دولة الإمارات العربية المتحدة
UNITED ARAB EMIRATES

الجداول 1 و 2 و 3

Schedule 1 , 2 , 3

لجنـــــــة السلـــع و المـــــواد
الخاضعة لرقابة الاستيراد و التصدير
المـكتب التنفـــــــيذي

COMMITTEE FOR GOODS & MATERIALS
SUBJECTED TO IMPORT & EXPORT
CONTRILL/ EXECUTIVE OFFICE

المكتب التنفيذي

EXCUTIVE OFFICE

دولة الإمارات العربية المتحدة
UNITED ARAB EMIRATES

الجدول 1

Schedule 1

Schedule 1

A. Toxic chemicals

		(CAS Registry number)
(1)	O-Alkyl (<=C10, incl. cycloalkyl) alkyl (Me, Et, n-Pr or i-Pr)-phosphonofluoridates	
e.g. Sarin:	O-Isopropyl methylphosphonofluoridate	(107-44-8)
Soman:	O-Pinacolyl methylphosphonofluoridate	(96-64-0)
(2)	O-Alkyl (<=C10, incl. cycloalkyl) N,N-dialkyl (Me, Et, n-Pr or i-Pr) phosphoramidocyanidates	
e.g. Tabun:	O-Ethyl N,N-dimethyl phosphoramidocyanidate	(77-81-6)
(3)	O-Alkyl (H or <=C10, incl. cycloalkyl) S-2-dialkyl (Me, Et, n-Pr or i-Pr)-aminoethyl alkyl (Me, Et, n-Pr or i-Pr) phosphonothiolates and corresponding alkylated or protonated salts	
e.g. VX:	O-Ethyl S-2-diisopropylaminoethyl methyl phosphonothiolate	(50782-69-9)
(4)	Sulfur mustards:	
	2-Chloroethylchloromethylsulfide	(2625-76-5)
	Mustard gas: Bis(2-chloroethyl)sulfide	(505-60-2)
	Bis(2-chloroethylthio)methane	(63869-13-6)
	Sesquimustard: 1,2-Bis(2-chloroethylthio)ethane	(3563-36-8)
	1,3-Bis(2-chloroethylthio)-n-propane	(63905-10-2)
	1,4-Bis(2-chloroethylthio)-n-butane	(142868-93-7)
	1,5-Bis(2-chloroethylthio)-n-pentane	(142868-94-8)
	Bis(2-chloroethylthiomethyl)ether	(63918-90-1)
	O-Mustard: Bis(2-chloroethylthioethyl)ether	(63918-89-8)
(5)	Lewisites:	
	Lewisite 1: 2-Chlorovinyldichloroarsine	(541-25-3)
	Lewisite 2: Bis(2-chlorovinyl)chloroarsine	(40334-69-8)
	Lewisite 3: Tris(2-chlorovinyl)arsine	(40334-70-1)
(6)	Nitrogen mustards:	
	HN1: Bis(2-chloroethyl)ethylamine	(538-07-8)
	HN2: Bis(2-chloroethyl)methylamine	(51-75-2)

		(CAS Registry number)
	HN3: Tris(2-chloroethyl)amine	(555-77-1)
(7)	Saxitoxin	(35523-89-8)
(8)	Ricin	(9009-86-3)

B. Precursors

		(CAS Registry number)
(9)	Alkyl (Me, Et, n-Pr or i-Pr) phosphonyldifluorides	
e.g. DF:	Methylphosphonyldifluoride	(676-99-3)
(10)	O-Alkyl (H or <=C10, incl. cycloalkyl) O-2-dalkyl (Me, Et, n-Pr or i-Pr)-aminoethyl alkyl (Me, Et, n-Pr or i-Pr) phosphonites and corresponding alkylated or protonated salts	
e.g. QL:	O-Ethyl O-2-diisopropylaminoethyl methylphosphonite	(57856-11-8)
(11)	Chlorosarin: O-Isopropyl methylphosphonochloridate	(1445-76-7)
(12)	Chlorosoman: O-Pinacolyl methylphosphonochloridate	(7040-57-5)

Annex

LISTS OF VALIDATED DATA FOR ANALYTICAL DERIVATIVES OF SCHEDULED CHEMICALS

TABLE 1: LIST OF APPROVED MS DATA

OPCW Code	Chemical Name	Schedule	Associated Chemical Schedule
17-2-0103	Butyl bis(2-chlorovinyl)arsinothiolite	DS	1.A.05
17-2-0104	Dibutyl 2-chlorovinylarsonodithiolite	DS	1.A.05
17-2-0105	Tributyl arsenotrithiolite	DS	2.B.07
25-2-0014	Dibutyl 2-chlorovinylarsonodithiolite	DS	1.A.05
08-2-0090	2-(2-Chlorovinyl)-5-methyl-1,3,2-benzodithiarsole	DS	1.A.05
14-2-0097	N-Ethyl-N-methyl-N-(2-trimethylsilyloxyethyl)amine	DS	2.B.11

Annex

LISTS OF NEW VALIDATED DATA

TABLE 1: LIST OF APPROVED MS DATA

OPCW Code	Chemical Name	Schedule
07-2-2723	O,O-Dimethyl methylphosphonothionate	2.B.04
07-2-2724	O-Ethyl O-methyl methylphosphonothionate	2.B.04
07-2-2725	O-Methyl O-propyl methylphosphonothionate	2.B.04
07-2-2726	O-Isopropyl O-methyl methylphosphonothionate	2.B.04
07-2-2727	O-Butyl O-methyl methylphosphonothionate	2.B.04
07-2-2728a	O-sec-Butyl O-methyl methylphosphonothionate	2.B.04
07-2-2728b	O-sec-Butyl O-methyl methylphosphonothionate	2.B.04
07-2-2729	O-Isobutyl O-methyl methylphosphonothionate	2.B.04
07-2-2730	O-Cyclohexyl O-methyl methylphosphonothionate	2.B.04
07-2-2731a	O-Methyl O-pinacolyl methylphosphonothionate	2.B.04
07-2-2731b	O-Methyl O-pinacolyl methylphosphonothionate	2.B.04
07-2-2732	O,O-Diethyl methylphosphonothionate	2.B.04
07-2-2733	O-Ethyl O-propyl methylphosphonothionate	2.B.04
07-2-2734	O-Ethyl O-isopropyl methylphosphonothionate	2.B.04
07-2-2735	O-Butyl O-ethyl methylphosphonothionate	2.B.04
07-2-2736a	O-sec-Butyl O-ethyl methylphosphonothionate	2.B.04
07-2-2736b	O-sec-Butyl O-ethyl methylphosphonothionate	2.B.04
07-2-2737	O-Ethyl O-isobutyl methylphosphonothionate	2.B.04
07-2-2738	O-Cyclohexyl O-ethyl methylphosphonothionate	2.B.04
07-2-2739a	O-Ethyl O-pinacolyl methylphosphonothionate	2.B.04
07-2-2739b	O-Ethyl O-pinacolyl methylphosphonothionate	2.B.04
07-2-2740	O,O-Dipropyl methylphosphonothionate	2.B.04
07-2-2741	O-Isopropyl O-propyl methylphosphonothionate	2.B.04
07-2-2742	O-Butyl O-propyl methylphosphonothionate	2.B.04
07-2-2743a	O-sec-Butyl O-propyl methylphosphonothionate	2.B.04
07-2-2743b	O-sec-Butyl O-propyl methylphosphonothionate	2.B.04
07-2-2744	O-Isobutyl O-propyl methylphosphonothionate	2.B.04
07-2-2745	O-Cyclohexyl O-propyl methylphosphonothionate	2.B.04
07-2-2746a	O-Pinacolyl O-propyl methylphosphonothionate	2.B.04
07-2-2746b	O-Pinacolyl O-propyl methylphosphonothionate	2.B.04
07-2-2747	O,O-Diisopropyl methylphosphonothionate	2.B.04
07-2-2748	O-Butyl O-isopropyl methylphosphonothionate	2.B.04
07-2-2749a	O-sec-Butyl O-isopropyl methylphosphonothionate	2.B.04
07-2-2749b	O-sec-Butyl O-isopropyl methylphosphonothionate	2.B.04
07-2-2750	O-Isobutyl O-isopropyl methylphosphonothionate	2.B.04
07-2-2751	O-Cyclohexyl O-isopropyl methylphosphonothionate	2.B.04
07-2-2752a	O-Isopropyl O-pinacolyl methylphosphonothionate	2.B.04
07-2-2752b	O-Isopropyl O-pinacolyl methylphosphonothionate	2.B.04
07-2-2753	O,O-Dibutyl methylphosphonothionate	2.B.04
07-2-2754a	O-Butyl O-sec-butyl methylphosphonothionate	2.B.04

OPCW Code	Chemical Name	Schedule
07-2-2754b	O-Butyl O-sec-butyl methylphosphonothionate	2.B.04
07-2-2755	O-Butyl O-isobutyl methylphosphonothionate	2.B.04
07-2-2756	O-Butyl O-cyclohexyl methylphosphonothionate	2.B.04
07-2-2757a	O-Butyl O-pinacolyl methylphosphonothionate	2.B.04
07-2-2757b	O-Butyl O-pinacolyl methylphosphonothionate	2.B.04
07-2-2758a	Bis(O-sec-butyl) methylphosphonothionate	2.B.04
07-2-2758b	Bis(O-sec-butyl) methylphosphonothionate	2.B.04
07-2-2758c	Bis(O-sec-butyl) methylphosphonothionate	2.B.04
07-2-2759a	O-sec-Butyl O-isobutyl methylphosphonothionate	2.B.04
07-2-2759b	O-sec-Butyl O-isobutyl methylphosphonothionate	2.B.04
07-2-2760a	O-sec-Butyl O-cyclohexyl methylphosphonothionate	2.B.04
07-2-2760b	O-sec-Butyl O-cyclohexyl methylphosphonothionate	2.B.04
07-2-2761a	O-sec-Butyl O-pinacolyl methylphosphonothionate	2.B.04
07-2-2761b	O-sec-Butyl O-pinacolyl methylphosphonothionate	2.B.04
07-2-2761c	O-sec-Butyl O-pinacolyl methylphosphonothionate	2.B.04
07-2-2762	O,O-Diisobutyl methylphosphonothionate	2.B.04
07-2-2763	O-Cyclohexyl O-isobutyl methylphosphonothionate	2.B.04
07-2-2764a	O-Isobutyl O-pinacolyl methylphosphonothionate	2.B.04
07-2-2764b	O-Isobutyl O-pinacolyl methylphosphonothionate	2.B.04
07-2-2765	O,O-Dicyclohexyl methylphosphonothionate	2.B.04
07-2-2766a	O-Cyclohexyl O-pinacolyl methylphosphonothionate	2.B.04
07-2-2766b	O-Cyclohexyl O-pinacolyl methylphosphonothionate	2.B.04
07-2-2767	O,O-Dipinacolyl methylphosphonothionate	2.B.04
07-2-2768	O,O-Dimethyl ethylphosphonothionate	2.B.04
07-2-2769	O-Ethyl O-methyl ethylphosphonothionate	2.B.04
07-2-2770	O-Methyl O-propyl ethylphosphonothionate	2.B.04
07-2-2771	O-Isopropyl O-methyl ethylphosphonothionate	2.B.04
07-2-2772	O-Butyl O-methyl ethylphosphonothionate	2.B.04
07-2-2773a	O-sec-Butyl O-methyl ethylphosphonothionate	2.B.04
07-2-2773b	O-sec-Butyl O-methyl ethylphosphonothionate	2.B.04
07-2-2774	O-Isobutyl O-methyl ethylphosphonothionate	2.B.04
07-2-2775	O-Cyclohexyl O-methyl ethylphosphonothionate	2.B.04
07-2-2776a	O-Methyl O-pinacolyl ethylphosphonothionate	2.B.04
07-2-2776b	O-Methyl O-pinacolyl ethylphosphonothionate	2.B.04
07-2-2777	O,O-Diethyl ethylphosphonothionate	2.B.04
07-2-2778	O-Ethyl O-propyl ethylphosphonothionate	2.B.04
07-2-2779	O-Ethyl O-isopropyl ethylphosphonothionate	2.B.04
07-2-2780	O-Butyl O-ethyl ethylphosphonothionate	2.B.04
07-2-2781a	O-sec-Butyl O-ethyl ethylphosphonothionate	2.B.04
07-2-2781b	O-sec-Butyl O-ethyl ethylphosphonothionate	2.B.04
07-2-2782	O-Ethyl O-isobutyl ethylphosphonothionate	2.B.04
07-2-2783	O-Cyclohexyl O-ethyl ethylphosphonothionate	2.B.04
07-2-2784a	O-Ethyl O-pinacolyl ethylphosphonothionate	2.B.04
07-2-2784b	O-Ethyl O-pinacolyl ethylphosphonothionate	2.B.04
07-2-2785	O,O-Dipropyl ethylphosphonothionate	2.B.04

OPCW Code	Chemical Name	Schedule
07-2-2786	O-Isopropyl O-propyl ethylphosphonothionate	2.B.04
07-2-2787	O-Butyl O-propyl ethylphosphonothionate	2.B.04
07-2-2788a	O-sec-Butyl O-propyl ethylphosphonothionate	2.B.04
07-2-2788b	O-sec-Butyl O-propyl ethylphosphonothionate	2.B.04
07-2-2789	O-Isobutyl O-propyl ethylphosphonothionate	2.B.04
07-2-2790	O-Cyclohexyl O-propyl ethylphosphonothionate	2.B.04
07-2-2791a	O-Pinacolyl O-propyl ethylphosphonothionate	2.B.04
07-2-2791b	O-Pinacolyl O-propyl ethylphosphonothionate	2.B.04
07-2-2792	O,O-Diisopropyl ethylphosphonothionate	2.B.04
07-2-2793	O-Butyl O-isopropyl ethylphosphonothionate	2.B.04
07-2-2794a	O-sec-Butyl O-isopropyl ethylphosphonothionate	2.B.04
07-2-2794b	O-sec-Butyl O-isopropyl ethylphosphonothionate	2.B.04
07-2-2795	O-Isobutyl O-isopropyl ethylphosphonothionate	2.B.04
07-2-2796	O-Cyclohexyl O-isopropyl ethylphosphonothionate	2.B.04
07-2-2797a	O-Isopropyl O-pinacolyl ethylphosphonothionate	2.B.04
07-2-2797b	O-Isopropyl O-pinacolyl ethylphosphonothionate	2.B.04
07-2-2798	O,O-Dibutyl ethylphosphonothionate	2.B.04
07-2-2799a	O-Butyl O-sec-butyl ethylphosphonothionate	2.B.04
07-2-2799b	O-Butyl O-sec-butyl ethylphosphonothionate	2.B.04
07-2-2800	O-Butyl O-isobutyl ethylphosphonothionate	2.B.04
07-2-2801	O-Butyl O-cyclohexyl ethylphosphonothionate	2.B.04
07-2-2802a	O-Butyl O-pinacolyl ethylphosphonothionate	2.B.04
07-2-2802b	O-Butyl O-pinacolyl ethylphosphonothionate	2.B.04
07-2-2803a	Bis(O-sec-butyl) ethylphosphonothionate	2.B.04
07-2-2803b	Bis(O-sec-butyl) ethylphosphonothionate	2.B.04
07-2-2803c	Bis(O-sec-butyl) ethylphosphonothionate	2.B.04
07-2-2804a	O-sec-Butyl O-isobutyl ethylphosphonothionate	2.B.04
07-2-2804b	O-sec-Butyl O-isobutyl ethylphosphonothionate	2.B.04
07-2-2805a	O-sec-Butyl O-cyclohexyl ethylphosphonothionate	2.B.04
07-2-2805b	O-sec-Butyl O-cyclohexyl ethylphosphonothionate	2.B.04
07-2-2806a	O-sec-Butyl O-pinacolyl ethylphosphonothionate	2.B.04
07-2-2806b	O-sec-Butyl O-pinacolyl ethylphosphonothionate	2.B.04
07-2-2806c	O-sec-Butyl O-pinacolyl ethylphosphonothionate	2.B.04
07-2-2806d	O-sec-Butyl O-pinacolyl ethylphosphonothionate	2.B.04
07-2-2807	O,O-Diisobutyl ethylphosphonothionate	2.B.04
07-2-2808	O-Cyclohexyl O-isobutyl ethylphosphonothionate	2.B.04
07-2-2809a	O-Isobutyl O-pinacolyl ethylphosphonothionate	2.B.04
07-2-2809b	O-Isobutyl O-pinacolyl ethylphosphonothionate	2.B.04
07-2-2810	O,O-Dicyclohexyl ethylphosphonothionate	2.B.04
07-2-2811a	O-Cyclohexyl O-pinacolyl ethylphosphonothionate	2.B.04
07-2-2811b	O-Cyclohexyl O-pinacolyl ethylphosphonothionate	2.B.04
07-2-2812a	O,O-Dipinacolyl ethylphosphonothionate	2.B.04
07-2-2812b	O,O-Dipinacolyl ethylphosphonothionate	2.B.04
09-2-0167	O-Isopropyl O-pinacolyl methylphosphonothionate	2.B.04
09-2-0168	Bis(1,3-dimethylbutyl) dimethylpyrophosphonate	2.B.04

OPCW Code	Chemical Name	Schedule
09-2-0169	Bis(1-butylpentyl) propylphosphonate	2.B.04
09-2-0170	Bis(1-propylpentyl) propylphosphonate	2.B.04
09-2-0171	Bis(S-2-diethylaminoethyl) methylphosphonodithiolate	2.B.04
09-2-0172	O-tert-Butyldimethylsilyl O-ethyl methylphosphonothionate	2.B.04
09-2-0173	O-tert-Butyldimethylsilyl O-propyl propylphosphonothionate	2.B.04
09-2-0174	S-2-Ethylthioethyl N,N-dipropyl ethylphosphonamidothiolate	2.B.04
09-2-0175	S-2-Ethylthioethyl N-ethyl-N-propyl propylphosphonamidothiolate	2.B.04
09-2-0176	O-Isobutyl O-trimethylsilyl methylphosphonothionate	2.B.04
09-2-0177	Dimethyl dipropylpyrophosphonate	2.B.04
09-2-0178	2,2-Dimethylpropyl methylphosphonofluoridate	1.A.01
09-2-0179	Butyl methylphosphinate	2.B.04
09-2-0180	Diethyl isopropylphosphonite	2.B.04
09-2-0181	Ethyl ethylphosphinate	2.B.04
09-2-0182	S-Methyl methylphosphonothiolochloridate	2.B.04
09-2-0183	O-Methyl S-methyl methylphosphonothiolate	2.B.04
09-2-0184	Cyclohexylmethyl S-2-dimethylaminoethyl propylphosphonothiolate	1.A.03
09-2-0185	Cyclooctyl S-2-dimethylaminoethyl propylphosphonothiolate	1.A.03
09-2-0186	Cyclopentyl S-2-diisopropylaminoethyl methylphosphonothiolate	1.A.03
09-2-0187	Ethyl methylphosphinate	2.B.04
09-2-0188	Methylphosphonic chloride fluoride	2.B.04
09-2-0189	Methylphosphonothioic dichloride	2.B.04
09-2-0190	2-(N-Methyl-N-propylamino)ethanethiol	2.B.12
14-2-0079	O-Isopropyl S-methyl propylphosphonothiolate	2.B.04
14-2-0082	S-Methyl O-propyl isopropylphosphonothiolate	2.B.04
14-2-0083	O-Isopropyl S-methyl isopropylphosphonothiolate	2.B.04
14-2-0112	O-Isopropyl S-methyl propylphosphonothiolate	2.B.04
14-2-0113	S-Methyl O-propyl isopropylphosphonothiolate	2.B.04
14-2-0114	O-Isopropyl S-methyl isopropylphosphonothiolate	2.B.04
16-2-0062	2-Methoxyethyl methyl isopropylphosphonate	2.B.04
16-2-0063	Isopropyl 2-methoxyethyl isopropylphosphonate	2.B.04
16-2-0064	2-Methoxyethyl propyl isopropylphosphonate	2.B.04
16-2-0065	Bis(2-methoxyethyl) isopropylphosphonate	2.B.04
16-2-0066	Isobutyl isopropyl isopropylphosphonate	2.B.04
16-2-0067	Isobutyl propyl isopropylphosphonate	2.B.04
16-2-0068	Diisobutyl isopropylphosphonate	2.B.04
16-2-0069	Isobutyl 2-methoxyethyl isopropylphosphonate	2.B.04
16-2-0070	sec-Butyl 2-methoxyethyl isopropylphosphonate	2.B.04
16-2-0071	1-Ethylpropyl propyl methylphosphonate	2.B.04
16-2-0072	1-Ethylpropyl propyl ethylphosphonate	2.B.04
16-2-0073	1-Ethylpropyl propyl propylphosphonate	2.B.04
16-2-0074	1-Ethylpropyl isopropyl methylphosphonate	2.B.04
16-2-0075	1-Ethylpropyl isopropyl ethylphosphonate	2.B.04

OPCW Code	Chemical Name	Schedule
16-2-0076	1-Ethylpropyl isopropyl propylphosphonate	2.B.04
16-2-0077	3-Methylbutyl propyl methylphosphonate	2.B.04
16-2-0078	3-Methylbutyl propyl ethylphosphonate	2.B.04
16-2-0079	3-Methylbutyl propyl propylphosphonate	2.B.04
17-2-0214	2,2-Dimethylhexyl methylphosphonofluoridate	1.A.01
17-2-0215	Cyclopentyl isopropylphosphonochloridate	2.B.04
17-2-0216	3-Methylbutyl isopropylphosphonochloridate	2.B.04
17-2-0217	3-Methylbutyl propylphosphonochloridate	2.B.04
17-2-0218	Butyl isopropylphosphonochloridate	2.B.04
17-2-0219	Isobutyl isopropylphosphonochloridate	2.B.04
17-2-0220	Dibutyl methylphosphonate	2.B.04
17-2-0221	Dibutyl isopropylphosphonate	2.B.04
17-2-0222	Dibutyl diisopropylpyrophosphonate	2.B.04
17-2-0223	Pentyl isopropylphosphonochloridate	2.B.04
17-2-0224a	5-Ethyl-5-methoxymethyl-2-methyl-1,3,2-dioxaphosphinane-2-oxide	2.B.04
17-2-0224b	5-Ethyl-5-methoxymethyl-2-methyl-1,3,2-dioxaphosphinane-2-oxide	2.B.04
17-2-0225a	5-Ethyl-2-methyl-5-trimethylsilyloxymethyl-1,3,2-dioxaphosphinane-2-oxide	2.B.04
17-2-0225b	5-Ethyl-2-methyl-5-trimethylsilyloxymethyl-1,3,2-dioxaphosphinane-2-oxide	2.B.04
17-2-0227a	Butyl (5-ethyl-2-methyl-2-oxido-1,3,2-dioxaphosphinan-5-yl)methyl methylphosphonate	2.B.04
17-2-0227b	Butyl (5-ethyl-2-methyl-2-oxido-1,3,2-dioxaphosphinan-5-yl)methyl methylphosphonate	2.B.04
17-2-0228c	Bis[(5-ethyl-2-methyl-2-oxido-1,3,2-dioxaphosphinan-5-yl)methyl] methylphosphonate	2.B.04

STRATEGIC GOODS CONTROL LIST
PART II OF THE SCHEDULE OF THE STRATEGIC GOODS (CONTROL) ACT

I. MUNITIONS LIST

MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
ML01	**Arms and automatic weapons with a calibre of 12.7 mm (calibre 0.50 inches) or less and accessories, as follows, and specially designed components therefor:**			
	a. rifles, carbines, revolvers, pistols, machine pistols and machine guns;	**ML01A**	**9302.00.00**	▪ Revolvers and pistols, other than those of heading 93.03 or 93.04
			9303.10.00	▪ Muzzle-loading firearms
	b. smooth-bore weapons specially designed for military use;	**ML01B**	**9303.90.00**	▪ Other firearms and similar devices which operate by the firing of an explosive charge
	c. weapons using caseless ammunition;	**ML01C**	**9304.00.10** **9304.00.90**	▪ Air guns, not exceeding 7 kg ▪ Other arms (for example, spring, air or gas guns and pistols, truncheons), excluding those of heading 93.07
	d. silencers, special gun-mountings, clips, weapons sights and flash suppressers for any of the items under Munition Codes ML01.a, ML01.b and ML01.c.	**ML01D**	**9305.10.00**	▪ Parts and accessories, of revolvers or pistols
			9305.21.90 **9305.91.00**	▪ Other shotgun barrels ▪ Other parts and accessories, of military weapons of heading 93.01
			9305.99.10	▪ Parts and accessories of goods of subheading 9304.00.90 (Other arms, other than air guns not exceeding 7 kg)
			9305.99.90	▪ Other parts and accessories of other articles of headings 93.01 to 93.04.
	*Note for **ML01**:* **ML01** does **not** control the following: 1. Smooth-bore weapons used for hunting or sporting purposes. These weapons must not be specially designed for military use or of the fully automatic firing type; 2. Firearms specially designed for dummy ammunition and which are incapable of firing any controlled ammunition; 3. Weapons using non-centre fire cased ammunition and which are not of the fully automatic firing type.			

Important Note:

- The HS code only serve as useful guide and are not exhaustive. An item is controlled if it meets the technical specifications indicated in column 2 "Description of Item".
- The category code for items not in the control list but are known or suspected for weapons of mass desctuction purposes, is "WMD01"

MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	ML01.a does **not** control the following: 1. Muskets, rifles and carbines manufactured earlier than 1938; 2. Reproductions of muskets, rifles and carbines the originals of which were manufactured earlier than 1890; 3. Revolvers, pistols and machine guns manufactured earlier than 1890, and their reproductions. *Technical Note:* *Smooth-bore weapons specially designed for military use as specified in **ML01.b** are those which:* *1. are proof tested at pressures above 1,300 bars;* *2. operate normally and safely at pressures above 1,000 bars; and* *3. are capable of accepting ammunition above 76.2 mm in length (e.g., commercial 12-gauge magnum shot gun shells).* *The parameters in this Technical Note are to be measured according to the standards of the Commission Internationale Permanente.*			
ML02	**Armament or weapons with a calibre greater than 12.7 mm (calibre 0.50 inches), projectors and accessories, as follows, and specially designed components therefor:**			
	a. guns, howitzers, cannon, mortars, anti-tank weapons, projectile launchers, military flame throwers, recoilless rifles and signature reduction devices therefor;	**ML02A**	**9301.11.00**	▪ Artillery weapons (for e.g. guns, howitzers and mortars), self-propelled
			9301.19.00	▪ Other artillery weapons (for example, guns, howitzers and mortars)
			9301.20.00	▪ Rocket launchers; flame-throwers; grenade launchers; torpedo tubes and similar projectors
			9301.90.00	▪ Other military weapons (for example, guns, howitzers and mortars)
	b. smoke, gas and pyrotechnic projectors or generators specifically designed for military use, except signal pistols;	**ML02B**	**3604.90.90**	▪ Other fireworks, signalling flares, rain rockets, fog signals and other pyrotechnic articles
	c. weapons sights.	**ML02C**	**9305.91.00**	▪ Parts and accessories, of military weapons of heading 93.01
	*Note for **ML02**:*			

Important Note:

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	ML02.a includes injectors, metering devices, storage tanks and other specially designed components for use with liquid propelling charges for any of the equipment controlled under this category.			
ML03	**The following ammunition and components:**			
	a. ammunition and specially designed components for any item under Munition Code ML01;	**ML03A**	**9306.21.00**	▪ Shotgun Cartridges
			9306.29.00	▪ Other, shotgun cartridges and parts thereof; air gun pellets
			9306.30.10 **9306.30.90**	▪ Other cartridges and parts thereof, use for revolvers and pistols of heading 93.02 ▪ Other cartridges and parts thereof
			9306.90.00	▪ Other, bombs, grenades, torpedoes, mines, missiles, and similar munitions of war and parts thereof, cartridges and other ammunition and projectiles and parts thereof, including shot and cartridge wads ▪
	b. ammunition and specially designed components for any item under Munition Code ML02;	**ML03B**	**9306.21.00**	▪ Shotgun Cartridges
			9306.29.00	▪ Other, shotgun cartridges and parts thereof; air gun pellets
			9306.30.10 **9306.30.90**	▪ Other cartridges and parts thereof, use for revolvers and pistols of heading 93.02 ▪ Other cartridges and parts thereof
			9306.90.00	▪ Other, bombs, grenades, torpedoes, mines, missiles, and similar munitions of war and parts thereof, cartridges and other ammunition and projectiles and parts thereof, including shot and cartridge wads
	c. ammunition and specially designed components for any item under Munition Code ML11.	**ML03C**	**9306.21.00**	▪ Shotgun Cartridges
			9306.29.00	▪ Other, shotgun cartridges and parts thereof; air gun pellets
			9306.30.10 **9306.30.90**	▪ Other cartridges and parts thereof, use for revolvers and pistols of heading 93.02 ▪ Other cartridges and parts thereof

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
			9306.90.00	▪ Other, bombs, grenades, torpedoes, mines, missiles, and similar munitions of war and parts thereof; cartridges and other ammunition and projectiles and parts thereof, including shot and cartridge wads ▪
	*Notes for **ML03**:* a. Specially designed components include: 1. Metal or plastic fabrications such as primer anvils, bullet cups, cartridge links, rotating bands and munitions metal parts; 2. Safing and arming devices, fuses, sensors and initiation devices; 3. Power supplies with high one-time operational output; 4. Combustible cases for charges; 5. Sub-munitions including bomblets, minelets and terminally guided projectiles. b. **ML03** does not control the following: 1. Ammunition crimped without a projectile (blank star) and dummy ammunition with a pierced powder chamber; 2. Cartridges specially designed for any of the following purposes: (a) Signalling; (b) Bird scaring; or (c) Lighting of gas flares at oil wells.			
ML04	**Bombs, torpedoes, rockets, missiles, and related equipment and accessories, as follows, if specially designed for military use, and specially designed components therefor:**			
	a. bombs, rockets and missiles;	**ML04A**	**9306.90.00**	▪ Other, bombs, grenades, torpedoes, mines, missiles, and similar munitions of war and parts thereof; and parts thereof
	b. torpedoes, grenades, smoke canisters, mines, depth charges, demolition-charges, demolition-devices and demolition-kits, "military pyrotechnics", cartridges, and equipment simulating the characteristics of any of these;	**ML04B**	**9306.90.00**	▪ Other, bombs, grenades, torpedoes, mines, missiles, and similar munitions of war and parts thereof and parts thereof
	c. equipment specially designed for the handling, control, activation, powering with one-time operational output, launching, discharging, decoying, jamming, detonation or detection of any item under Munition Code ML04.a;	**ML04C**	**3603.00.90** **8543.89.60** **8543.89.90**	▪ Other safety fuses; detonating fuses; percussion or detonating caps; igniters; electric detonators ▪ Electrical mine detonators ▪ Other electrical machines and apparatus, having individual functions, not specified or included elsewhere in this Chapter

Important Note:

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- The category code for items not in the control list but are known or suspected for weapons of mass desctuction purposes, is "WMD01"

MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
			9301.20.00 **9301.90.00** **9305.99.90**	▪ Rocket launchers; flame-throwers; grenade launchers; torpedo tubes and similar projectors ▪ Artillery weapons (for example, guns, howitzers and mortars ▪ Other parts and accessories of articles of headings 93.01 to 93.04
	d. equipment specially designed for the handling, control, activation, powering with one-time operational output, launching, laying, sweeping, discharging, decoying, jamming, detonation or detection of any item under Munition Code ML04.b.	**ML04D**	**3603.00.90** **8543.89.60** **8543.89.90**	▪ Other safety fuses; detonating fuses; percussion or detonating caps; igniters; electric detonators ▪ Electrical mine detonators ▪ Other electrical machines and apparatus, having individual functions, not specified or included elsewhere in this Chapter.
			9301.20.00 **9301.90.00** **9305.99.90**	▪ Rocket launchers; flame-throwers; grenade launchers; torpedo tubes and similar projectors ▪ Artillery weapons (for example, guns, howitzers and mortars. ▪ Other parts and accessories of articles of headings 93.01 to 93.04
	*Notes for **ML04**:* a. **ML04.a** includes missile rocket nozzles and re-entry vehicle nosetips. b. **ML04.b** includes smoke grenades, fire bombs, incendiary bombs and explosive devices; c. **ML04.b** also includes: 1. Mobile gas liquefying equipment capable of producing 1,000 kg or more per day of gas in liquid form; 2. Buoyant electric conducting cable suitable for sweeping magnetic mines. *Technical Note:* *Hand-held devices, limited by design solely to the detection of metal objects and incapable of distinguishing between mines and other metal objects, are not considered to be specially designed for the detection of items controlled by **ML04.b.***			
ML05	**Fire control and related alerting and warning equipment, and related systems, test and alignment and countermeasure equipment, as follows, if specially designed for military use, and specially designed components and accessories therefor:**			

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	a. weapon sights, bombing computers, gun laying equipment and weapon control systems;	**ML05A**	**8543.90.90**	▪ Other parts of electrical machines and apparatus, having individual functions, not specified or included elsewhere in this Chapter
	b. target acquisition, designation, range-finding, surveillance or tracking systems; detection, data fusion, recognition or identification equipment; and sensor integration equipment;	**ML05B**	**8543.90.90**	▪ Other parts of electrical machines and apparatus, having individual functions, not specified or included elsewhere in this Chapter
	c. countermeasure equipment for any item under Munition Codes ML05.a and ML05.b;	**ML05C**	**8543.90.90**	▪ Other electrical machines and apparatus, having individual functions, not specified or included elsewhere in this Chapter
	d. field test or alignment equipment, specially designed for any item under Munition Codes ML05.a and ML05.b.	**ML05D**	**8543.90.90**	▪ Other parts of electrical machines and apparatus, having individual functions, not specified or included elsewhere in this Chapter
ML06	**Ground vehicles (including trailers) and components therefor specially designed or modified for military use:**			
	a. tanks and other military armed vehicles and military vehicles fitted with mountings for arms or equipment for mine laying or the launching of any item under Munition Code ML04;	**ML06A**	**8710.00.00**	▪ Tanks and other armoured fighting vehicles, motorised, whether or not fitted with weapons, and parts of such vehicles
	b. armoured vehicles;	**ML06B**	**8710.00.00**	▪ Tanks and other armoured fighting vehicles, motorised, whether or not fitted with weapons, and parts of such vehicles
	c. amphibious and deep water fording vehicles;	**ML06C**	**8710.00.00**	▪ Tanks and other armoured fighting vehicles, motorised, whether or not fitted with weapons, and parts of such vehicles
	d. recovery vehicles and vehicles for towing or transporting ammunition or weapon systems and associated load handling equipment;	**ML06D**	**8710.00.00**	▪ Tanks and other armoured fighting vehicles, motorised, whether or not fitted with weapons, and parts of such vehicles
	e. other military ground vehicles.	**ML06E**	**8710.00.00**	▪ Tanks and other armoured fighting vehicles, motorised, whether or not fitted with weapons, and parts of such vehicles

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	*Notes for **ML06**:* a. Modification of a ground vehicle for military use entails a structural, electrical or mechanical change involving one or more specially designed military components. Such components include: 1. Pneumatic tyre casings of a kind specially designed to be bullet-proof or to run when deflated; 2. Tyre inflation pressure control systems, operated from inside a moving vehicle; 3. Armoured protection of vital parts, (e.g. fuel tanks or vehicle cabs); 4. Special reinforcements for mountings for weapons. b. **ML06** does **not** control civil automobiles or trucks designed for transporting money or valuables, having armoured protection.			
ML07	**"Military explosives" and fuels, including propellants, and related substances, as follows:**			
	a. the following substances and mixtures thereof:	**ML07A**	**3601.00.00** **3602.00.00**	▪ Propellent powders ▪ Prepared explosives, other than propellent powders
	1. spherical aluminium powder (CAS 7429-90-5) with a particle size of 60 µm or less, manufactured from material with an aluminium content of 99% or more;			
	2. metal fuels in particle form whether spherical, atomized, spheroidal, flaked or ground, manufactured from material consisting of 99% or more of any of the following;			
	(*a*) metals and mixtures thereof: (i) Beryllium (CAS 7440-41-7) in particle sizes of less than 60 µm; (ii) Iron powder (CAS 7439-89-6) with particle size of 3 µm or less produced by reduction of iron oxide with hydrogen;			
	(*b*) mixtures, which contain any of the following: (i) Zirconium (CAS 7440-67-7), magnesium (CAS 7439-95-4) and alloys of these in particle sizes of less than 60 µm;			

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	(ii) Boron (CAS 7440-42-8) or boron carbide (CAS 12069-32-8) fuels of 85% purity or higher and particle sizes of less than 60 μm;			
	3. Perchlorates, chlorates and chromates composited with powdered metal or other high energy fuel components;			
	4. Compounds composed of fluorine and one or more of the following: other halogens, oxygen, nitrogen; other than compounds under the "Chemical and Biological List";			
	5. Carboranes; decaborane (CAS 17702-41-9); pentaborane and derivatives thereof;			
	6. Cyclotetramethylenetetranitramine (CAS 2691-41-0) (HMX); octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazine; 1,3,5,7-tetranitro-1,3,5,7-tetraza-cyclooctane; (octogen, octogene);			
	7. Hexanitrostilbene (HNS) (CAS 20062-22-0);			
	8. Diaminotrinitrobenzene (DATB) (CAS 1630-08-6);			
	9. Triaminotrinitrobenzene (TATB) (CAS 3058-38-6);			
	10. Triaminotrinitrobenzene (TATB) (CAS 3058-38-6);			
	11. Titanium subhydride of stoichiometry TiH 0.65-1.68;			
	12. Dinitroglycoluril (DNGU, DINGU) (CAS 55510-04-8); tetranitroglycoluril (TNGU, SORGUYL) (CAS 55510-03-7);			
	13. Tetranitrobenzotriazolobenzotriazole (TACOT) (CAS 25243-36-1);			
	14. Diaminohexanitrobiphenyl (DIPAM) (CAS 17215-44-0);			
	15. Picrylaminodinitropyridine (PYX) (CAS 38082-89-2);			
	16. 3-nitro-1,2,4-triazol-5-one (NTO or ONTA) (CAS 932-64-9);			

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	17. Hydrazine (CAS 302-01-2) in concentrations of 70% or more; hydrazine nitrate (CAS 37836-27-4); hydrazine perchlorate (CAS 27978-54-7); Unsymmetrical dimethyl hydrazine (CAS 57-14-7); Monomethyl (CAS 60-34-4) hydrazine; Symmetrical dimethyl hydrazine (CAS 540-73-8);			
	18. Ammonium perchlorate (CAS 7790-98-9);			
	19. Cyclotrimethylenetrinitramine (RDX) (CAS 121-82-4); Cyclonite; T4; hexahydro-1,3,5-trinitro-1,3,5-triazine; 1,3,5-trinitro-1,3,5-triaza-cyclohexane (hexogen, hexogene);			
	20. Hydroxylammonium nitrate (HAN) (CAS 13465-08-2); Hydroxylammonium perchlorate (HAP) (CAS 15588-62-2);			
	21. 2-(5-cyanotetrazolato) penta amine-cobalt (III) perchlorate (or CP) (CAS 70247-32-4);			
	22. cis-bis (5-nitrotetrazolato) tetra amine-cobalt (III) perchlorate (or BNCP);			
	23. 7-Amino-4,6-dinitrobenzofurazane-1-oxide (ADNBF) (CAS 97096-78-1); amino dinitrobenzofurozan;			
	24. 5,7-diamino-4,6-dinitrobenzofurazane-1-oxide (CAS 117907-74-1), (CL-14 or diamino dinitrobenzofurozan);			
	25. 2,4,6-trinitro-2,4,6-triazacyclohexanone (K-6 or Keto-RDX) (CAS 115029-35-1);			
	26. 2,4,6,8-tetranitro-2,4,6,8-tetraazabicyclo [3,3,0]-octanone-3 (CAS 130256-72-3) (tetranitrosemiglycouril, K-55 or keto-bicyclic HMX);			
	27. 1,1,3-trinitroazetidine (TNAZ) (CAS 97645-24-4);			
	28. 1,4,5,8-tetranitro-1,4,5,8-tetraazadecalin (TNAD) (CAS 135877-16-6);			
	29. Hexanitrohexaazaisowurtzitane (CAS 135285-90-4) (CL-20 or HNIW); and chlathrates of CL-20;			

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	30. Polynitrocubanes with more than 4 nitro groups;			
	31. Ammonium dinitramide (ADN or SR 12) (CAS 140456-78-6);			
	32. Trinitrophenylmethylnitramine (tetryl) (CAS 479-45-8);			
	b. the following explosives and propellants:	**ML07B**	**3601.00.00** **3602.00.00**	▪ Propellent powders ▪ Prepared explosives, other than propellent powders
	1. any explosive with a detonation velocity exceeding 8,700 m/s or a detonation pressure exceeding 34 GPa (340 kbar);			
	2. other organic explosives not listed in Munition Code ML07 yielding detonation pressures of 25 Gpa (250 kbar) or more that will remain stable at temperatures of 523 K (250^{0}C) or higher for periods of 5 minutes or longer;			
	3. any other United Nations (UN) Class 1.1 solid propellant not listed in Munition Code ML07 with a theoretical specific impulse (under standard conditions) of more than 250 seconds for non-metallised, or more than 270 seconds for aluminised compositions;			
	4. any UN Class 1.3 solid propellant with a theoretical specific impulse of more than 230 seconds for non-halogenised, 250 seconds for non-metallised and 266 seconds for metallised compositions;			
	5. any other gun propellants not listed in Munition Code ML07 having a force constant of more than 1,200 kJ/kg;			
	6. any other explosive, propellant or pyrotechnic not listed in Munition Code ML07 that can sustain a steady-state burning rate of more than 38 mm per second under standard conditions of 6.89 MPa (68.9 bar) pressure and 294 K (21^{0}C); or			
	7. elastomer modified cast double based propellants (EMCDB)			

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	with extensibility at maximum stress of more than 5% at 233 K (-40°C);			
	c. "military pyrotechnics";	**ML07C**	**3604.90.90**	▪ Other fireworks, signalling flares, rain rockets, fog signals and other pyrotechnic articles
	d. the following substances:	**ML07D**	**2710.19.13**	▪ Aviation turbine fuel (jet fuel) having a flash point of not less than 23°C
	1. aircraft fuels specially formulated for military purposes;		**2710.19.14**	▪ Aviation turbine fuel (jet fuel) having a flash point of less than 23°C
	2. military materials containing thickeners for hydrocarbon fuels specially formulated for use in flamethrowers or incendiary munitions, such as metal stearates or palmates (also known as octal) (CAS 637-12-7) and M1, M2, M3 thickeners;			***[Declarant to provide technical specifications]***
	3. liquid oxidisers comprised of or containing inhibited red fuming nitric acid (IRFNA) (CAS 8007-58-7) or oxygen difluoride;		**2808.00.00** **2811.19.90**	▪ Nitric acid; sulphonitric acids ▪ Other inorganic acids, (oxygen difluoride)
	e. the following "additives" and "precursors":	**ML07E**	**3602.00.00**	▪ Prepared explosives, other than propellent powders
	1. Azidomethylmethyloxetane (AMMO) and its polymers;			
	2. Basic copper salicylate (CAS 62320-94-9); lead salicylate (CAS 15748-73-9);			
	3. Bis(2,2-dinitropropyl) formal (CAS 5917-61-3) or Bis(2,2-dinitropropyl) acetal (CAS 5108-69-0);			
	4. Bis-(2-fluoro-2,2-dinitroethyl) formal (FEFO) (CAS 17003-79-1);			
	5. Bis-(2-hydroxyethyl) glycolamide (BHEGA) (CAS 17409-41-5);			
	6. Bis(2-methyl aziridinyl) methylamino phosphine oxide (Methyl BAPO) (CAS 85068-72-0);			
	7. Bisazidomethyloxetane and its polymers (CAS 17607-20-4);			

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	8. Bischloromethyloxetane (BCMO) (CAS 142173-6-0);			
	9. Butadienenitrileoxide (BNO);			
	10. Butanetrioltrinitrate (BTTN) (CAS 6659-60-5);			
	11. Catocene (CAS 37206-42-1) (2,2-Bis-ethylferrocenyl propane); ferrocene carboxylic acids; N-butyl-ferrocene (CAS 319904-29-7); Butacene (CAS 125856-62-4) and other adducted polymer ferrocene derivatives;			
	12. Dinitroazetidine-t-butyl salt;			
	13. Energetic monomers, plasticisers and polymers containing nitro, azido, nitrate, nitraza or difluoroamino groups;			
	14. Poly-2,2,3,3,4,4-hexafluoropentane-1,5-diol formal (FPF-1);			
	15. Poly-2,4,4,5,5,6,6-heptafluoro-2-tri-fluoromethyl-3-oxaheptane-1,7-diol formal (FPF-3);			
	16. Glycidylazide Polymer (GAP) (CAS 143178-24-9) and its derivatives;			
	17. Hexabenzylhexaazaisowurtzitane (HBIW) (CAS 124782-15-6);			
	18. Hydroxyl terminated polybutadiene (HTPB) with a hydroxyl functionality equal to or greater than 2.2 and less than or equal to 2.4, a hydroxyl value of less than 0.77 meq/g, and a viscosity at 30°C of less than 47 poise (CAS 69102-90-5);			
	19. Superfine iron oxide (Fe_2O_3 hematite) with a specific surface area more than 250 m^2/g and an average particle size of 0.003 µm or less (CAS 1309-37-1);			
	20. Lead beta-resorcylate (CAS 20936-32-7);			
	21. Lead stannate (CAS 12036-31-6), lead maleate (CAS 19136-			

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	34-6), lead citrate (CAS 14450-60-3);			
	22. Lead-copper chelates of beta-resorcylate or salicylates (CAS 68411-07-4);			
	23. Nitratomethylmethyloxetane or poly (3-Nitratomethyl, 3-methyl oxetane); (Poly-NIMMO) (NMMO) (CAS 84051-81-0);			
	24. 3-Nitraza-1,5-pentane diisocyanate (CAS 7406-61-9);			
	25. N-Methyl-p-Nitroaniline (CAS 100-15-2);			
	26. Organo-metallic coupling agents, specifically: (*a*) Neopentyl [diallyl] oxy, tri [dioctyl] phosphato titanate (CAS 103850-22-2); also known as titanium IV, 2,2[bis 2-propenolato-methyl, butanolato, tris (dioctyl) phosphato] (CAS 110438-25-0); or LICA 12 (CAS 103850-22-2);			
	(*b*) Titanium IV, [(2-propenolato-l) methyl, n-propanolatomethyl] butanolato-1, tris[dioctyl] pyrophosphate; or KR3538; (*c*) Titanium IV, [(2-propenolato-1) methyl, n-propanolatomethyl] butanolato-1, tris(dioctyl)phosphate;			
	27. Polycyanodifluoroaminoethyleneoxide (PCDE);			
	28. Polyfunctional aziridine amides with isophthalic, trimesic (BITA or butylene imine trimesamide), isocyanuric or trimethyladipic backbone structures and 2-methyl or 2-ethyl substitutions on the aziridine ring;			
	29. Polyglycidylnitrate or poly (nitratomethyl oxirane); (Poly-GLYN) (PGN) (CAS 27814-48-8);			
	30. Polynitroorthocarbonates;			
	31. Propyleneimine, 2-methylaziridine (CAS 75-55-8);			
	32. Tetraacetyldibenzylhexaazaisowurtzitane (TAIW);			
	33. Tetraethylenepentaamineacrylonitrile (TEPAN) (CAS 68412-45-3); cyanoethylated polyamines and their salts;			
	34. Tetraethylenepentaamineacrylonitrileglycidol (TEPANOL) (CAS 68412-46-4); cyanoethylated polyamines adducted with glycidol and their salts;			
	35. Triphenyl bismuth (TPB) (CAS 603-33-8);			
	36. Tris-1-(2-methyl)aziridinyl phosphine oxide (MAPO) (CAS			

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	57-39-6); bis(2-methyl aziridinyl) 2-(2-hydroxypropanoxy) propylamino phosphine oxide (BOBBA 8); and other MAPO derivatives;			
	37. 1,2,3-Tris[1,2-bis(difluoroamino)ethoxy] propane (CAS 53159-39-0); tris vinoxy propane adduct (TVOPA);			
	38. 1,3,5-trichlorobenzene (CAS 108-70-3);			
	39. 1,2,4 trihydroxybutane (1,2,4-butanetriol);			
	40. 1,3,5,7 tetraacetyl-1,3,5,7,-tetraaza cyclo-octane (TAT) (CAS 41378-98-7);			
	41. 1,4,5,8 Tetraazadecalin (CAS 5409-42-7);			
	42. Low (less than 10,000) molecular weight, alcohol-functionalised, poly (epichlorohydrin); poly (epichlorohydrindiol) and triol.			
	*Notes for **ML07**:* a. The military explosives and fuels containing the metals or alloys listed in **ML07.a.1** and **ML07.a.2** are controlled whether or not the metals or alloys are encapsulated in aluminium, magnesium, zirconium or beryllium. b. **ML07** does not control boron and boron carbide enriched with boron-10 (20% or more of total boron-10 content). c. Aircraft fuels controlled by **ML07.d.1** are finished products not their constituents. d. **ML07** does not control perforators specially designed for oil well logging e. **ML07** does not control the following substances when not compounded or mixed with military explosives or powdered metals: 1. Ammonium picrate; 2. Black powder; 3. Hexanitrodiphenylamine; 4. Difluoroamine (HNF_2); 5. Nitrostarch; 6. Potassium nitrate; 7. Tetranitronaphthalene; 8. Trinitroanisol;			

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	9. Trinitronaphthalene ; 10. Trinitroxylene; 11. Fuming nitric acid non-inhibited and not enriched; 12. Acetylene; 13. Propane; 14. Liquid oxygen; 15. Hydrogen peroxide in concentrations of less than 85%; 16. Misch metal; 17. N-pyrrolidinone; 1-methyl-2-pyrrolidinone; 18. Dioctylmaleate; 19. Ethylhexylacrylate; 20. Triethylaluminium (TEA), trimethylaluminium (TMA), and other pyrophoric metal alkyls and aryls of lithium, sodium, magnesium, zinc and boron; 21. Nitrocellulose; 22. Nitroglycerin (or glyceroltrinitrate, trinitroglycerine) (NG); 23. 2,4,6-trinitrotoluene (TNT); 24. Ethylenediaminedinitrate (EDDN); 25. Pentaerythritoltetranitrate (PETN); 26. Lead azide, normal and basic lead styphnate, and primary explosives or priming compositions containing azides or azide complexes; 27. Triethyleneglycoldinitrate (TEGDN); 28. 2,4,6-trinitroresorcinol (styphnic acid); 29. Diethyldiphenyl urea; dimethylidiphenyl urea; methylethyldiphenyl urea [Centralites]; 30. N, N-diphenylurea (unsymmetrical diphenylurea); 31. Methyl-N,N-diphenylurea (methyl unsymmetrical diphenylurea); 32. Ethyl-N,N-diphenylurea (ethyl unsymmetrical diphenylurea); 33. 2-Nitrodiphenylamine (2-NDPA); 34. 4-Nitrodiphenylamine (4-NDPA); 35. 2,2-dinitropropanol; 36. Chlorine trifluoride.			
ML08	**Vessels of war, special naval equipment and accessories, as follows, and components therefor, being vessels, equipment, accessories and components specially designed for military use:**			
	a. combatant vessels and vessels (surface or underwater) specially designed or modified for offensive or defensive action, whether or	**ML08A**	**8906.10.00**	▪ Warships

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	not converted to non-military use, regardless of current state of repair or operating condition, and whether or not they contain weapon delivery systems or armour, and hulls or parts of hulls for such vessels;			
	b. the following engines:	**ML08B**		
	1. diesel engines specially designed for submarines with both of the following characteristics: (*a*) a power output of 1.12 MW (1,500 hp.) or more; and (*b*) a rotary speed of 700 rpm or more;		**8408.10.90**	▪ Marine propulsion engines, of a power exceeding 750 kw
	2. electric motors specially designed for submarines having all of the following characteristics: (*a*) a power output of more than 0.75 MW (1,000 hp.); (*b*) quick reversing; (*c*) liquid cooled; and (*d*) totally enclosed;		**8501.34.10**	▪ Motors, of an output exceeding 375 kw
	3. non-magnetic diesel engines with a power output of 37.3 kW (50 hp.) or more and with a non-magnetic content in excess of 75% of total mass;		**8408.10.40**	▪ Marine propulsion engines, of a power exceeding 100 kw but not exceeding 750 kw
	c. underwater detection devices and controls thereof;	**ML08C**	**9014.80.90**	▪ Other, other instruments and appliances, for direction finding compasses, other navigational instruments and appliances.
	d. submarine and torpedo nets;	**ML08D**	**8906.10.00**	▪ Warships
	e. equipment for guidance and navigation;	**ML08E**	**9015.40.00** **9015.80.90**	▪ Photogrammetrical surveying instruments and appliances ▪ Other other instruments and appliances
	f. hull penetrators and connectors that enable interaction with equipment external to a vessel;	**ML08F**	**8544.20.10** **8544.20.20**	▪ Insulated cables fitted with connectors, for a voltage not exceeding 66,000 v ▪ Insulated cables not fitted with connectors, for a voltage not exceeding 66,000 v
			8544.20.30 **8544.20.40**	▪ Insulated cables fitted with connectors, for a voltage exceeding 66,000 v ▪ Insulated cables not fitted with connectors, for a voltage exceeding 66,000 v ▪ Telephone cables, submarine

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
			8544.41.11	
			8544.41.13	▪ Telegraph and radio relay cables, submarine
			8544.70.10	▪ Telephone, telegraph and radio relay cables, submarine
	g. silent bearings, with gas or magnetic suspension, active signature or vibration suppression controls, and equipment containing those bearings.	**ML08G**	**8482.10.00** **8482.20.00** **8482.30.00** **8482.40.00**	▪ Ball bearings ▪ Tapered roller bearings, including cone and tapered roller assemblies ▪ Spherical roller bearings ▪ Needle roller bearings
			8482.50.00	▪ Other cylindrical roller bearings
	*Note for **ML08**:* **ML08.f** includes connectors for vessels which are of the single-conductor, multi-conductor, coaxial or waveguide type, and hull penetrators for vessels, both of which are capable of remaining impervious to leakage from without and of retaining required characteristics at marine depths exceeding 100 m; and fibre-optic connectors and optical hull penetrators specially designed for "laser" beam transmission regardless of depth. It does not include ordinary propulsive shaft and hydrodynamic control-rod hull penetrators.		**8482.80.00** **8482.91.00** **8482.99.00**	▪ Other, including combined ball/roller bearings ▪ Balls, needles and rollers ▪ Other parts, of ball or roller bearings
ML09	**"Aircraft", unmanned airborne vehicles, aero-engines and "aircraft" equipment, and related equipment and components, as follows, being "aircraft", vehicles, aero-engines, equipment and components specially designed or modified for military use:**			
	a. combat "aircraft" and specially designed components therefor;	**ML09A**	**8802. 11.00** **8802.12.00**	▪ Helicopters, of an unladen weight not exceeding 2,000 kg ▪ Helicopters, of an unladen weight exceeding 2,000 kg
			8802.20.10 **8802.20.90**	▪ Aeroplanes,of an unladen weight not exceeding 2,000 kg ▪ Other aircrafts, of an unladen weight not exceeding 2,000 kg
			8802.30.10 **8802.30.90** **8802.40.10**	▪ Aeroplanes, of an unladen weight exceeding 2,000 kg but not exceeding 15,000 kg ▪ Other aircrafts, of an unladen weight exceeding 2,000 kg but not exceeding 15,000 kg ▪ Aeroplanes, of an unladen weight exceeding 15,000 kg ▪ Other aircraft, of an unladen weight exceeding 15,000 kg

Important Note:

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- The category code for items not in the control list but are known or suspected for weapons of mass desctuction purposes, is "WMD01"

MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
			8802.40.90	
			8803.10.10 **8803.10.90** **8803.20.10**	▪ Propellers and rotors and parts thereof : of helicopters or aeroplanes ▪ Other propellers and rotors and parts thereof ▪ Under-carriage and parts thereof : of helicopters, aeroplanes, balloons, gliders or kites
			8803.20.90 **8803.30.00** **8803.90.90**	▪ Other under-carriage and parts thereof ▪ Other parts of aeroplanes or helicopters ▪ Other of goods of heading 88.01 or 88.02
	b. other "aircraft" including military reconnaissance, assault, military training, transporting and air-dropping troops or military equipment, logistics support, and specially designed components therefor;	**ML09B**	**8802.11.00** **8802.12.00**	▪ Helicopters, of an unladen weight not exceeding 2,000 kg ▪ Helicopters, of an unladen weight exceeding 2,000 kg
			8802.20.10 **8802.20.90**	▪ Aeroplanes,of an unladen weight not exceeding 2,000 kg ▪ Other aircrafts, of an unladen weight not exceeding 2,000 kg
			8802.30.10 **8802.30.90** **8802.40.10** **8802.40.90**	▪ Aeroplanes, of an unladen weight exceeding 2,000 kg but not exceeding 15,000 kg ▪ Other aircrafts, of an unladen weight exceeding 2,000 kg but not exceeding 15,000 kg ▪ Aeroplanes, of an unladen weight exceeding 15,000 kg ▪ Other aircraft, of an unladen weight exceeding 15,000 kg
			8803.10.10 **8803.10.90** **8803.20.10**	▪ Propellers and rotors and parts thereof : of helicopters or aeroplanes ▪ Other propellers and rotors and parts thereof ▪ Under-carriage and parts thereof : of helicopters, aeroplanes, balloons, gliders or kites
			8803.20.90 **8803.30.00** **8803.90.90**	▪ Other under-carriage and parts thereof ▪ Other parts of aeroplanes or helicopters ▪ Other of goods of heading 88.01 or 88.02
	c. aero-engines and specially designed components therefor;	**ML09C**	**8407.10.00**	▪ Aircraft engines

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
			8409.10.00	▪ Parts for aircraft engines
	d. the following unmanned airborne vehicles and related equipment and specially designed components therefor:	**ML09D**	**8802. 11.00**	▪ Helicopters, of an unladen weight not exceeding 2,000 kg
	1. unmanned airborne vehicles including remotely piloted air vehicles (RPVs) and autonomous programmable vehicles; 2. associated launchers and ground support equipment; 3. related equipment for command and control;		**8802.12.00** **8802.20.10** **8802.20.90** **8802.30.10**	▪ Helicopters, of an unladen weight exceeding 2,000 kg ▪ Aeroplanes,of an unladen weight not exceeding 2,000 kg ▪ Other aircrafts, of an unladen weight not exceeding 2,000 kg ▪ Aeroplanes, of an unladen weight exceeding 2,000 kg but not exceeding 15,000 kg
			8802.30.90	▪ Other aircrafts, of an unladen weight exceeding 2,000 kg but not exceeding 15,000 kg
			8802.40.10 **8802.40.90** **8526.92.00**	▪ Aeroplanes, of an unladen weight exceeding 15,000 kg ▪ Other aircraft, of an unladen weight exceeding 15,000 kg ▪ Radio remote control apparatus
	e. airborne equipment, including airborne refuelling equipment, specially designed for use with an "aircraft" under Munition Code ML09.a or ML09.b or an aero-engine under Munition Code ML09.c, and specially designed components therefor or modified for military use;	**ML09E**	**8803.10.10** **8803.10.90** **8803.20.10**	▪ Propellers and rotors and parts thereof : of helicopters or aeroplanes ▪ Other propellers and rotors and parts thereof ▪ Under-carriage and parts thereof : of helicopters, aeroplanes, balloons, gliders or kites
			8803.20.90 **8803.30.00** **8803.90.90**	▪ Other under-carriage and parts thereof ▪ Other parts of aeroplanes or helicopters ▪ Other parts, of goods of heading 88.01 or 88.02
	f. pressure refuellers, pressure refuelling equipment, equipment specially designed to facilitate operations in confined areas and ground equipment, developed specially for "aircraft" under Munition Code ML09.a or ML09.b, or for aero-engines under Munition Code ML09.c;	**ML09F**	**8803.10.10** **8803.10.90** **8803.20.10**	▪ Propellers and rotors and parts thereof : of helicopters or aeroplanes ▪ Other propellers and rotors and parts thereof ▪ Under-carriage and parts thereof : of helicopters, aeroplanes, balloons, gliders or kites
			8803.20.90 **8803.30.00** **8803.90.90**	▪ Other under-carriage and parts thereof ▪ Other parts of aeroplanes or helicopters ▪ Other parts, of goods of heading 88.01 or 88.02

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	g. pressurised breathing equipment and partial pressure suits for use in "aircraft", anti-g suits, military crash helmets and protective masks, liquid oxygen converters used or intended to be used for "aircraft" or missiles, and catapults and cartridge actuated devices for emergency escape of personnel from "aircraft";	**ML09G**	**9020.00.10** **9020.00.90**	▪ Breathing appliances ▪ Other, breathing appliances and gas masks, excluding protective masks having neither mechanical parts not replaceable filters
	h. parachutes used or intended to be used for combat personnel, cargo dropping or "aircraft" deceleration, as follows:	**ML09H**		
	1. parachutes for — (*a*) pin point dropping of rangers; (*b*) dropping of paratroopers; 2. cargo parachutes;		**8804.00.10** **8804.00.90**	▪ Parachutes; parts and accessories of parachutes and parts of rotochutes ▪ Other parachutes (including dirigible parachutes and paragliders) and rotochutes; parts thereof and accessories thereto
	3. paragliders, drag parachutes, drogue parachutes for stabilisation and attitude control of dropping bodies, (for example, recovery capsules, ejection seats, bombs);		**8801.10.00** **8801.90.00**	▪ Gliders and hang gliders ▪ Other balloons and dirigibles; gliders, hang gliders and other non-powered aircraft
	4. drogue parachutes for use with ejection seat systems for deployment and inflation sequence regulation of emergency parachutes; 5. recovery parachutes for guided missiles, drones or space vehicles; 6. approach parachutes and landing deceleration parachutes; 7. other military parachutes;		**8804.00.10** **8804.00.90**	▪ Parachutes; parts and accessories of parachutes and parts of rotochutes ▪ Other parachutes (including dirigible parachutes and paragliders) and rotochutes; parts thereof and accessories thereto.
	i. automatic piloting systems for parachuted loads; equipment for controlled opening jumps at any height, including oxygen equipment.	**ML09I**	**8526.92.00**	▪ Radio remote control apparatus

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	*Notes for **ML09:*** a. **ML09.b** does **not** control "aircraft" or variants of those "aircraft" specially designed for military use which: 1. Are not configured for military use and are not fitted with equipment or attachments specially designed or modified for military use; and 2. Have been certified for civil use by the civil aviation authority in the recipient state. b. **ML09.c** does not control: 1. Aero-engines designed or modified for military use which have been certified by the civil aviation authority in the recipient state for use in "civil aircraft", or specially designed components therefor; 2. Reciprocating engines or specially designed components therefor. c. The control in **ML09.b** and **ML09.c** on specially designed components and related equipment for non-military "aircraft" or aero-engines modified for military use applies only to those military components and to military related equipment required for the modification to military use.			
ML10	**Electronic equipment, not specified elsewhere on the "Munitions List", specially designed for military use, and specially designed components as follows:**			
	a. electronic countermeasure and electronic counter-countermeasure equipment (that is, equipment designed to introduce extraneous or erroneous signals into radar or radio communication receivers or to hinder the reception, operation or effectiveness of adversary electronic receivers, including their countermeasure equipment), including jamming and counter-jamming equipment;	**ML10A**	**8525.20.99** **8526.91.90**	▪ Other transmission apparatus incorporating reception apparatus: [ITA1/A-049] [ex ITA1/B-197] ▪ Other radio navigational aid apparatus
	b. frequency agile tubes;	**ML10B**	**8525.20.99** **8526.91.90**	▪ Other transmission apparatus incorporating reception apparatus: [ITA1/A-049] [ex ITA1/B-197] ▪ Other radio navigational aid apparatus
	c. electronic systems or equipment designed either for surveillance and monitoring of the electro-magnetic spectrum for military intelligence or security purposes or for counteracting such surveillance and monitoring;	**ML10C**	**8525.20.99**	▪ Other transmission apparatus incorporating reception apparatus: [ITA1/A-049] [ex ITA1/B-197]

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	d. underwater countermeasures, including acoustic and magnetic jamming and decoy, equipment designed to introduce extraneous or erroneous signals into sonar receivers;	**ML10D**	**8525.20.99**	▪ Other transmission apparatus incorporating reception apparatus: [ITA1/A-049] [ex ITA1/B-197]
	e. data processing security equipment, data security equipment and transmission and signalling line security equipment, using ciphering processes:	**ML10E**	**8517.80.10** **8517.80.20** **8517.80.30**	▪ Scramblers, including speech inverters and on-line cypher equipment ▪ Data security equipment ▪ Encryption devices
	f. identification, authentication and keyloader equipment and key management, manufacturing and distribution equipment;	**ML10F**	**8517.80.20**	▪ Data security equipment
	g. other electronic equipment specially designed for military use.	**ML10G**	**8543.89.90**	▪ Other, machines and apparatus
ML11	**High velocity kinetic energy weapon systems and related equipment, as follows, and specially designed components therefor:**			
	a. kinetic energy weapon systems specially designed for destruction or effecting mission-abort of a target;	**ML11A**	**9301.90.00** **9306.90.00**	▪ Other artillery weapons (for eg. guns, howitzers and mortars) ▪ Other, other cartridges and parts thereof
	b. specially designed test and evaluation facilities and test models, including diagnostic instrumentation and targets, for dynamic testing of kinetic energy projectiles and systems.	**ML11B**	**9031.80.92** **9031.80.99**	▪ Other cable test equipment, electrically operated ▪ Other cable test equipment, not electrically operated

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	*Notes for **ML11*** a. ML11 does not control weapon systems using sub-calibre ammunition or employing solely chemical propulsion, and ammunition therefor, see ML01, ML02, ML03 and ML04 for these controls. b. **ML11** includes the following when specially designed for kinetic energy weapon systems: 1. Launch propulsion systems capable of accelerating masses larger than 0.1 g to velocities in excess of 1.6 km/s, in single or rapid fire modes; 2. Prime power generation, electric armour, energy storage, thermal management, conditioning, switching or fuel-handling equipment; and electrical interfaces between power supply, gun and other turret electric drive functions; 3. Target acquisition, tracking, fire control or damage assessment systems; 4. Homing seeker, guidance or divert propulsion (lateral acceleration) systems for projectiles.			
	c. **ML11** controls weapon systems using any of the following methods of propulsion: 1. Electromagnetic; 2. Electrothermal; 3. Plasma; 4. Light gas; or 5. Chemical (when used in combination with any of the above). d. ML11 does **not** control "technology" for magnetic induction for continuous propulsion of civil transport devices.			
ML12	**Armoured or protective equipment and constructions and components, as follows:**			
	a. armoured plate that is — 1. manufactured to comply with a military standard or specification; or 2. suitable for military use;	**ML12A**	**7326.90.90** **8710.00.00**	▪ Other, other articles of iron or steel ▪ Tanks and other armoured fighting vehicles, motorised, whether or not fitted with weapons, and parts of such vehicles
	b. constructions of metallic or non-metallic materials or combinations thereof specially designed to provide ballistic protection for	**ML12B**	**7326.90.90**	▪ Other, other articles of iron or steel

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	military systems, and specially designed components therefor;			
	c. military helmets;	**ML12C**	**6506.10.90** **6506.99.90**	▪ Other safety headgears ▪ Other, other headgear, whether or not lined or trimmed
	d. body armour manufactured according to military standards or specifications, or equivalent, and specially designed components therefor;	**ML12D**	**3926.20.50** **7019.90.10**	▪ Articles of apparel used for the protection from chemical substances, radiation and fire ▪ Bullet-proof vests and police shields
	e. flak suits manufactured according to military standards or specifications, or equivalent, and specially designed components therefor.	**ML12E**	**3926.20.50** **6812.50.00**	▪ Articles of apparel used for the protection from chemical substances, radiation and fire ▪ Clothing, clothing accessories, footwear and headgear
	*Notes for **ML12**:* a. **ML12.b** includes materials specially designed to form explosive reactive armour or to construct military shelters. b. **ML12.c** does **not** control conventional steel helmets, neither modified or designed to accept, nor equipped with any type of accessory device. c. **ML12.d** does **not** control individual suits of body armour for personal protection and accessories therefore when accompanying their users.			
ML13	**Specialised equipment for military training or for simulating military scenarios, and specially designed components and accessories therefor.**	**ML13A**	**8805.21.00** **9023.00.00**	▪ Air combat simulators and parts thereof ▪ Instruments, apparatus and models, designed for demonstrational purposes (for eg. in education or exhibitions), unsuitable for other uses
	Notes for ML13 **ML13** includes image generating and interactive environment systems for simulators when specially designed or modified for military use. *Technical Note:* *The term **specialised equipment for military training** includes military types of attack trainers, operational flight trainers, radar target trainers, radar target generators, gunnery training devices, anti-submarine warfare trainers, flight simulators (including human-rated centrifuges for pilot/astronaut training), radar trainers, instrument flight trainers, navigation trainers, missile launch trainers, target equipment, drone "aircraft", armament trainers, pilotless "aircraft" trainers and mobile training units.*			

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
ML14	**Imaging or countermeasure equipment, as follows, if specially designed for military use, and specially designed components and accessories therefor:**			
	a. recorders and image processing equipment;	**ML14A**	**8520.90.90** **8521.90.99** **8543.89.90**	▪ Other, sound recording apparatus ▪ Other, video recording or reproducing apparatus ▪ Other electrical machines and apparatus
	b. cameras, photographic equipment and film processing equipment;	**ML14B**	**9006.59.90** **9006.91.90** **9010.50.90** **9010.90.90**	▪ Other, other cameras ▪ Parts and accessories, for other cameras ▪ Other, other apparatus and equipment for photographic (including cinematographic) laboratories; negatoscopes ▪ Other parts and accessories, for other apparatus and equipment for photographic
	c. image intensifier equipment;	**ML14C**	**8540.20.10** **8540.20.90**	▪ Television camera tubes; image converters and intensifiers; other photo-cathode tubes, for use with articles of heading 85.25 ▪ Other television camera tubes; image converters and intensifiers; other photo-cathode tubes
	d. infrared or thermal imaging equipment;	**ML14D**	**9005.10.00** **9006.59.90** **9006.91.90** **9010.50.90** **9010.90.90**	▪ Binoculars ▪ Other, other cameras ▪ Parts and accessories, for other cameras ▪ Other, other apparatus and equipment for photographic (including cinematographic) laboratories; negatoscopes ▪ Other parts and accessories, for other apparatus and equipment for photographic laboratories
	e. imaging radar sensor equipment;	**ML14E**	**8526.10.90**	▪ Other radar apparatus
	f. countermeasure or counter-countermeasure equipment for any item under Munition Codes ML14.a to ML14.e.	**ML14F**	**8525.20.99**	▪ Other transmission apparatus incorporating reception apparatus; [ITA1/A-049] [ex ITA1/B-197]
	*Notes for **ML14**:* a. **ML14.f** includes equipment designed to degrade the operation or effectiveness of military imaging systems or to minimize such degrading effects. b. The term "specially designed components" includes the following when			

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	specially designed for military use: 1. Infrared image converter tubes; 2. Image intensifier tubes (other than first generation); 3. Microchannel plates; 4. Low-light-level television camera tubes; 5. Detector arrays (including electronic interconnection or read out systems); 6. Pyroelectric television camera tubes 7. Cooling systems for imaging systems; 8. Electrically triggered shutters of the photochromic or electro-optical type having a shutter speed of less than 100 µs, except in the case of shutters which are an essential part of a high speed camera; 9. Fibre optic image inverters; 10. Compound semiconductor photocathodes. c. **ML14** does **not** control "first generation image intensifier tubes" or equipment specially designed to incorporate "first generation image intensifier tubes". d. For the status of weapons sights incorporating "first generation image intensifier tubes" see **ML01.d**, **ML02.c** and **ML05.a**.			
ML15	**Forgings, castings and other unfinished items the use of which in any item on the "Munitions List" is identifiable by material composition, geometry or function, and which are specially designed for any item under the following Munition Codes:**			
	a. **ML01**	**ML15A**	)	
	b. **ML02**	**ML15B**	)	
	c. **ML03**	**ML15C**	)	
	d. **ML04**	**ML15D**	) **7326.90.90**	▪ Other, other articles of iron or steel
	e. **ML06**	**ML15E**	)	
	f. **ML08**	**ML15F**	)	
	g. **ML09**	**ML15G**	)	
	h. **ML11**	**ML15H**	)	
	i. **ML18**	**ML15I**	)	
ML16	**Miscellaneous equipment, materials and libraries, as follows, and specially designed components therefor:**			
	a. the following self-contained diving and underwater swimming	**ML16A**	**9020.00.10**	▪ Breathing appliances

Important Note:

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- The category code for items not in the control list but are known or suspected for weapons of mass desctuction purposes, is "WMD01"

MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	apparatus: 1. closed or semi-closed circuit (rebreathing) apparatus specially designed for military use (that is, specially designed to be non-magnetic); 2. specially designed components for use in the conversion of open-circuit apparatus to military use; 3. articles designed exclusively for military use with self-contained diving and underwater swimming apparatus;		**9020.00.20** **9020.00.90**	▪ Divers' headgear with breathing apparatus ▪ Other, other breathing appliances and gas masks, excluding protective masks having neither mechanical parts nor replaceable filters
	b. construction equipment specially designed for military use;	**ML16B**	**8426.11.00** **8426.12.00** **8426.19.00** **8426.20.00** **8426.30.00** **8426.41.00** **8426.49.10** **8426.49.90** **8426.91.00** **8426.99.10** **8426.99.90** **8429.11.10** **8429.11.90** **8429.19.10** **8429.19.90** **8429.20.00** **8429.30.00** **8429.40.10** **8429.40.20** **8429.40.30** **8429.51.00**	▪ Overhead travelling cranes on fixed support ▪ Mobile lifting frames on tyres and straddle carriers ▪ Other, overhead travelling cranes, transporter cranes, gantry cranes, bridge cranes ▪ Tower cranes ▪ Portal or pedestal jib cranes ▪ Other machinery, self-propelled on tyres ▪ Other machinery, self-propelled, ship's derricks ▪ Other, other machinery, self-propelled ▪ Other machinery designed for mounting on road vehicles ▪ Other machinery, ship's derricks ▪ Other, other machinery, of cranes and mobile lifting cranes ▪ Track laying bulldozers ▪ Other track laying, angledozers ▪ Other, bulldozers ▪ Other, other angledozers ▪ Graders and levellers ▪ Scrapers ▪ Road rollers, of vibrating gross weight not exceeding 20 t ▪ Road rollers, of vibrating gross weight exceeding 20 t ▪ Tamping machines ▪ Front-end shovel loaders ▪ Mechanical shovels and excavators ▪ Other,machinery with a 360 deg. revolving superstructure ▪ Other, mechanical shovels and excavators ▪ Other, shovel loaders

Important Note:

- The HS code only serve as useful guide and are not exhaustive. An item is controlled if it meets the technical specifications indicated in column 2 "Description of Item".
- The category code for items not in the control list but are known or suspected for weapons of mass desctuction purposes, is "WMD01"

MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
			8429.52.10 **8429.52.90** **8429.59.10** **8429.59.90**	
	c. fittings, coatings and treatments for signature suppression, specially designed for military use;	**ML16C**	**3208.90.90** **8710.00.00**	▪ Other, other paints ▪ Tanks and other armoured fighting vehicles, motorised, whether or not fitted with weapons, and parts of such vehicles
	d. field engineer equipment specially designed for use in a combat zone;	**ML16D**	**8426.11.00** **8426.12.00**	▪ Overhead travelling cranes on fixed support ▪ Mobile lifting frames on tyres and straddle carriers
			8426.19.00 **8426.20.00** **8426.30.00** **8426.41.00** **8426.49.10** **8426.49.90** **8426.91.00** **8426.99.10** **8426.99.90** **8429.11.10** **8429.11.90** **8429.19.10** **8429.19.90** **8429.20.00** **8429.30.00** **8429.40.10** **8429.40.20**	▪ Other,overhead travelling cranes, transporter cranes, gantry cranes, bridge cranes ▪ Tower cranes ▪ Portal or pedestal jib cranes ▪ Other machinery, self-propelled on tyres ▪ Other machinery, self-propelled, ship's derricks ▪ Other, other machinery, self-propelled ▪ Other machinery designed for mounting on road vehicles ▪ Other machinery, ship's derricks ▪ Other, other machinery, of cranes and mobile lifting cranes ▪ Track laying bulldozers ▪ Other track laying, angledozers ▪ Other, bulldozers ▪ Other, other angledozers ▪ Graders and levellers ▪ Scrapers ▪ Road rollers, of vibrating gross weight not exceeding 20 t ▪ Road rollers, of vibrating gross weight exceeding 20 t ▪ Tamping machines ▪ Front-end shovel loaders ▪ Mechanical shovels and excavators ▪ Other,machinery with a 360 deg. revolving superstructure ▪ Other, mechanical shovels and excavators ▪ Other, shovel loaders

Important Note:

- The HS code only serve as useful guide and are not exhaustive. An item is controlled if it meets the technical specifications indicated in column 2 "Description of Item".
- The category code for items not in the control list but are known or suspected for weapons of mass desctuction purposes, is "WMD01"

MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
			8429.40.30 **8429.51.00** **8429.52.10** **8429.52.90** **8429.59.10** **8429.59.90** **8907.90.90**	▪ Other, floating structures
	e. "robots", "robot" controllers and "robot" controllers and "end-effectors", having any of the following characteristics: 1. specially designed for military use; 2. incorporating means of protecting hydraulic lines against externally induced punctures caused by ballistic fragments (for example, incorporating self-sealing lines) and designed to use hydraulic fluids with flash points higher than 839 K (566^{0}C); or	**ML16E**	**8479.50.90**	▪ Other industrial robots, not elsewhere specified or included
	3. specially designed or rated for operating in an electro-magnetic pulse (EMP) environment;			4.
	f. libraries (parametric technical databases) specially designed for military use with items on the "Munitions List";	**ML16F**	**4901.99.11** **4901.99.19** **8524.31.90** **8524.99.90**	5. Wholly or essentially in the official language of the importing country 6. Other educational, technical, scientific, historical or cultural books, including children or legal books and economic books 7. Other discs for laser reading systems ***8.*** Other records, tapes and other recorded media for sound or other similarly recorded phenomena, including matrices and masters for the production if records, but excluding products of Chapter 37
	g. nuclear power generating equipment or propulsion equipment, including "nuclear reactors", specially designed for military use and components therefor specially designed or modified for military use;	**ML16G**	**8401.10.00** **8401.40.00**	▪ Nuclear reactors ▪ Parts of nuclear reactors
	h. equipment and material, coated or treated for signature suppression, specially designed for military use, other than those on the "Munitions List";	**ML16H**	**5907.00.90**	▪ Other, textile fabrics otherwise impregnated, coated or covered
	i. simulators specially designed for military "nuclear reactors";	**ML16I**	**9023.00.00**	▪ Instruments, apparatus and models, designed for demonstrational purposes (for eg. in education or

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
				exhibitions), unsuitable for other uses
	j. mobile repair shops specially designed to service military equipment;	**ML16J**	**8705.90.40** **8705.90.90**	▪ Mobile manufacture units for explosives ▪ Other special purposes motor vehicles, other than those principally designed for the transport of persons or goods (for eg. breakdown lorries, crane lorries, fire fighting vehicles, concrete-mixer lorries, road sweeper lorries, spraying lorries, mobile workshops, mobile radiological units)
	k. field generators specially designed for military use;	**ML16K**	**8502.11.00** **8502.20.40** **8502.39.10** **8502.39.20** **8502.39.30**	▪ Generating sets with compression - ignition internal combustion piston engines (diesel or semi-diesel engines of an output not exceeding 75 kVA) ▪ Generating sets with spark-ignition internal combustion piston engines of an output exceeding 10,000 kVA ▪ Other generating sets wind-powered of an output not exceeding 10 kVA ▪ Other generating sets wind-powered of an output exceeding 10 kVA but not exceeding 10,000 kVA ▪ Other generating sets wind-powered of an output exceeding 10,000 kVA
	l. containers specially designed for military use;	**ML16L**	**8609.00.11** **8609.00.19** **8609.00.91** **8609.00.99**	▪ Dry containers ▪ Other containers of metal ▪ Dry containers ▪ Other containers (including containers for transport of fluids) specially designed and equipped for carriage by one or more modes of transport
	m. bridges specially designed for military use;	**ML16M**	**7308.10.10** **7308.10.90**	▪ Prefabricated modular type joined by shear connectors ▪ Other than prefabricated modular type joined by shear connectors
	n. test models specially designed for the "development" of any item under Munition Codes ML04, ML06, ML08 and ML09.	**ML16N**	))	
		ML16O	)	
		ML16P	) **9023.00.00**	▪ Instruments, apparatus and models, designed for demonstrational purposes (for eg. in education or
		ML16Q		

Important Note:

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- The category code for items not in the control list but are known or suspected for weapons of mass desctuction purposes, is "WMD01"

MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
		ML16R	)	exhibitions), unsuitable for other uses
		ML16S	)	
		ML16T	)	
	*Note for **ML16**:* *Technical Note:* *For the purpose of **ML16,** the term **library** (parametric technical database) means a collection of technical information of a military nature, reference to which may enhance the performance of military equipment or systems.*			
ML17	**The following equipment:**			
	a. specially designed or modified production equipment for the production of items on the "Munitions List", and specially designed components therefor;			
	b. specially designed environmental test facilities and specially designed equipment therefor, for the certification, qualification, or testing of items on the "Munitions List".			*[Declarant needs to provide technical specifications]*
	The following "technology": c. specific production "technology", even if the equipment with which such "technology" is to be used is not on the "Munitions List";			
	d. "technology" specific to the design of, the assembly of components into, and the operation, maintenance and repair of complete production installations even if the components themselves are not on the "Munitions List",			
	if the technology is related to any item under the following Munition Codes:			
	a. **ML01**	**ML17A**	)	
	b. **ML02**	**ML17B**	)	
	c. **ML03**	**ML17C**	)	
	d. **ML04**	**ML17D**	)	
	e. **ML05**	**ML17E**	)	
	f. **ML06**	**ML17F**	)	
	g. **ML07**	**ML17G**	)	
	h. **ML08**	**ML17H**	)	
	i. **ML09**	**ML17I**	)	*[Declarant needs to provide technical specifications]*
	j. **ML10**	**ML17J**	)	

Important Note:

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- The category code for items not in the control list but are known or suspected for weapons of mass desctuction purposes, is "WMD01"

MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	k. **ML11**	**ML17K**	)	
	l. **ML12**	**ML17L**	)	
	m. **ML13**	**ML17M**	)	
	n. **ML14**	**ML17N**	)	
	o. **ML15**	**ML17O**	)	
	p. **ML16**	**ML17P**	)	
	q. **ML18**	**ML17Q**	)	
	r. **ML19**	**ML17R**	)	
	*Notes for **ML17**:* a. **ML17.I** and **ML17.II** include the following equipment: 1. Continuous nitrators 2. Centrifugal testing apparatus or equipment having any of the following characteristics: (a) Driven by a motor or motors having a total rated horsepower of more than 298 kW (400 hp); (b) Capable of carrying a payload of 113 kg or more; or (c) Capable of exerting a centrifugal acceleration of 8 g or more on a payload of 91kg or more. 3. Dehydration presses. 4. Screw extruders specially designed or modified for military explosive extrusion. 5. Cutting machines for the sizing of extruded propellants. 6. Sweetie barrels (tumblers) 1.85 m or more in diameter and having over 227 kg product capacity. 7. Continuous mixers for solid propellants. 8. Fluid energy mills for grinding or milling the ingredients of military explosives. 9. Equipment to achieve both sphericity and uniform particle size in metal powder listed in **ML07.a.1** 10. Convection current converters for the conversion of materials listed in **ML07.a.6** b. **ML17.IV** does **not** control "technology" for civil purposes, such as agricultural, pharmaceutical, medical, veterinary, environmental, waste management, or in the food industry. *Technical Note:* *For the purposes of **ML17**, the term **production** means design, examination, manufacture, testing and checking. The definition in Schedule 1 does not apply here..*			
ML18	**Directed energy weapon systems (DEW), related or countermeasure**			

Important Note:

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	equipment and test models, as follows, and specially designed components therefor:			
	a. "laser" systems specially designed for destruction or effecting mission-abort of a target;	**ML18A**	**9013.20.00**	▪ Lasers, other than laser diodes
	b. particle beam systems capable of destruction or effecting mission-abort of a target;	**ML18B**	**9013.20.00**	▪ Lasers, other than laser diodes
	c. high power radio-frequency (RF) systems capable of destruction or effecting mission-abort of a target;	**ML18C**	**8525.20.99**	▪ Other transmission apparatus incorporating reception apparatus [ITA1/A-049] [ex ITA1/B-197]
	d. equipment specially designed for the detection or identification of, or defence against, systems under Munition Code ML18.a, ML18.b or ML18.c;	**ML18D**	**8543.89.90**	▪ Other, other machines and apparatus
	e. physical test models and related test results for the systems, equipment and components under this Munition Code;	**ML18E**	**9023.00.00**	▪ Instruments, apparatus and models, designed for demonstrational purposes (for e.g. in education or exhibitions), unsuitable for other uses
	f. continuous wave or pulsed "laser" systems especially designed to cause permanent blindness to unenhanced vision; i.e. to the naked eye or to the eye with corrective eyesight devices.	**ML18F**	**9013.20.00**	▪ Lasers, other than laser diodes
	*Notes for **ML18**:* a. Directed energy weapon systems controlled by **ML18** include systems whose capability is derived from the controlled application of: 1. "Lasers" of sufficient continuous wave or pulsed power to effect destruction similar to the manner of conventional ammunition; 2. Particle accelerators which project a charged or neutral particle beam with destructive power; 3. High pulsed power or high average power radio frequency beam transmitters which produce fields sufficiently intense to disable electronic circuitry at a distant target. b. **ML18** includes the following when specially designed for directed energy weapon systems: 1. Prime power generation, energy storage, switching, power conditioning or fuel-handling equipment; 2. Target acquisition or tracking systems; 3. Systems capable of assessing target damage, destruction or mission-abort;			

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- The category code for items not in the control list but are known or suspected for weapons of mass desctuction purposes, is "WMD01"

MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	4. Beam-handling, propagation or pointing equipment; 5. Equipment with rapid beam slew capability for rapid multiple target operations; 6. Adaptive optics and phase conjugators; 7. Current injectors for negative hydrogen ion beams; 8. "Space qualified" accelerator components; 9. Negative ion beam funnelling equipment; 10. Equipment for controlling and slewing a high energy ion beam; 11. "Space qualified" foils for neutralising negative hydrogen isotope beams.			
ML19	**Cryogenic and "superconductive" equipment, as follows, and specially designed components and accessories therefor:**			
	a. equipment specially designed or configured to be installed in a vehicle for military ground, marine, airborne or space applications, capable of operating while in motion and of producing or maintaining temperatures below 103K (-170°C);	**ML19A**	**8710.00.00** **8803.30.00**	▪ Tanks and other armoured fighting vehicles, motorised, whether or not fitted with weapons, and parts of such vehicles ▪ Other parts of aeroplanes and helicopter
			8803.90.10 **8803.90.90**	▪ Parts of telecommunication satellites [ITA/2] ▪ Other parts of goods of heading 88.01 or 88.02
	b. "superconductive" electrical equipment (rotating machinery and transformers) specially designed or configured to be installed in a vehicle for military ground, marine, airborne or space applications, capable of operating while in motion.	**ML19B**	**8543.89.90**	▪ Other, other machines and apparatus
	*Notes for **ML19**:* a. **ML19.a** includes mobile systems incorporating or employing accessories or components manufactured from non-metallic or non-electrical conductive materials, such as plastics or epoxy-impregnated materials. b. **ML19.b** does **not** control direct-current hybrid homopolar generators that have single-pole normal metal armatures which rotate in a magnetic field produced by superconducting windings, provided those windings are the only superconducting component in the generator.			

Important Note:

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- The category code for items not in the control list but are known or suspected for weapons of mass desctuction purposes, is "WMD01"

MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
ML20	**The following "software":**			
	a. "software" specially designed or modified for the "development", "production" or "use" of any equipment or materials under the following Munition Codes:			
	1. **ML01**	**ML20A**	)	
	2. **ML02**	**ML20B**	)	
	3. **ML03**	**ML20C**	)	
	4. **ML04**	**ML20D**	)	
	5. **ML05**	**ML20E**	)	
	6. **ML06**	**ML20F**	)	
	7. **ML07**	**ML20G**	)	*[Declarant needs to provide technical specifications]*
	8. **ML08**	**ML20H**	)	
	9. **ML09**	**ML20I**	)	
	10. **ML10**	**ML20J**	)	
	11. **ML11**	**ML20K**	)	
	12. **ML12**	**ML20L**	)	
	13. **ML13**	**ML20M**	)	
	14. **ML14**	**ML20N**	)	
	15. **ML15**	**ML20O**	)	
	16. **ML16**	**ML20P**	)	
	17. **ML17**	**ML20Q**	)	
	18. **ML18**	**ML20R**	)	
	19. **ML19**	**ML20S**	)	
	b. "software" specially designed for — 1. modelling, simulation or evaluation of military weapon systems; 2. "development", monitoring, maintenance or up-dating of "software" embedded in military weapon systems; 3. modelling or simulating military operation scenarios, not under Munition Code ML13; 4. Command, Communications, Control and Intelligence (C^3I) or Command, Communications, Control, Computer and Intelligence (C^4I) applications;	**ML20T**		*[Declarant needs to provide technical specifications]*

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MUNITION CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	c. "software" for determining the effects of conventional, nuclear, chemical or biological warfare weapons;	**ML20U**		
	d. "software", not included under Munition Code ML20.a, ML20.b.1 or ML20.b.2, specially designed or modified to enable any item not on the "Munitions List" to perform the military functions of any item under Munition Code ML05, ML08.c, ML08.e, ML09.c, ML10, ML13, ML14, ML16.i or ML17.	**ML20V**		
ML21	**"Technology" for the "development", "production" or "use" of items on the "Munitions List", other than "technology" under Munition Code ML17, and which is related to any item under the following Munition Codes:**			
	1. **ML01**	**ML21A**	)	
	2. **ML02**	**ML21B**	)	
	3. **ML03**	**ML21C**	)	
	4. **ML04**	**ML21D**	)	
	5. **ML05**	**ML21E**	)	
	6. **ML06**	**ML21F**	)	
	7. **ML07**	**ML21G**	)	
	8. **ML08**	**ML21H**	)	
	9. **ML09**	**ML21I**	)	*[Declarant needs to provide technical specificationbs.]*
	10. **ML10**	**ML21J**	)	
	11. **ML11**	**ML21K**	)	
	12. **ML12**	**ML21L**	)	
	13. **ML13**	**ML21M**	)	
	14. **ML14**	**ML21N**	)	
	15. **ML15**	**ML21O**	)	
	16. **ML16**	**ML21P**	)	
	17. **ML18**	**ML21Q**	)	
	18. **ML19**	**ML21R**	)	
	19. **ML20**	**ML21S**	)	

Important Note:

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- The category code for items not in the control list but are known or suspected for weapons of mass desctuction purposes, is "WMD01"

دولة الإمارات العربية المتحدة
UNITED ARAB EMIRATES

الجدول 2

Schedule 2

Schedule 2

A. Toxic chemicals

		(CAS Registry number)
(1)	Amiton: O,O-Diethyl S-[2-(diethylamino)ethyl] phosphorothiolate	(78-53-5)
	and corresponding alkylated or protonated salts	
(2)	PFIB: 1,1,3,3,3-Pentafluoro-2-(trifluoromethyl)-1-propene	(382-21-8)
(3)	BZ: 3-Quinuclidinyl benzilate (*)	(6581-06-2)

B. Precursors

		(CAS Registry number)
(4)	Chemicals, except for those listed in Schedule 1, containing a phosphorus atom to which is bonded one methyl, ethyl or propyl (normal or iso) group but not further carbon atoms,	
e.g	Methylphosphonyl dichloride	(676-97-1)
	Dimethyl methylphosphonate	(756-79-6)
Exemption: Fonofos:	O-Ethyl S-phenyl ethylphosphonothiolothionate	(944-22-9)
(5)	N,N-Dialkyl (Me, Et, n-Pr or i-Pr) phosphoramidic dihalides	
(6)	Dialkyl (Me, Et, n-Pr or i-Pr) N,N-dialkyl (Me, Et, n-Pr or i-Pr)-phosphoramidates	
(7)	Arsenic trichloride	(7784-34-1)
(8)	2,2-Diphenyl-2-hydroxyacetic acid	(76-93-7)
(9)	Quinuclidin-3-ol	(1619-34-7)
(10)	N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethyl-2-chlorides and corresponding protonated salts	
(11)	N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-ols and corresponding protonated salts	
Exemptions:	N,N-Dimethylaminoethanol	(108-01-0)
	and corresponding protonated salts	
	N,N-Diethylaminoethanol	(100-37-8)
	and corresponding protonated salts	
(12)	N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-thiols and corresponding protonated salts	

(13)	Thiodiglycol: Bis(2-hydroxyethyl)sulfide	(111-48-8)
(14)	Pinacolyl alcohol: 3,3-Dimethylbutan-2-ol	(464-07-3)

TABLE 2: LIST OF APPROVED GC(RI) DATA

OPCW Code	Chemical Name	Schedule	Column	RI(a)	RI(b)	Associated Chemical Schedule
17-4-0078	Butyl bis(2-chlorovinyl)arsinothiolite	DS	1	1697	1702	1.A.05
17-4-0080	Tributyl arsenotrithiolite	DS	1	2170		2.B.07

Note: A "1" under the "Column" heading in this table means an HP5 or an SE54 column.

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STRATEGIC GOODS CONTROL LIST
PART II OF THE SCHEDULE OF THE STRATEGIC GOODS (CONTROL) ACT

II. CHEMICAL AND BIOLOGICAL LIST

CHEM-BIO CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
BL01	**The following biological agents and toxins:**			
	*Notes for **BL01**:* Biological agents mean any organism, either natural or modified, which can cause death, disease and/or incapacitate human beings and animals or which can also cause death, disease or harm to plants. Toxin means any compound originated from any organisms including microorganisms, animals or plants, whatever their method of production, whether natural or modified, or which are chemically synthesised, which can cause death, disease or other harms to human beings, animals or plants.			
BL01-A	**HUMAN AND ZOONOTIC PATHOGENS**			
	Viruses			
	a. Crimean-Congo haemorrhagic fever virus;	**BL01A01**	**3002.90.00**	▪ Other, human blood; animal blood prepared for therapeutic, prophylactic or diagnostic uses; toxins, cultures of micro-organisms (excluding yeasts and similar products) - i.e. other than antisera and other blood fractions, vaccines for human medicine and vaccines for veterinary medicine
	b. Eastern equine encephalitis virus;	**BL01A02**		
	c. Ebola virus;	**BL01A03**		
	d. Sin Nombre virus;	**BL01A04**		
	e. Junin virus;	**BL01A05**		
	f. Lassa fever virus;	**BL01A06**		
	g. Machupo virus;	**BL01A07**		
	h. Marburg virus;	**BL01A08**		

Important Note:

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CHEM-BIO CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	i. Rift Valley fever virus;	**BL01A09**		
	j. Tick-borne encephalitis virus;	**BL01A10**		
	k. Variola major virus (Smallpox virus);	**BL01A11**		
	l. Venezuelan equine encephalitis virus;	**BL01A12**		
	m. Western equine encephalitis virus;	**BL01A13**		
	n. Yellow fever virus;	**BL01A14**		
	o. Monkeypox virus.	**BL01A15**		
	Bacteria			
	a. Bacillus anthracis;	**BL01A16**		
	b. Brucella abortus;	**BL01A17**		
	c. Brucella melitensis;	**BL01A18**		
	d. Brucella suis;	**BL01A19**		
	e. Burkholderia mallei;	**BL01A20**		
	f. Burkholderia pseudomallei;	**BL01A21**		
	g. Francisella tularensis;	**BL01A22**		
	h. Yersinia pestis;	**BL01A23**		
	i. Coxiella burnetti;	**BL01A24**		
	j. Rickettsia prowazekii;	**BL01A25**		

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CHEM-BIO CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	k. Rickettsia rickettsii.	**BL01A26**		
	Protozoa			
	a. Naegleria fowleri;	**BL01A27**		
	b. Naegleria australiensis.	**BL01A28**		
BL01-B	**ANIMAL PATHOGENS**			
	Bovine pathogens			
	a. Contagious bovine (pleuropheumonia)/mycoplasma mycoides var mycoides;	**BL01B01**	**3002.90.00**	▪ Other, human blood; animal blood prepared for therapeutic, prophylactic or diagnostic uses; toxins, cultures of micro-organisms (excluding yeasts and similar products) - i.e. other than antisera and other blood fractions, vaccines for human medicine and vaccines for veterinary medicine
	b. Foot and mouth disease virus (including the ovine and swine strains of the virus);	**BL01B02**		
	c. Rinderpest virus;	**BL01B03**		
	d. Vesicular stomatitis virus.	**BL01B04**		
	Ovine pathogens			
	a. Peste des petits ruminants virus;	**BL01B05**		
	b. Blue tongue virus.	**BL01B06**		
	Swine pathogens			
	a. African swine fever virus;	**BL01B07**		
	b. Teschen disease virus (porcine enterovirus type 1).	**BL01B08**		
	Avian pathogens			
	a. Avian influenza virus (fowl plague virus);	**BL01B09**		

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CHEM-BIO CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	b. Newcastle disease virus.	**BL01B10**		
	Equine pathogens			
	a. African horse sickness virus.	**BL01B11**		
BL01-C	**PLANT PATHOGENS**			
	Cereal pathogens		**3002.90.00**	▪ Other, human blood; animal blood prepared for therapeutic, prophylactic or diagnostic uses; toxins, cultures of micro-organisms (excluding yeasts and similar products) - i.e. other than antisera and other blood fractions, vaccines for human medicine and vaccines for veterinary medicine
	a. Tilletia indica.	**BL01C01**		
	Sugar cane pathogens			
	a. Sugar cane Fiji disease virus;	**BL01C02**		
	b. Xanthomonas albilineans.	**BL01C03**		
	Cash crop pathogens			
	a. Colletotrichum coffeanum var. virulans;	**BL01C04**		
	b. Erwinia amylovora;	**BL01C05**		
	c. Ralstonia solanacearum;	**BL01C06**		
	d. Peronospora hyoscyami de Bary f.sp. tabacina (Adam) skalicky.	**BL01C07**		
	Forest pathogens			
	a. Dothistroma pini (Scirrhia pini).	**BL01C08**		
BL01-D	D. TOXINS		**3002.90.00**	▪ Other, human blood; animal blood prepared for therapeutic, prophylactic or diagnostic uses; toxins, cultures of micro-organisms (excluding yeasts and similar products) - i.e. other than antisera and other blood fractions, vaccines for human medicine and vaccines for veterinary medicine
	Bacteriotoxins			
	a. Botulinum toxins;	**BL01D01**		
	b. Clostridium perfringens toxins;	**BL01D02**		

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CHEM-BIO CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	c. Staphylococcal enterotoxins;	**BL01D03**		
	d. Shigatoxins.	**BL01D04**		
	Phycotoxins			
	a. Anatoxins;	**BL01D05**		
	b. Ciguatoxins;	**BL01D06**		
	c. Saxitoxins;	**BL01D07**		
	d. Abrins;	**BL01D08**		
	e. Ricins.	**BL01D09**		
	Mycotoxins			
	a. Trichothecene toxins.	**BL01D10**		
	Zootoxins			
	a. Bungarotoxins.	**BL01D11**		
CL01	**Toxic Chemicals and its precursors (binary and key precursors) and chemical warfare agents as follows:**			
	*Notes for **CL01-**:* Toxic chemicals mean any chemicals, which through its chemical action on life processes can cause death, temporary incapacitation or permanent harm to humans and animals. This includes all such chemicals, regardless of their origin or of their method of production, and regardless of whether they are produced in facilitates, in munitions or elsewhere. Precursor means any chemical reactant, which takes part at any stage in the production by whatever method of a toxic chemical. This includes key component of a binary or multi-component chemical system.			
CL01-1A	**1A – TOXIC CHEMICALS**			

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CHEM-BIO CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	1. O-Alkyl (equal to or less than C10, including cycloalkyl) alkyl (Methyl, Ethyl, n-Propyl or Isopropyl)-phosphonofluoridates. E.g: Sarin(GB):O-Isopropyl methylphosphonofluoridate (CAS 107-44-8); Soman(GD):O-Pinacolyl methylphosphonofluoridate (CAS 96-64-0);	**CL011A01**	**2931.00.90**	• Other, other organic-inorganic compounds
	2. O-Alkyl (equal to or less than C10, including cycloalkyl) N, N-dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl) phosphoramidocyanidates. E.g: Tabun(GA):O-Ethyl N,N-dimethylphosphoramidocyanidate (CAS 77-81-6);	**CL01-1A/02**	**2931.00.90**	• Other, other organic-inorganic compounds
	3. O-Alkyl (H or equal to or less than C10, including cycloalkyl) S-2-dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl)-aminoethyl alkyl (Methyl, Ethyl, n-Propyl or Isopropyl) phosphonothiolates and corresponding alkylated and protonated salts, E.g.: VX:O-Ethyl S-2-diisopropylaminoethyl methyl phosphonothiolate (CAS 50782-69-9);	**CL011A03**	**2930.90.00**	• Other organo-sulphur compounds
	4. Sulphur mustards. 2-Chloroethylchloromethylsulphide (CAS 2625-76-5); Mustard gas (H): Bis(2-chloroethyl) sulphide (CAS 505-60-2); Bis(2-chloroethylthio) methane (CAS 63869-13-6); 1,2-bis (2-chloroethylthio) ethane (CAS 3563-36-8) ; 1,3-bis (2-chloroethylthio) -n-propane (CAS 63905-10-2); 1,4-bis (2-chloroethylthio) -n-butane (CAS 142868-93-7); 1,5-bis (2-chloroethylthio) -n-pentane (CAS 142868-94-8); Bis (2-chloroethylthiomethyl) ether (CAS 63918-90-1); O-Mustard: Bis (2-chloroethylthioethyl) ether (CAS 63918-89-8);	**CL011A04**	**2930.90.00**	• Other organo-sulphur compounds
	5. Lewisites: a. Lewisites 1: 2-chlorovinyldichloroarsine (CAS 541-25-3); b. Lewisites 2: Bis (2-chlorovinyl) chloroarsine (CAS 40334-69-8); c. Lewisites 3: Tris (2-chlorovinyl) arsine (CAS 40334-70-1);	**CL011A05**	**2931.00.90**	• Other, human blood; animal blood prepared for therapeutic, prophylactic or diagnostic uses; toxins, cultures of micro-organisms (excluding yeasts and similar products) - i.e. other than antisera and other blood fractions, vaccines for human medicine and vaccines for veterinary medicine
	6. Nitrogen mustards: a. HN1:bis (2-chloroethyl) ethylamine (CAS 538-07-8); b. HN2:bis (2-chloroethyl) methylamine (CAS 51-75-2); c. HN3:tris (2-chloroethyl) amine (CAS 555-77-1);	**CL011A06**	**2921.19.00**	• Other acyclic monpamines and their derivatives; salts thereof
	7. Saxitoxin [CAS 35523– 89-8];	**CL011A07**	**3002.90.00**	• Other, human blood; animal blood prepared for therapeutic, prophylactic or diagnostic uses; toxins, cultures of micro-organisms (excluding yeasts and

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CHEM-BIO CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
				similar products) - i.e. other than antisera and other blood fractions, vaccines for human medicine and vaccines for veterinary medicine
	8. Ricin [CAS 9009-86-3];	**CL011A08**	**3002.90.00**	• Other, human blood; animal blood prepared for therapeutic, prophylactic or diagnostic uses; toxins, cultures of micro-organisms (excluding yeasts and similar products) - i.e. other than antisera and other blood fractions, vaccines for human medicine and vaccines for veterinary medicine
CL01-1B	**1B – PRECURSORS**			
	1. Alkyl (Me, Et, n-Pr or i-Pr) phosphonyldifluorides a. Eg. DF: Methylphosphonyldifluoride (CAS 676-99-3);	**CL011B01**	**2931.00.90**	• Other organo-inorganic compounds
	2. O-Alkyl (H or ≤ C10, incl. cycloalkyl) O-2-dialkyl (Me, Et, n-Pr or i-Pr)-aminoethyl alkyl (Me, Et, n-Pr or i-Pr) phosphonites and corresponding alkylated or protonated salts; a. Eg. QL: O-Ethyl O-2 diisopropylaminoethyl methylphosphonite (CAS 57856-11-8);	**CL011B02**	**2931.00.90**	• Other organo-inorganic compounds
	3. Chlorosarin: O-Isopropyl methylphosphonochloridate (CAS 1445-76-7);	**CL011B03**	**2931.00.90**	• Other organo-inorganic compounds
	4. Chlorosoman: O-Pinacolyl methylphosphonochloridate (CAS 7040-57-5);	**CL011B04**	**2931.00.90**	• Other organo-inorganic compounds
CL01-2A	**2A - TOXIC CHEMICALS**			
	1. Amiton: O,O-Diethyl S-[2-(diethylamino)ethyl] phosphorothiolate and corresponding alkylated or protonated salts(CAS 78-53-5);	**CL012A01**	**2930.90.00**	• Other organo-sulphur compounds
	2. PFIB: 1,1,3,3,3-Pentafluoro-2-(trifluoromethyl)-1-propene(CAS 382-21-8);	**CL012A02**	**2903.30.90**	• Fluorinated, brominated or iodinated derivatives of acyclic hydrocarbons
	3. BZ: 3-Quinuclidinyl benzilate (*)(CAS 6581-06-2);	**CL012A03**	**2933.39.90**	• Other, other compounds containing an unfused pyridine ring (whether or not hydrogenated) in the structure.
	2B – PRECURSORS			

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CHEM-BIO CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	1. Chemicals, except for those listed in Schedule 1, containing a phosphorus atom to which is bonded one methyl, ethyl or propyl (normal or iso) group but not further carbons atoms, a. E.g. i. Methylphosphonyl dichloride (CAS 676-97-1); ii. Dimethyl methylphosphonate (CAS 756-79-6); iii. Exemption: Fonofos: O-Ethyl S-phenyl ethylphosphonothiolothionate (CAS 944-22-9);	**CL012B01**	**2931.00.90**	• Other, other organo-inorganic compounds
	2. N,N-Dialkyl (Me, Et, n-Pr or i-Pr) phosphoramidic dihalides;	**CL012B02**	**2929.90.90**	• Other compounds with other nitrogen function
	3. Dialkyl (Me, Et, n-Pr or i-Pr) N,N-dialkyl (Me, Et, n-Pr or i-Pr) phosphoramidates;;	**CL012B03**	**2929.90.90**	• Other compounds with other nitrogen function •
	4. Arsenic trichloride (CAS 7784-34-1);	**CL012B04**	**2812.10.00**	• Chlorides and chloride oxides
	5. Benzilic acid: 2,2-Diphenyl-2-hydroxyacetic acid(CAS 76-93-7);	**CL012B05**	**2918.19.00**	• Other carboxylic acids with alcohol function but without other oxygen function, their anhydrides, halides peroxides, peroxyacids & their derivatives
	6. Quinuclidine-3-ol (CAS 1619-34-7);	**CL012B06**	**2933.39.90**	• Other, other compounds containing an unfused imidazole ring (whether or not hydrogenated) in the structure
	7. N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethyl-2-chlorides and corresponding protonated salts;	**CL012B07**	**2921.19.00**	• Other acyclic monoamines and their derivatives; salts thereof
	8. N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-ols and corresponding protonated salts; a. Exemptions: i. N,N-Dimethylaminoethanol and corresponding protonated salts, (CAS 108-01-0); ii. N,N-Diethylaminoethanol and corresponding protonated salts (CAS 100-37-8);	**CL012B08**	**2922.19.90**	• Other amino-alcohols, their ethers & esters, other than containing more than one kind of oxygen function; salts thereof
	9. N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-thiols and corresponding protonated salts;	**CL012B09**	**2930.90.00**	• Other organo-sulphur compounds
	10. Thioglycol: Bis(2-hydroxyethyl) sulfide(CAS 111-48-8);	**CL012B10**	**2930.90.00**	• Other organo-sulphur compounds

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CHEM-BIO CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	11. Pinacolyl alcohol: 3,3-Dimethylbutan-2-ol (CAS 464-07-3);	**CL012B11**	**2905.19.90**	• Other saturated monohydric acid
	3A - TOXIC CHEMICALS			
	1. Phosgene: Carbonyl dichloride(CAS 75-44-5);	**CL013A01**	**2812.10.00**	• Chlorides and chloride oxides
	2. Cyanogen chloride(CAS 506-77-4);	**CL013A02**	**2851.00.90**	• Liquid & compressed air
	3. Hydrogen cyanide(CAS 74-90-8);	**CL013A03**	**2811.19.90**	• Other inorganic acids
	4. Chloropicrin: Trichloronitromethane(CAS 76-06-2);	**CL013A04**	**2904.90.00**	• Other sulphonated, nitrated or nitrosated derivatives of hydrocarbons, whether or not halogenated
	3B – PRECURSORS			
	1. Phosphorus oxychloride (Phosphoryl chloride) (CAS 10025-87-3);	**CL013B01**	**2812.10.00**	• Chlorides and chloride oxides
	2. Phosphorus trichloride(CAS 7719-12-3);	**CL013B02**	**2812.10.00**	• Chlorides and chloride oxides
	3. Phosphorus pentachloride (Phosphorane, pentachloro) (CAS 10026-13-8);	**CL013B03**	**2812.10.00**	• Chlorides and chloride oxides
	4. Trimethyl phosphite (Phosphorous acid, trimethyl ester) (CAS 121-45-9);	**CL013B04**	**2920.90.90**	• Other esters of other inorganic acids and their salts
	5. Triethyl phosphite (Phosphorous acid, triethyl ester) (CAS 122-52-1);	**CL013B05**	**2920.90.90**	• Other esters of other inorganic acids and their salts
	6. Dimethyl phosphite (Phosphonic acid, dimethyl ester) (CAS 868-85-9);	**CL013B06**	**2920.90.90**	• Other esters of other inorganic acids and their salts
	7. Diethyl phosphite (Phosphonic acid, diethyl ester) (CAS 762-04-9);	**CL013B07**	**2920.90.90**	• Other esters of other inorganic acids and their salts
	8. Sulfur monochloride (Sulfur chloride) (CAS 10025-67-9);	**CL013B08**	**2812.10.00**	• Chlorides and chloride oxides
	9. Sulfur dichloride (Sulfur chloride) (CAS 10545-99-0);	**CL013B09**	**2812.10.00**	• Chlorides and chloride oxides
	10. Thionyl chloride(CAS 7719-09-7);	**CL013B10**	**2812.10.00**	• Chlorides and chloride oxides
	11. Ethyldiethanolamine(CAS 139-87-7);	**CL013B11**	**2922.19.90**	• Other amino-alcohols, their ethers & esters, other than containing more than one kind of oxygen function;

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CHEM-BIO CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
				salts thereof
	12. Methyldiethanolamine(CAS 105-59-9);	**CL013B12**	**2922.19.90**	• Other amino-alcohols, their ethers & esters, other than containing more than one kind of oxygen function; salts thereof
	13. Triethanolamine(CAS 102-71-6).	**CL013B13**	**2922.13.00**	• Triethanolamine and its salts

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TABLE 2: LIST OF APPROVED GC(RI) DATA

OPCW Code	Chemical Name	Schedule	Column	RI(a)	RI(b)	RI(c)	RI(d)	RI(e)
07-4-2486	O,O-Dimethyl methylphosphonothionate	2.B.04	2	930				
07-4-2487	O-Ethyl O-methyl methylphosphonothionate	2.B.04	2	994				
07-4-2488	O-Methyl O-propyl methylphosphonothionate	2.B.04	2	1084				
07-4-2489	O-Isopropyl O-methyl methylphosphonothionate	2.B.04	2	1025				
07-4-2490	O-Butyl O-methyl methylphosphonothionate	2.B.04	2	1181				
07-4-2491	O-sec-Butyl O-methyl methylphosphonothionate	2.B.04	2	1121	1123			
07-4-2492	O-Isobutyl O-methyl methylphosphonothionate	2.B.04	2	1135				
07-4-2493	O-Cyclohexyl O-methyl methylphosphonothionate	2.B.04	2	1415				
07-4-2494	O-Methyl O-pinacolyl methylphosphonothionate	2.B.04	2	1242	1246			
07-4-2495	O,O-Diethyl methylphosphonothionate	2.B.04	2	1053				
07-4-2496	O-Ethyl O-propyl methylphosphonothionate	2.B.04	2	1142				
07-4-2497	O-Ethyl O-isopropyl methylphosphonothionate	2.B.04	2	1081				
07-4-2498	O-Butyl O-ethyl methylphosphonothionate	2.B.04	2	1236				
07-4-2499	O-sec-Butyl O-ethyl methylphosphonothionate	2.B.04	2	1174	1178			
07-4-2500	O-Ethyl O-isobutyl methylphosphonothionate	2.B.04	2	1190				
07-4-2501	O-Cyclohexyl O-ethyl methylphosphonothionate	2.B.04	2	1467				
07-4-2502	O-Ethyl O-pinacolyl methylphosphonothionate	2.B.04	2	1292	1298			
07-4-2503	O,O-Dipropyl methylphosphonothionate	2.B.04	2	1230				
07-4-2504	O-Isopropyl O-propyl methylphosphonothionate	2.B.04	2	1169				
07-4-2505	O-Butyl O-propyl methylphosphonothionate	2.B.04	2	1323				
07-4-2506	O-sec-Butyl O-propyl methylphosphonothionate	2.B.04	2	1262	1267			
07-4-2507	O-Isobutyl O-propyl methylphosphonothionate	2.B.04	2	1277				
07-4-2508	O-Cyclohexyl O-propyl methylphosphonothionate	2.B.04	2	1556				
07-4-2509	O-Pinacolyl O-propyl methylphosphonothionate	2.B.04	2	1379	1386			
07-4-2510	O,O-Diisopropyl methylphosphonothionate	2.B.04	2	1109				
07-4-2511	O-Butyl O-isopropyl methylphosphonothionate	2.B.04	2	1262				
07-4-2512	O-sec-Butyl O-isopropyl methylphosphonothionate	2.B.04	2	1204	1206			
07-4-2513	O-Isobutyl O-isopropyl methylphosphonothionate	2.B.04	2	1216				
07-4-2514	O-Cyclohexyl O-isopropyl methylphosphonothionate	2.B.04	2	1490				
07-4-2515	O-Isopropyl O-pinacolyl methylphosphonothionate	2.B.04	2	1324	1327			

OPCW Code	Chemical Name	Schedule	Column	RI(a)	RI(b)	RI(c)	RI(d)	RI(e)
07-4-2516	O,O-Dibutyl methylphosphonothionate	2.B.04	2	1416				
07-4-2517	O-Butyl O-sec-butyl methylphosphonothionate	2.B.04	2	1354	1359			
07-4-2518	O-Butyl O-isobutyl methylphosphonothionate	2.B.04	2	1369				
07-4-2519	O-Butyl O-cyclohexyl methylphosphonothionate	2.B.04	2	1651				
07-4-2520	O-Butyl O-pinacolyl methylphosphonothionate	2.B.04	2	1471	1479			
07-4-2521	Bis(O-sec-butyl) methylphosphonothionate	2.B.04	2	1299	1302	1305		
07-4-2522	O-sec-Butyl O-isobutyl methylphosphonothionate	2.B.04	2	1308	1313			
07-4-2523	O-sec-Butyl O-cyclohexyl methylphosphonothionate	2.B.04	2	1586	1592			
07-4-2524	O-sec-Butyl O-pinacolyl methylphosphonothionate	2.B.04	2	1421	1425	1427		
07-4-2525	O,O-Diisobutyl methylphosphonothionate	2.B.04	2	1323				
07-4-2526	O-Cyclohexyl O-isobutyl methylphosphonothionate	2.B.04	2	1600				
07-4-2527	O-Isobutyl O-pinacolyl methylphosphonothionate	2.B.04	2	1425	1432			
07-4-2528	O,O-Dicyclohexyl methylphosphonothionate	2.B.04	2	1901				
07-4-2529	O-Cyclohexyl O-pinacolyl methylphosphonothionate	2.B.04	2	1712	1720			
07-4-2530	O,O-Dipinacolyl methylphosphonothionate	2.B.04	2	1554				
07-4-2531	O,O-Dimethyl ethylphosphonothionate	2.B.04	2	1018				
07-4-2532	O-Ethyl O-methyl ethylphosphonothionate	2.B.04	2	1078				
07-4-2533	O-Methyl O-propyl ethylphosphonothionate	2.B.04	2	1169				
07-4-2534	O-Isopropyl O-methyl ethylphosphonothionate	2.B.04	2	1109				
07-4-2535	O-Butyl O-methyl ethylphosphonothionate	2.B.04	2	1264				
07-4-2536	O-sec-Butyl O-methyl ethylphosphonothionate	2.B.04	2	1204	1207			
07-4-2537	O-Isobutyl O-methyl ethylphosphonothionate	2.B.04	2	1218				
07-4-2538	O-Cyclohexyl O-methyl ethylphosphonothionate	2.B.04	2	1501				
07-4-2539	O-Methyl O-pinacolyl ethylphosphonothionate	2.B.04	2	1324	1332			
07-4-2540	O,O-Diethyl ethylphosphonothionate	2.B.04	2	1135				
07-4-2541	O-Ethyl O-propyl ethylphosphonothionate	2.B.04	2	1222				
07-4-2542	O-Ethyl O-isopropyl ethylphosphonothionate	2.B.04	2	1162				
07-4-2543	O-Butyl O-ethyl ethylphosphonothionate	2.B.04	2	1315				
07-4-2544	O-sec-Butyl O-ethyl ethylphosphonothionate	2.B.04	2	1256	1260			
07-4-2545	O-Ethyl O-isobutyl ethylphosphonothionate	2.B.04	2	1270				

OPCW Code	Chemical Name	Schedule	Column	RI(a)	RI(b)	RI(c)	RI(d)	RI(e)
07-4-2546	O-Cyclohexyl O-ethyl ethylphosphonothionate	2.B.04	2	1549				
07-4-2547	O-Ethyl O-pinacolyl ethylphosphonothionate	2.B.04	2	1373	1381			
07-4-2548	O,O-Dipropyl ethylphosphonothionate	2.B.04	2	1310				
07-4-2549	O-Isopropyl O-propyl ethylphosphonothionate	2.B.04	2	1249				
07-4-2550	O-Butyl O-propyl ethylphosphonothionate	2.B.04	2	1400				
07-4-2551	O-sec-Butyl O-propyl ethylphosphonothionate	2.B.04	2	1342	1347			
07-4-2552	O-Isobutyl O-propyl ethylphosphonothionate	2.B.04	2	1355				
07-4-2553	O-Cyclohexyl O-propyl ethylphosphonothionate	2.B.04	2	1637				
07-4-2554	O-Pinacolyl O-propyl ethylphosphonothionate	2.B.04	2	1460	1470			
07-4-2555	O,O-Diisopropyl ethylphosphonothionate	2.B.04	2	1190				
07-4-2556	O-Butyl O-isopropyl ethylphosphonothionate	2.B.04	2	1341				
07-4-2557	O-sec-Butyl O-isopropyl ethylphosphonothionate	2.B.04	2	1285	1288			
07-4-2558	O-Isobutyl O-isopropyl ethylphosphonothionate	2.B.04	2	1295				
07-4-2559	O-Cyclohexyl O-isopropyl ethylphosphonothionate	2.B.04	2	1572				
07-4-2560	O-Isopropyl O-pinacolyl ethylphosphonothionate	2.B.04	2	1406	1412			
07-4-2561	O,O-Dibutyl ethylphosphonothionate	2.B.04	2	1492				
07-4-2562	O-Butyl O-sec-butyl ethylphosphonothionate	2.B.04	2	1432	1438			
07-4-2563	O-Butyl O-isobutyl ethylphosphonothionate	2.B.04	2	1445				
07-4-2564	O-Butyl O-cyclohexyl ethylphosphonothionate	2.B.04	2	1729				
07-4-2565	O-Butyl O-pinacolyl ethylphosphonothionate	2.B.04	2	1549	1560			
07-4-2566	Bis(O-sec-butyl) ethylphosphonothionate	2.B.04	2	1379	1384	1387		
07-4-2567	O-sec-Butyl O-isobutyl ethylphosphonothionate	2.B.04	2	1387	1393			
07-4-2568	O-sec-Butyl O-cyclohexyl ethylphosphonothionate	2.B.04	2	1668	1674			
07-4-2569	O-sec-Butyl O-pinacolyl ethylphosphonothionate	2.B.04	2	1503	1507	1510	1513	
07-4-2570	O,O-Diisobutyl ethylphosphonothionate	2.B.04	2	1399				
07-4-2571	O-Cyclohexyl O-isobutyl ethylphosphonothionate	2.B.04	2	1680				
07-4-2572	O-Isobutyl O-pinacolyl ethylphosphonothionate	2.B.04	2	1505	1515			
07-4-2573	O,O-Dicyclohexyl ethylphosphonothionate	2.B.04	2	1983				
07-4-2574	O-Cyclohexyl O-pinacolyl ethylphosphonothionate	2.B.04	2	1796	1807			
07-4-2575	O,O-Dipinacolyl ethylphosphonothionate	2.B.04	2	1639	1643			
09-4-0049	O-Isopropyl O-pinacolyl methylphosphonothionate	2.B.04	1	1341				

OPCW Code	Chemical Name	Schedule	Column	RI(a)	RI(b)	RI(c)	RI(d)	RI(e)
09-4-0050	Bis(1,3-dimethylbutyl) dimethylpyrophosphonate	2.B.04	1	1832	1841	1862	1879	1883
09-4-0051	Bis(1-butylpentyl) propylphosphonate	2.B.04	1	2138				
09-4-0052	Bis(1-propylpentyl) propylphosphonate	2.B.04	1	1986	1989			
09-4-0053	Bis(S-2-diethylaminoethyl) methylphosphonodithiolate	2.B.04	1	2235				
09-4-0054	O-tert-Butyldimethylsilyl O-ethyl methylphosphonothionate	2.B.04	1	1354				
09-4-0055	O-tert-Butyldimethylsilyl O-propyl propylphosphonothionate	2.B.04	1	1590				
09-4-0058	O-Isobutyl O-trimethylsilyl methylphosphonothionate	2.B.04	1	1269				
09-4-0059	Dimethyl dipropylpyrophosphonate	2.B.04	1	1593	1597			
09-4-0060	2,2-Dimethylpropyl methylphosphonofluoridate	1.A.01	1	970				
09-4-0061	Butyl methylphosphinate	2.B.04	1	1091				
09-4-0063	Ethyl ethylphosphinate	2.B.04	1	986				
09-4-0065	O-Methyl S-methyl methylphosphonothiolate	2.B.04	1	1059				
09-4-0066	Cyclohexylmethyl S-2-dimethylaminoethyl propylphosphonothiolate	1.A.03	1	2155				
09-4-0067	Cyclooctyl S-2-dimethylaminoethyl propylphosphonothiolate	1.A.03	1	2277				
09-4-0068	Cyclopentyl S-2-diisopropylaminoethyl methylphosphonothiolate	1.A.03	1	2048				
09-4-0069	Ethyl methylphosphinate	2.B.04	1	891				
09-4-0070	Methylphosphonic chloride fluoride	2.B.04	1	654				
09-4-0071	Methylphosphonothioic dichloride	2.B.04	1	891				
09-4-0072	2-(N-Methyl-N-propylamino)ethanethiol	2.B.12	1	987				
15-4-0095r	Diethyl dimethylpyrophosphonate	2.B.04	1	1403				
15-4-0096r	1-Ethyl-2-methylpropyl ethylphosphonofluoridate	1.A.01	1	1175				
15-4-0097r	Bis(cyclopropylmethyl) ethylphosphonate	2.B.04	1	1534				
15-4-0098r	Bis(cyclopropylmethyl) methylphosphonate	2.B.04	1	1459				
15-4-0099r	Cyclopropylmethyl propylphosphonofluoridate	1.A.01	1	1179				
15-4-0100r	Bis(cyclopropylmethyl) propylphosphonate	2.B.04	1	1611				
15-4-0112r	3,3,5,5-Tetramethylcyclohexyl methylphosphonofluoridate	1.A.01	1	1390				

OPCW Code	Chemical Name	Schedule	Column	RI(a)	RI(b)	RI(c)	RI(d)	RI(e)
15-4-0113r	3,3,5,5-Tetramethylcyclohexyl ethylphosphonofluoridate	1.A.01	1	1487				
15-4-0114r	3,3,5,5-Tetramethylcyclohexyl isopropylphosphonofluoridate	1.A.01	1	1535				
15-4-0115r	3,3,5,5-Tetramethylcyclohexyl propylphosphonofluoridate	1.A.01	1	1572				
15-4-0119r	2-Isopropyl-5-methylcyclohexyl methylphosphonofluoridate	1.A.01	1	1463	1471			
15-4-0120r	2-Isopropyl-5-methylcyclohexyl ethylphosphonofluoridate	1.A.01	1	1557	1563			
15-4-0121r	2-Isopropyl-5-methylcyclohexyl isopropylphosphonofluoridate	1.A.01	1	1604	1608			
15-4-0122r	2-Isopropyl-5-methylcyclohexyl propylphosphonofluoridate	1.A.01	1	1637	1646			
15-4-0125r	Dicyclohexyl ethylphosphonate	2.B.04	1	1962				
16-4-0096	Bis(2-ethoxyethyl) methylphosphonate	2.B.04	1	1546				
16-4-0097	Bis(2-ethoxyethyl) propylphosphonate	2.B.04	1	1688				
16-4-0098	2-Methoxyethyl methyl isopropylphosphonate	2.B.04	1	1275				
16-4-0099	Isopropyl 2-methoxyethyl isopropylphosphonate	2.B.04	1	1349				
16-4-0100	2-Methoxyethyl propyl isopropylphosphonate	2.B.04	1	1414				
16-4-0101	Bis(2-methoxyethyl) isopropylphosphonate	2.B.04	1	1526				
16-4-0102	Isobutyl isopropyl isopropylphosphonate	2.B.04	1	1295				
16-4-0104	Diisobutyl isopropylphosphonate	2.B.04	1	1405				
16-4-0105	Isobutyl 2-methoxyethyl isopropylphosphonate	2.B.04	1	1463				
16-4-0106	sec-Butyl 2-methoxyethyl isopropylphosphonate	2.B.04	1	1438	1445			
16-4-0107	1-Ethylpropyl propyl methylphosphonate	2.B.04	1	1320				
16-4-0108	1-Ethylpropyl propyl ethylphosphonate	2.B.04	1	1395				
16-4-0109	1-Ethylpropyl propyl propylphosphonate	2.B.04	1	1466				
16-4-0110	1-Ethylpropyl isopropyl methylphosphonate	2.B.04	1	1252				
16-4-0111	1-Ethylpropyl isopropyl ethylphosphonate	2.B.04	1	1327				
16-4-0112	1-Ethylpropyl isopropyl propylphosphonate	2.B.04	1	1399				
16-4-0113	3-Methylbutyl propyl methylphosphonate	2.B.04	1	1347				
16-4-0114	3-Methylbutyl propyl ethylphosphonate	2.B.04	1	1423				
16-4-0115	3-Methylbutyl propyl propylphosphonate	2.B.04	1	1497				
17-4-0195	2,2-Dimethylhexyl methylphosphonofluoridate	1.A.01	1	1258				
17-4-0196	Cyclopentyl isopropylphosphonochloridate	2.B.04	1	1411				

OPCW Code	Chemical Name	Schedule	Column	RI(a)	RI(b)	RI(c)	RI(d)	RI(e)
17-4-0197	3-Methylbutyl isopropylphosphonochloridate	2.B.04	1	1337				
17-4-0198	3-Methylbutyl propylphosphonochloridate	2.B.04	1	1364				
17-4-0199	Butyl isopropylphosphonochloridate	2.B.04	1	1280				
17-4-0200	Isobutyl isopropylphosphonochloridate	2.B.04	1	1234				
17-4-0201	Dibutyl methylphosphonate	2.B.04	1	1388				
17-4-0202	Dibutyl isopropylphosphonate	2.B.04	1	1494				
17-4-0204	Pentyl isopropylphosphonochloridate	2.B.04	1	1378				

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دولة الإمارات العربية المتحدة
UNITED ARAB EMIRATES

الجدول 3

Schedule 3

Schedule 3

A. Toxic chemicals

		(CAS Registry number)
(1)	Phosgene: Carbonyl dichloride	(75-44-5)
(2)	Cyanogen chloride	(506-77-4)
(3)	Hydrogen cyanide	(74-90-8)
(4)	Chloropicrin: Trichloronitromethane	(76-06-2)

B. Precursors

		(CAS Registry number)
(5)	Phosphorus oxychloride	(10025-87-3)
(6)	Phosphorus trichloride	(7719-12-2)
(7)	Phosphorus pentachloride	(10026-13-8)
(8)	Trimethyl phosphite	(121-45-9)
(9)	Triethyl phosphite	(122-52-1)
(10)	Dimethyl phosphite	(868-85-9)
(11)	Diethyl phosphite	(762-04-9)
(12)	Sulfur monochloride	(10025-67-9)
(13)	Sulfur dichloride	(10545-99-0)
(14)	Thionyl chloride	(7719-09-7)
(15)	Ethyldiethanolamine	(139-87-7)
(16)	Methyldiethanolamine	(105-59-9)
(17)	Triethanolamine	(102-71-6)

STRATEGIC GOODS CONTROL LIST
PART II OF THE SCHEDULE OF THE STRATEGIC GOODS (CONTROL) ACT

III. DUAL-USE LIST

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DUALUSE CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
DL01	**CATEGORY 1 - NUCLEAR MATERIALS, FACILITIES, AND EQUIPMENT**			
	1A - SYSTEMS, EQUIPMENT AND COMPONENTS			
DL01A-01	**"Nuclear reactors" and specially designed or prepared equipment and components therefor, as follows:**			
	a. "Nuclear reactors" capable of operation so as to maintain a controlled self-sustaining fission chain reaction;	**DL01A01A**	**8401.10.00**	• Nuclear reactors
	b. Metal vessels, or major shop-fabricated parts therefor, specially designed or prepared to contain the core of a "nuclear reactor", including the reactor vessel head for a reactor pressure vessel;	**DL01A01B**	**8401.40.00**	• Parts of nuclear reactors
	c. Manipulative equipment specially designed or prepared for inserting or removing fuel in a "nuclear reactor";	**DL01A01C**	**8401.40.00**	• Parts of nuclear reactors
	d. Control rods specially designed or prepared for the control of the fission process in a "nuclear reactor", support or suspension structures therefor, rod drive mechanisms and rod guide tubes;	**DL01A01D**	**8401.40.00**	• Parts of nuclear reactors
	e. Pressure tubes specially designed or prepared to contain fuel elements and the primary coolant in a "nuclear reactor" at an operating pressure in excess of 5.1 MPa;	**DL01A01E**	**8401.40.00**	• Parts of nuclear reactors
	f. Zirconium metal and alloys in the form of tubes or assemblies of tubes in which the ratio of hafnium to zirconium is less than 1:500 parts by weight, specially designed or prepared for use in a "nuclear reactor";	**DL01A01F**	**8401.40.00**	• Parts of nuclear reactors
	g. Coolant pumps specially designed or prepared for circulating the primary coolant of "nuclear reactors";	**DL01A01G**	**8401.40.00**	• Parts of nuclear reactors

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DUALUSE CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	h. 'Nuclear reactor internals' specially designed or prepared for use in a "nuclear reactor", including support columns for the core, fuel channels, thermal shields, baffles, core grid plates, and diffuser plates;	**DL01A01H**	**8401.40.00**	• Parts of nuclear reactors
	i. Heat exchangers (steam generators) specially designed or prepared for use in the primary coolant circuit of a "nuclear reactor";	**DL01A01I**	**8401.40.00**	• Parts of nuclear reactors
	j. Neutron detection and measuring instruments specially designed or prepared for determining neutron flux levels within the core of a "nuclear reactor".	**DL01A01J**	**8401.40.00**	• Parts of nuclear reactors
	Note for DL01A-01: In **DL01A-01.h**, 'nuclear reactor internals' means any major structure within a reactor vessel which has one or more functions such as supporting the core, maintaining fuel alignment, directing primary coolant flow, providing radiation shields for the reactor vessel, and guiding in-core instrumentations.			
	1B - TEST INSPECTION AND PRODUCTION EQUIPMENT			
DL01B-01	**Plant for the separation of isotopes of "natural uranium", "depleted uranium" and "special fissile materials", and specially designed or prepared equipment and components therefor, as follows:**			
	a. Plant specially designed for separating isotopes of "natural uranium", "depleted uranium", and "special fissile materials", as follows: 1. Gas centrifuge separation plant; 2. Gaseous diffusion separation plant; 3. Aerodynamic separation plant; 4. Chemical exchange separation plant; 5. Ion-exchange separation plant; 6. Atomic vapour "laser" isotope separation (AVLIS) plant; 7. Molecular "laser" isotope separation (MLIS) plant; 8. Plasma separation plant; 9. Electro magnetic separation plant;	**DL01B01A**	**8401.20.10**	• Machinery and apparatus for isotopic separati
	b. Gas centrifuges and assemblies and components, specially designed or prepared for gas centrifuge separation process, as follows: 1. Gas centrifuges;	**DL01B01B**	**8401.20.90**	• Other parts of machinery and apparatus for is separation

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DUALUSE CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	2. Complete rotor assemblies; 3. Rotor tube cylinders with a wall thickness of 12 mm or less, a diameter of between 75 mm and 400 mm, made from 'high strength-to-density ratio materials'; 4. Rings or bellows with a wall thickness of 3 mm or less and a diameter of between 75 mm and 400 mm and designed to give local support to a rotor tube or to join a number together, made from 'high strength-to-density ratio materials'; 5. Baffles of between 75 mm and 400 mm diameter for mounting inside a rotor tube, made from 'high strength-to-density ratio materials'; 6. Top or bottom caps of between 75 mm and 400 mm diameter to fit the ends of a rotor tube, made from 'high strength-to-density ratio materials'; 7. Magnetic suspension bearings consisting of an annular magnet suspended within a housing made of or protected by "materials resistant to corrosion by UF_6" containing a damping medium and having the magnet coupling with a pole piece or second magnet fitted to the top cap of the rotor; 8. Specially prepared bearings comprising a pivot-cup assembly mounted on a damper; 9. Molecular pumps comprised of cylinders having internally machined or extruded helical grooves and internally machined bores; 10. Ring-shaped motor stators for multiphase AC hysteresis (or reluctance) motors for synchronous operation within a vacuum in the frequency range of 600 to 2,000 Hz and a power range of 50 to 1,000 Volt-Amps; 11. Centrifuge housing/recipients to contain the rotor tube assembly of a gas centrifuge, consisting of a rigid cylinder of wall thickness up to 30 mm with precision machined ends and made of or protected by "materials resistant to corrosion by UF_6"; 12. Scoops consisting of tubes of up to 12 mm internal diameter for the extraction of UF_6 gas from within a centrifuge rotor tube by a Pitot tube action, made of or protected by "materials resistant to corrosion by UF_6"; 13. Frequency changers (converters or inverters) specially designed or prepared to supply motor stators for gas centrifuge enrichment, having all of the following characteristics, and specially designed components therefor:			

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DUALUSE CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	I. Multiphase output of 600 to 2,000 Hz; II. Frequency control better than 0.1%; III. Harmonic distortion of less than 2%; and IV. An efficiency greater than 80%;			
	Note to DL01B-01b: In **DL01B-01.b**, 'high strength-to-density ratio material' means any of the following: a. Maraging steel capable of an ultimate tensile strength of 2,050 MPa or more; b. Aluminium alloys capable of an ultimate tensile strength of 460 MPa or more; or c. "Fibrous or filamentary materials" with a "specific modulus" of more than 3.18×10^6 m and a "specific tensile strength" greater than 76.2×10^3 m.			
	c. Equipment and components, specially designed or prepared for gaseous diffusion separation process, as follows: 1. Gaseous diffusion barriers made of porous metallic, polymer or ceramic "materials resistant to corrosion by UF_6" with a pore size of 10 to 100 nm, a thickness of 5 mm or less, and, for tubular forms, a diameter of 25 mm or less; 2. Gaseous diffuser housings made of or protected by "materials resistant to corrosion by UF_6"; 3. Compressors (positive displacement, centrifugal and axial flow types) or gas blowers with a suction volume capacity of 1 m^3/min or more of UF_6, and discharge pressure up to 666.7 kPa, made of or protected by "materials resistant to corrosion by UF_6"; 4. Rotary shaft seals for compressors or blowers controlled by **DL01-01.c.3** and designed for a buffer gas in-leakage rate of less than 1,000 cm^3/min; 5. Heat exchangers made of aluminium, copper, nickel, or alloys containing more than 60 weight percent nickel, or combinations of these metals as clad tubes, designed to operate at sub-atmospheric pressure with a leak rate that limits the pressure rise to less than 10 Pa per hour under a pressure differential of 100 kPa; 6. Bellow valves made of or protected by "materials resistant to corrosion by UF_6", with a diameter of 40 mm to 1,500 mm;	**DL01B01C**	**8401.20.90**	• Other parts of machinery and apparatus for is separation

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DUALUSE CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	d. Equipment and components, specially designed or prepared for aerodynamic separation process, as follows: 1. Separation nozzles consisting of slit-shaped, curved channels having a radius of curvature less than 1 mm, resistant to corrosion by UF_6, and having a knife-edge contained within the nozzle which separates the gas flowing through the nozzle into two streams; 2. Tangential inlet flow-driven cylindrical or conical tubes (vortex tubes), made of or protected by "materials resistant to corrosion by UF_6", with a diameter of between 0.5 cm and 4 cm and a length to diameter ratio of 20:1 or less and with one or more tangential inlets; 3. Compressors (positive displacement, centrifugal and axial flow types) or gas blowers with a suction volume capacity of 2 m^3/min, made of or protected by "materials resistant to corrosion by UF_6", and rotary shaft seals therefor; 4. Heat exchangers made of or protected by "materials resistant to corrosion by UF_6"; 5. Aerodynamic separation element housings, made of or protected by "materials resistant to corrosion by UF_6" to contain vortex tubes or separation nozzles; 6. Bellows valves made of or protected by "materials resistant to corrosion by UF_6", with a diameter of 40 to 1,500 mm; 7. Process systems for separating UF_6 from carrier gas (hydrogen or helium) to 1 ppm UF_6 content or less, including: (a) Cryogenic heat exchangers and cryoseparators capable of temperatures of 153 K (-120^{0}C) or less; (b) Cryogenic refrigeration units capable of temperatures of 153 K (-120^{0}C) or less; (c) Separation nozzle or vortex tube units for the separation of UF_6 from carrier gas; 8. UF_6 cold traps capable of temperatures of 253 K (-20^{0}C) or less.	DL01B01D	8401.20.90	• Other parts of machinery and apparatus for is separation
	5. Fast-exchange liquid-liquid pulse columns with stage residence time of 30 seconds or less and resistant to concentrated hydrochloric acid (e.g. made of or protected by suitable plastic materials such as fluorocarbon polymers or glass); 1. Fast-exchange liquid-liquid centrifugal contactors with stage residence time of 30 seconds or less and resistant to concentrated hydrochloric acid (e.g. made of or protected by suitable plastic	DL01B01E	8401.20.90	• Other parts of machinery and apparatus for is separation

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DUALUSE CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	materials such as fluorocarbon polymers or glass); 2. Electrochemical reduction cells resistant to concentrated hydrochloric acid solutions, for reduction of uranium from one valence state to another; 3. Electrochemical reduction cells feed equipment to take U^{+4} from the organic stream and, for those parts in contact with the process stream, made of or protected by suitable material (e.g. glass, fluorocarbon polymers, polyphenyl sulphate, polyether sulfone and resin-impregnated graphite); 4. Feed preparation systems for producing high purity uranium chloride solution consisting of dissolution, solvent extraction and/or ion exchange equipment for purification and electrolytic cells for reducing the uranium U^{+6} or U^{+4} to U^{+3}; 5. Uranium oxidation systems for oxidation of U^{+3} to U^{+4}			
	6. Equipment and components, specially designed or prepared for ion-exchange separation process, as follows:	**DL01B01F**	**8401.20.90**	• Other parts of machinery and apparatus for is separation
	1. Fast reacting ion-exchange resins, pellicular or porous macro-reticulated resins in which the active chemical exchange groups are limited to a coating on the surface of an inactive porous support structure, and other composite structures in any suitable form, including particles or fibres, with diameters of 0.2 mm or less, resistant to concentrated hydrochloric acid and designed to have an exchange rate half-time of less than 10 seconds and capable of operating at temperatures in the range of 373 K (100^0C) to 473 K (200^0C); 2. Ion exchange columns (cylindrical) with a diameter greater than 1,000 mm, made of or protected by materials resistant to concentrated hydrochloric acid (e.g. titanium or fluorocarbon plastics) and capable of operating at temperatures in the range of 373 K (100^0C) to 473 K (200^0C) and pressures above 0.7 MPa; 3. Ion exchange reflux systems (chemical or electrochemical oxidation or reduction systems) for regeneration of the chemical reducing or oxidizing agents used in ion exchange enrichment cascades			
	7. Equipment and components, specially designed or prepared for atomic vapour "laser" isotope separation process (AVLIS), as follows:	**DL01B01G**	**8401.20.90**	• Other parts of machinery and apparatus for is separation

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DUALUSE CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	1. High power strip or scanning electron beam guns with a delivered power of more than 2.5 kW/cm for use in uranium vaporization systems; 2. Liquid uranium metal handling systems for molten uranium or uranium alloys, consisting of crucibles, made of or protected by suitable corrosion and heat resistant materials (e.g. tantalum, yttria-coated graphite, graphite coated with other rare earth oxides or mixtures thereof), and cooling equipment for the crucibles; 3. Product and tails collector systems made of or lined with materials resistant to the heat and corrosion of uranium metal vapour or liquid, such as yttria-coated graphite or tantalum; 4. Separator module housings (cylindrical or rectangular vessels) for containing the uranium metal vapour source, the electron beam gun and the product and tails collectors; 5. "Lasers" or "laser" systems for the separation of uranium isotopes with a spectrum frequency stabilizer for operation over extended periods of time		**9013.20.00**	• Lasers, other than laser diodes
	8. Equipment and components, specially designed or prepared for molecular "laser" isotope separation process (MLIS) or chemical reaction by isotope selective laser activation (CRISLA), as follows:	**DL01B01H**	**8401.20.90**	• Other parts of machinery and apparatus for is separation
	1. Supersonic expansion nozzles for cooling mixtures of UF_6 and carrier gas to 150 K (-123^{0}C) or less and made from "materials resistant to corrosion by UF_6"; 2. Uranium pentafluoride (UF_5) product collectors consisting of filter, impact, or cyclone-type collectors or combinations thereof, and made of "materials resistant to corrosion by UF_5/UF_6"; 3. Compressors made of or protected by "materials resistant to corrosion by UF_6", and rotary shaft seals therefor; 4. Equipment for fluorinating UF_5 (solid) to UF_6 (gas); 5. Process systems for separating UF_6 from carrier gas (e.g. nitrogen or argon) including: I. Cryogenic heat exchangers and cryoseparators capable of temperatures of 153 K (-120^{0}C) or less; II. Cryogenic refrigeration units capable of temperatures of 153 K (-120^{0}C) or less; III. UF_6 cold traps capable of temperatures of 253 K (-20^{0}C) or less; 6. "Lasers" or "laser" systems for the separation of uranium isotopes		**9013.20.00**	• Lasers, other than laser diodes

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DUALUSE CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	with a spectrum frequency stabilizer for operation over extended periods of time			
	9. Equipment and components, specially designed or prepared for plasma separation process, as follows:	**DL01B01I**	**8401.20.90**	• Other parts of machinery and apparatus for is separation
	1. Microwave power sources and antennae for producing or accelerating ions, with an output frequency greater than 30 GHz and mean power output greater than 50 kW; 2. Radio frequency ion excitation coils for frequencies of more than 100 kHz and capable of handling more than 40 kW mean power; 3. Uranium plasma-generation systems; 4. Liquid metal handling systems for molten uranium or uranium alloys, consisting of crucibles, made of or protected by suitable corrosion and heat resistant materials (e.g. tantalum, yttria-coated graphite, graphite coated with other rare earth oxides or mixtures thereof), and cooling equipment for the crucibles; 5. Product and tails collectors made of or protected by materials resistant to the heat and corrosion of uranium vapour such as yttria-coated graphite or tantalum; 6. Separator module housings (cylindrical) for containing the uranium plasma source, radio-frequency drive coil and the product and tails collectors and made of a suitable non-magnetic material (e.g. stainless steel)			
	10. Equipment and components, specially designed or prepared for electromagnetic separation process, as follows:	**DL01B01J**	**8401.20.90**	• Other parts of machinery and apparatus for is separation
	1. Ion sources, single or multiple, consisting of a vapour source, ionizer, and beam accelerator made of suitable non-magnetic materials (e.g. graphite, stainless steel, or copper) and capable of providing a total ion beam current of 50 mA or greater; 2. Ion collector plates for collection of enriched or depleted uranium ion beams, consisting of two or more slits and pockets and made of suitable non-magnetic materials (e.g. graphite or stainless steel); 3. Vacuum housings for uranium electromagnetic separators made of non-magnetic materials (e.g. stainless steel) and designed to operate at pressures of 0.1 Pa or lower; 4. Magnet pole pieces with a diameter greater than 2 m;			

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DUALUSE CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	5. High voltage power supplies for ion sources, having all of the following characteristics: I. Capable of continuous operation; II. Output voltage of 20,000 V or greater; III. Output current of 1 A or greater; and IV. Voltage regulation of better than 0.01% over a period of 8 hours; 6. *Magnet power supplies (high power, direct current) having all of the following characteristics:* I. Capable of continuous operation with a current output of 500 A or greater at a voltage of 100 V or greater; and II. Current or voltage regulation better than 0.01% over a period of 8 hours.			
DL01B-02	**Specially designed or prepared auxiliary systems, equipment and components, as follows, for isotope separation plant controlled by DL01B-01, made of or protected by "materials resistant to corrosion by UF_6":**		**8401.20.90**	• Other parts of machinery and apparatus for is separation
	a. Feed autoclaves, ovens or systems used for passing UF_6 to the enrichment process;	**DL01B02A**		
	b. Desublimers or cold traps, used to remove UF_6 from the enrichment process for subsequent transfer upon heating;	**DL01B02B**		
	c. Product and tails stations for transferring UF_6 into containers;	**DL01B02C**		
	d. Liquefaction or solidification stations used to remove UF_6 from the enrichment process by compressing, cooling and converting UF_6 to a liquid or solid form;	**DL01B02D**		
	e. Piping systems and header systems specially designed for handling UF_6 within gaseous diffusion, centrifuge or aerodynamic cascades;	**DL01B02E**		
	f. Vacuum manifolds or vacuum headers: 1. having a suction capacity of 5 m^3/minute or more; 2. specially designed for use in UF_6 bearing atmospheres;	**DL01B02F**		
	g. UF_6 mass spectrometers/ion sources specially designed or prepared for taking on-line samples of feed, product or tails from UF_6 gas streams	**DL01B02G**		

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DUALUSE CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	and having all of the following characteristics: I. Unit resolution for mass of more than 320 amu; II. Ion sources constructed of or lined with nichrome or monel, or nickel plated; III. Electron bombardment ionization sources; and IV. Collector system suitable for isotopic analysis.			
DL01B-03	**Plant for the conversion of uranium and equipment specially designed or prepared therefor, as follows:**			
	a. Systems for the conversion of uranium ore concentrates to UO_3;	**DL01B03A**	**8401.40.00**	• Parts of nuclear reactors
	b. Systems for the conversion of UO_3 to UF_6;	**DL01B03B**		
	c. Systems for the conversion of UO_3 to UO_2;	**DL01B03C**		
	d. Systems for the conversion of UO_2 to UF_4;	**DL01B03D**		
	e. Systems for the conversion of UF_4 to UF_6;	**DL01B03E**		
	f. Systems for the conversion of UF_4 to uranium metal;	**DL01B03F**		
	g. Systems for the conversion of UF_6 to UO_2;	**DL01B03G**		
	h. Systems for the conversion of UF_6 to UF_4;	**DL01B03H**		
	i. Systems for the conversion of UO_2 to UC_{14}.	**DL01B03I**		
DL01B-04	**Plant for the production or concentration of heavy water, deuterium and deuterium compounds and specially designed or prepared equipment and components therefor, as follows:**			
	a. Plant for the production of heavy water, deuterium or deuterium compounds, as follows: 1. Water-hydrogen sulphide exchange plants; 2. Ammonia-hydrogen exchange plants;	**DL01B04A**	**8401.20.10**	• Machinery and apparatus for isotopic separati
	b. Equipment and components, as follows:	**DL01B04B**	**8401.20.90**	• Other parts of machinery and apparatus for is

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DUALUSE CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	1. Water-hydrogen sulphide exchange towers fabricated from fine carbon steel (e.g. "ASTM" A516) with diameters of 6 m to 9 m, capable of operating at pressures greater than or equal to 2 MPa and with a corrosion allowance of 6 mm or greater; 2. Single stage, low head (i.e. 0.2 MPa) centrifugal blowers or compressors for hydrogen sulphide gas circulation (i.e. gas containing more than 70% H_2S) with a throughput capacity greater than or equal to 56 m^3/second when operating at pressures greater than or equal to 1.8 MPa suction and having seals designed for wet H_2S service; 3. Ammonia-hydrogen exchange towers greater than or equal to 35 m in height with diameters of 1.5 m to 2.5 m capable of operating at pressures greater than 15 MPa; 4. Tower internals, including stage contactors, and stage pumps, including those which are submersible, for heavy water production utilizing the ammonia-hydrogen exchange process; 5. Ammonia crackers with operating pressures greater than or equal to 3 MPa for heavy water production utilizing the ammonia-hydrogen exchange process; 6. Infrared absorption analysers capable of on-line hydrogen/deuterium ratio analysis where deuterium concentrations are equal to or greater than 90%; 7. Catalytic burners for the conversion of enriched deuterium gas into heavy water utilizing the ammonia-hydrogen exchange process; 8. Complete heavy water upgrade systems, or columns therefor, for the upgrade of heavy water to reactor-grade deuterium concentration.			separation
DL01B-05	**Plant specially designed for the fabrication of "nuclear reactor" fuel elements and specially designed or prepared equipment therefor;**	**DL01B05A**	**8401.20.10**	• Machinery and apparatus for isotopic separati
	*Note for **DL01B-05**:* A plant for the fabrication of "nuclear reactor" fuel elements includes equipment which: a. Normally comes into direct contact with or directly processes or controls the production flow of nuclear materials; b. Seals the nuclear materials within the cladding;			

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DUALUSE CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	c. Checks the integrity of the cladding or the seal; or d. Checks the finish treatment of the solid fuel.			
DL01B-06	**Plant for the reprocessing of irradiated "nuclear reactor" fuel elements, and specially designed or prepared equipment and components therefor;**			
	DL01B-06 includes: a. Plant for the reprocessing of irradiated "nuclear reactor" fuel elements including equipment and components which normally come into direct contact with and directly control the irradiated fuel and the major nuclear material and fission product processing streams; b. Fuel element chopping or shredding machines, i.e. remotely operated equipment to cut, chop, shred or shear irradiated "nuclear reactor" fuel assemblies, bundles or rods; c. Dissolvers, critically safe tanks (e.g. small diameter, annular or slab tanks) specially designed or prepared for the dissolution of irradiated "nuclear reactor" fuel, which are capable of withstanding hot, highly corrosive liquids, and which can be remotely loaded and maintained; d. Counter-current solvent extractors and ion-exchange processing equipment specially designed or prepared for use in a plant for the reprocessing of irradiated "natural uranium", "depleted uranium" or "special fissile materials"; e. Holding or storage vessels specially designed to be critically safe and resistant to the corrosive effects of nitric acid;	**DL01B06A** **DL01B06B** **DL01B06C** **DL01B06D** **DL01B06E**	**8401.20.10** **8401.20.90**	• Machinery and apparatus for isotopic separati • Other parts of machinery and apparatus for is separation
	*Note for **DL01B-06.e**:* Holding or storage vessels may have the following features: a. Walls or internal structures with a boron equivalent (calculated for all constituent elements as defined in the Note to **DL01C-04**) of at least two percent; b. A maximum diameter of 175 mm for cylindrical vessels; or c. A maximum width of 75 mm for either a slab or annular vessel.			
	f. Process control instrumentation specially designed or prepared for monitoring or controlling the reprocessing of irradiated "natural uranium", "depleted uranium" or "special fissile materials"; g. Others.	**DL01B06F** **DL01B06G**		

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DUALUSE CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	1C MATERIALS			
DL01C-01	**"Natural uranium";**	**DL01C01A**	**2844.10.10**	• Natural uranium and its compounds
	or "depleted uranium";	**DL01C01B**	**2844.30.10**	• Uranium and its compounds; thorium and its compounds
	or thorium in the form of metal, alloy, chemical compound or concentrate and any other material containing one or more of the foregoing.	**DL01C01C**	**2844.30.10**	• Uranium and its compounds; thorium and its compounds
	*Note for **DL01C-01:*** a. **DL01C-01** does **not** control the following: 1. Four grammes or less of "natural uranium" or "depleted uranium" when contained in a sensing component in instruments; 2. "Depleted uranium" specially fabricated for the following civil non-nuclear applications: (a) Shielding; (b) Packaging; (c) Ballasts having a mass not greater than 100 kg; (d) Counter-weights having a mass not greater than 100 kg; 3. Alloys containing less than 5% thorium; 4. Ceramic products containing thorium, which have been manufactured for non-nuclear use. 5.			
DL01C-02	**"Special fissile materials";** [Only for separated plutonium and "uranium enriched isotopes 235 or 233" to more than 20%]	**DL01C02A**	**2844.20.10**	• Uranium and its compounds; plutonium and i compounds
	*Note for **DL01C-02:*** **DL01C-02** does **not** control four "effective grammes" or less when contained in a sensing component in instruments.			
DL01C-03	**Deuterium, heavy water (deuterium oxide) and other compounds of deuterium, and mixtures and solutions containing deuterium, in which the isotopic ratio of deuterium to hydrogen exceeds 1:5000;**	**DL01C03A**	**2845.10.00**	• Heavy water (deuterium oxide)
DL01C-04	**Graphite, nuclear grade, having a purity level of less than 5 parts per**	**DL01C04A**	**3801.10.00**	• Artificial graphite

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DUALUSE CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	million 'boron equivalent' and with a density greater than 1.5 g/cm^3;			
	*Notes for **DL01C-04**:* a. **DL01C-04** does **not** control the following: 1. Manufactures of graphite having a mass less than 1 kg, other than those specially designed or prepared for use in a nuclear reactor; 2. Graphite powder. b. In **DL01C-04**, 'boron equivalent' (BE) is defined as the sum of BE_Z for impurities (excluding BE_{carbon} since carbon is not considered an impurity) including boron, where: 1. $BE_Z(ppm) = CF \times$ concentration of element Z in ppm; Where CF is the conversion factor = $\sigma_Z A_B/\sigma_B A_Z$ and σ_B and σ_Z are the thermal neutron capture cross sections (in barns) for naturally occurring boron and element Z respectively; and A_B and A_Z are the atomic masses of naturally occurring boron and element Z respectively.			
DL01C-05	**Specially prepared compounds or powders for the manufacture of gaseous diffusion barriers, resistant to corrosion by UF_6 (e.g. nickel or alloy containing 60 weight percent or more nickel, a luminium oxide and fully fluorinated hydrocarbon polymers), having a purity of 99.9 weight percent or more and a mean particle size of less than 10 micrometres measured by American Society for Testing and Materials ("ASTM") B330 standard and a high degree of particle size uniformity.**	**DL01C05A**	**8401.20.90**	• Other parts of machinery and apparatus for is separation
DL02	**CATEGORY 2 – MATERIALS, CHEMICALS, "MICROORGANISMS" AND "TOXINS"**			
	2A - SYSTEMS, EQUIPMENT AND COMPONENTS			
DL02A-01	**Composite structures, in the form of tubes with an inside diameter of between 75 mm and 400 mm, and made with "fibrous or filamentary materials" or with carbon prepreg materials**	**DL02A01A**	**8401.20.10**	• Machinery and apparatus for isotopic separat
DL02A-02	**Platinized catalysts specially designed or prepared for promoting the hydrogen isotope exchange reaction between hydrogen and water for the**	**DL02A02A**	**8401.20.90**	• Other parts of machinery and apparatus for is separation

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	recovery of tritium from heavy water or for the production of heavy water			
DL02A-03	**Specialised packings for use in separating heavy water from ordinary water, having both of the following characteristics:** I. Made of phosphor bronze mesh (chemically treated to improve wettability); and II. Designed for use in vacuum distillation towers.	**DL02A03A**	**8401.20.90**	• Other parts of machinery and apparatus for is separation
DL02A-04	**High-density (lead glass or other) radiation shielding windows, having all of the following characteristics, and specially designed frames therefor:** I. A 'cold area' greater than 0.09 m^2; II. A density greater than 3 g/cm^3 ; and III. A thickness of 100 mm or greater.	**DL02A04A**	**8401.40.00**	• Parts of nuclear reactors
	*Note for **DL02A-04**:* The term 'cold area' means the viewing area of the window exposed to the lowest level of radiation in the design application.			
	2B – TEST, INSPECTION AND PRODUCTION EQUIPMENT			
DL02B-01	**Filament winding machines**, as follows:			
	a. Filament winding machines having all of the following characteristics: I. Having motions for positioning, wrapping, and winding fibres are co-ordinated and programmed in two or more axes; II. Specially designed to fabricate composite structures or laminates from "fibrous or filamentary materials"; and III. Capable of winding cylindrical rotors of diameter between 75 mm and 400 mm and lengths of 600 mm or greater.	**DL02B01A**	**8401.20.10**	• Machinery and apparatus for isotopic separati
	b. Co-ordinating and programming controls for the filament winding machines specified in **DL02B-01.a.**	**DL02B01B**	**8401.20.90**	• Other parts of machinery and apparatus for is separation
	c. Precision mandrels for the filament winding machines specified in **DL02B-01.a.**	**DL02B01C**	**8401.20.90**	• Other parts of machinery and apparatus for is separation

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DUALUSE CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
DL02B-02	**Electrolytic cells for fluorine production with an output capacity greater than 250 g of fluorine per hour.**	**DL02B02A**	**8401.20.90**	• Other parts of machinery and apparatus for is separation
DL02B-03	**Electromagnetic isotope separators designed for, or equipped with, single or multiple ion sources capable of providing a total ion beam current of 50 mA or greater.**	**DL02B03A**	**8401.20.90**	• Other parts of machinery and apparatus for is separation
	*Note for **DL02B-03**:* **DL02B-03** includes separators: 1. Capable of enriching stable isotopes; 2. With the ion sources and collectors both in the magnetic field and those configurations in which they are external to the field. 3.			
DL02B-04	**Ammonia synthesis converters or ammonia synthesis units in which the synthesis gas (nitrogen and hydrogen) is withdrawn from an ammonia/ hydrogen high-pressure exchange column and the synthesised ammonia is returned to that column.**	**DL02B04A**	**8401.20.10**	• Machinery and apparatus for isotopic separati
DL02B-05	**Hydrogen-cryogenic distillation columns having all of the following characteristics:**	**DL02B05A**	**8401.20.90**	• Other parts of machinery and apparatus for is separation
	I. Designed to operate with internal temperatures of 35 K (-238°C) or less; II. Designed to operate at an internal pressure of 0.5 to 5 MPa (5 to 50 atmospheres); III. Constructed of either: i. Stainless steel of the 300 series with low sulphur content and with an austenitic "ASTM" (or equivalent standard) grain size number of 5 or greater; or ii. Equivalent materials which are both cryogenic and H_2-compatible; and IV. With internal diameters of 1 m or greater and effective lengths of 5 m or greater			
DL02B-06	**Water-hydrogen sulphide exchange tray columns and 'internal contactors', as follows:**			
	a. Water-hydrogen sulphide exchange tray columns, having all of the following characteristics:	**DL02B06A**	**8401.20.90**	• Other parts of machinery and apparatus for is separation

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DUALUSE CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	I. Can operate at pressures of 2 MPa or greater; II. Constructed of carbon steel having an austenitic "ASTM" (or equivalent standard) grain size number of 5 or greater; and III. With a diameter of 1.8 m or greater.			
	b. 'Internal contactors' for the water-hydrogen sulphide exchange tray columns.	**DL02B06B**	**8401.20.90**	• Other parts of machinery and apparatus for is separation
	*Note for **DL02B-06b**:* *Technical Note* *'Internal contactors' of the columns are segmented trays which have an effective assembled diameter of 1.8 m or greater, are designed to facilitate countercurrent contacting and are constructed of stainless steels with a carbon content of 0.03% or less. These may be sieve trays, valve trays, bubble cap trays, or turbogrid trays.*			
DL02B-07	**Pumps capable of circulating solutions of concentrated or dilute potassium amide catalyst in liquid ammonia (KNH_2/NH_3), having all of the following characteristics:**	**DL02B07A**	**8401.20.10**	• Machinery and apparatus for isotopic separati
	I. Airtight (i.e., hermetically sealed);			
	II. A capacity greater than 8.5 m^3/h;			
	III. Either of the following characteristics: i. For concentrated potassium amide solutions (1% or greater), an operating pressure of 1.5 to 60 MPa (15-600 atmospheres); or ii. For dilute potassium amide solutions (less than 1%), an operating pressure of 20 to 60 MPa (200-600 atmospheres)			
DL02B-08	**Tritium facilities or plants, and equipment therefor, as follows:**			
	a. Facilities or plants for the production, recovery, extraction, concentration, or handling of tritium;	**DL02B08A**	**8401.20.10**	• Machinery and apparatus for isotopic separati
	b. Equipment for tritium facilities or plants, as follows: 1. Hydrogen or helium refrigeration units capable of cooling to 23 K (-250^{0}C) or less, with heat removal capacity greater than 150 watts; or 2. Hydrogen isotope storage and purification systems using metal	**DL02B08B**	**8401.20.90**	• Other parts of machinery and apparatus for is separation

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	hydrides as the storage, or purification medium.			
DL02B-09	**Turboexpanders or turboexpander-compressor sets having both of the following characteristics:**	**DL02B09A**	**8401.20.90**	• Other parts of machinery and apparatus for is separation
	I. Designed for operation with an outlet temperature of 35 K (-238^{0}C) or less; and			
	II. Designed for a throughput of hydrogen gas of 1,000 kg/h or greater.			
DL02B-10	**Lithium isotope separation facilities or plants, and equipment therefor, as follows:**			
	a. Facilities or plants for the separation of lithium isotopes;	**DL02B10A**	**8401.20.10**	• Machinery and apparatus for isotopic separati
	b. Equipment for the separation of lithium isotopes, as follows: 1. Packed liquid-liquid exchange columns specially designed for lithium amalgams; 2. Mercury or lithium amalgam pumps; 3. Lithium amalgam electrolysis cells; 4. Evaporators for concentrated lithium hydroxide solution.	**DL02B10B**	**8401.20.90**	• Other parts of machinery and apparatus for is separation
	2C MATERIALS			
	*General Note for **Category 2C**:* a. Metals and alloys: Unless provision to the contrary is made, the words **metals** and **alloys** in this category cover crude and semi-fabricated forms, as follows: b. Crude forms: Anodes, balls, bars (including notched bars and wire bars), billets, blocks, blooms, brickets, cakes, cathodes, crystals, cubes, dice, grains, granules, ingots, lumps, pellets, pigs, powder, rondelles, shot, slabs, slugs, sponge, sticks. c. Semi-fabricated forms (whether or not coated, plated, drilled or punched):			

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DUALUSE CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	1. Wrought or worked materials fabricated by rolling, drawing, extruding, forging, impact extruding, pressing, graining, atomising, and grinding, i.e. angles, channels, circles, discs, dust, flakes, foils and leaf, forging, plate, powder, pressings and stampings, ribbons, rings, rods (including bare welding rods, wire rods, and rolled wire), sections, shapes, sheets, strip, pipe and tubes (including tube rounds, squares, and hollows), drawn or extruded wire; 2. Cast material produced by casting in sand, die, metal, plaster or other types of moulds, including high pressure castings, sintered forms, and forms made by powder metallurgy.			
DL02C-01	**Alloys as follows:**			
	a. Aluminium "alloys capable of" an ultimate tensile strength of 460 MPa or more at 293 K (20^0C), in the form of tubes or cylindrical solid forms (including forgings) with an outside diameter of more than 75 mm;	**DL02C01A**	**7601.20.00** **8401.20.10** **8401.20.90** **8401.40.00**	• Aluminium alloys • Machinery and apparatus for isotopic separati • Other parts of machinery and apparatus for is separation • Parts of nuclear reactors
	b. Titanium "alloys capable of" an ultimate tensile strength of 900 MPa or more at 293 K (20^0C) in the form of tubes or cylindrical solid forms (including forgings) with an outside diameter of more than 75 mm;	**DL02C01B**	**8108.90.00** **8401.20.10** **8401.20.90** **8401.40.00**	• Other cadmium and articles thereof, including and scrap • Machinery and apparatus for isotopic separati • Other parts of machinery and apparatus for is separation • Parts of nuclear reactors
	*Note for **DL02C-01:*** *The phrase **alloys capable of** encompasses alloys before or after heat treatment.*			
DL02C-02	**"Fibrous or filamentary materials" or prepregs, as follows:**			
	a. Carbon or aramid "fibrous or filamentary materials" having a "specific modulus" of 12.7 x 10^6 m or greater or a "specific tensile strength" of 235 x 10^3 m or greater; **except**: Aramid "fibrous or filamentary materials" having 0.25 percent or more by weight of an ester based fibre surface modifier;	**DL02C02A**	**5503.10.00**	• Of nylon or other polyamides

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	b. Glass "fibrous or filamentary materials" having a "specific modulus" of 3.18 x 10^6 m or greater and a "specific tensile strength" of 76.2 x 10^3 m or greater; or	**DL02C02B**	**7019.11.00** **7019.12.00**	• Chopped strands, of a length of not more thar • Rovings
	c. Thermoset resin impregnated continuous "yarns", "rovings", "tows" or "tapes" with a width no greater than 15 mm (prepregs), made from carbon or glass "fibrous or filamentary materials" controlled by **DL02C-02.a** or **DL02C-02.b**;	**DL02C02C**	**7019.12.00** **8401.20.10** **8401.20.90** **8401.40.00**	• Rovings • Machinery and apparatus for isotopic separati • Other parts of machinery and apparatus for is separation • Parts of nuclear reactors
	*Note for **DL02C-02**:* In **DL02C-02**, "fibrous or filamentary materials" is restricted to continuous "monofilaments", "yarns", "rovings", "tows" or "tapes". *Technical Note:* *The resin forms the matrix of the composite.*			
DL02C-03	**Maraging steels, capable of an ultimate tensile strength of 2,050 Mpa or more, at 293 K (20°C) except:** forms in which no linear dimension exceeds 75 mm;	**DL02C03A**	**7218.91.00** **7218.99.00** **8401.20.10** **8401.20.90** **8401.40.00**	• Semi-finished products of stainless steel of rectangular (other than square) cross-section • Other semi-finished products of stainless stee rectangular (other than square) cross-section • Machinery and apparatus for isotopic separati • Other parts of machinery and apparatus for is separation • Parts of nuclear reactors
	*Note for **DL02C-03**:* The phrase maraging steel 'capable of' encompasses maraging steel before or after heat treatment.			
DL02C-04	**Boron enriched in the boron-10 (^{10}B) isotope to greater than its natural isotopic abundance, as follows: elemental boron, compounds, mixtures containing boron, manufactures thereof, waste or scrap of any of the foregoing.**	**DL02C04A**	**2804.50.00** **8401.20.10** **8401.20.90** **8401.40.00**	• Boron; tellurium • Machinery and apparatus for isotopic separati • Other parts of machinery and apparatus for is separation • Parts of nuclear reactors

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	*Note for **DL02C-04**:* In **DL02C-04**, mixtures containing boron include boron loaded materials. *Technical Note:* *The natural isotopic abundance of boron-10 is approximately 18.5 weight per cent (20 atom per cent).*			
DL02C-05	**Tungsten, tungsten carbide, and alloys containing more than 90% tungsten by weight, having both of the following characteristics:** I. In forms with a hollow cylindrical symmetry (including cylinder segments) with an inside diameter between 100 mm and 300 mm; and II. A mass greater than 20 kg.	**DL02C05A**	**8101.95.00** **8401.20.10** **8401.20.90** **8401.40.00**	• Bars and rods, other than those obtained simp sintering, profiles, plates, sheets, strip and foi • Machinery and apparatus for isotopic separati • Other parts of machinery and apparatus for is separation • Parts of nuclear reactors
	*Note for **DL02C-05**:* **DL02C-05** does **not** control manufactures/ parts specially designed for use as weights or gamma-ray collimators.			
DL02C-06	**Calcium, having both of the following characteristics:** I. Containing less than 1,000 parts per million by weight of metallic impurities other than magnesium; and II. Containing less than 10 parts per million by weight of boron.	**DL02C06A**	**2805.12.00**	• Calcium
DL02C-07	**Magnesium, having both of the following characteristics:** I. Containing less than 200 parts per million by weight of metallic impurities other than calcium; and II. Containing less than 10 parts per million by weight of boron.	**DL02C07A**	**8104.11.00**	• Unwrought magnesium : containing at least 9 by weight of magnesium
DL02C-08	**Bismuth, having both of the following characteristics:** I. A purity of 99.99% or greater by weight; and II. Containing less than 10 parts per million by weight of silver.	**DL02C08A**	**8106.00.90**	• Other bismuth and articles thereof, including and scrap
DL02C-09	**Beryllium metal, alloys containing more than 50% of beryllium by weight, beryllium compounds, manufactures thereof, and waste and scrap of any of the foregoing.**	**DL02C09A**	**8112.19.00** **8401.20.10** **8401.20.90**	• Other beryllium in other form excluding wast scrap • Machinery and apparatus for isotopic separati • Other parts of machinery and apparatus for is separation • Parts of nuclear reactors

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			8401.40.00	
	*Note for **DL02C-09**:* **DL02C-09** does **not** control the following: 1. Metal windows for X-ray machines, or for bore-hole logging devices; 2. Oxide shapes in fabricated or semi-fabricated forms specially designed for electronic component parts or as substrates for electronic circuits; 3. Beryl (silicate of beryllium and aluminium) in the form of emeralds or aquamarines.			
DL02C-10	**Hafnium metal, alloys containing more than 60% hafnium by weight, hafnium compounds containing more than 60% hafnium by weight, manufactures thereof, and waste and scrap of any of the foregoing.**	**DL02C10A**	**8112.99.00** **8112.99.00** **8401.20.10** **8401.20.90** **8401.40.00**	• Other articles of beryllium, chromium, germanium, vanadium, gallium, hafnium indium, niobium (columbium), rhenium a thallium metals • Other than unwrought in other forms • Machinery and apparatus for isotopic sep • Other parts of machinery and apparatus f isotopic separation • Parts of nuclear reactors
DL02C-11	**Helium-3 (^{3}He), mixtures containing helium-3, products or devices containing any of the foregoing.**	**DL02C11A**	**2804.29.00** **8112.99.00** **8401.20.10** **8401.20.90** **8401.40.00**	• Other rare gases • Other than unwrought in other forms • Machinery and apparatus for isotopic sep • Other parts of machinery and apparatus f isotopic separation • Parts of nuclear reactors
	*Note for **DL02C-11**:* **DL02C-11** does **not** control a product or device containing less than 1 g of helium-3.			
DL02C-12	**Lithium enriched in the lithium-6(^{6}Li) isotope to greater than its natural isotopic abundance, and products or devices containing enriched lithium, as follows: elemental lithium, alloys, compounds, mixtures**	**DL02C12A**	**2805.19.00**	• Other alkali or alkaline-earth metals

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	containing lithium, manufactures thereof, waste or scrap of any of the foregoing.			
	*Notes for **DL02C-12**:* **DL02C-12** does **not** control thermoluminescent dosimeters. *Technical Note:* *The natural isotopic abundance of lithium-6 is approximately 6.5 weight per cent (7.5 atom per cent).*			
DL02C-13	**Zirconium with a hafnium content of less that 1 part hafnium to 500 parts zirconium by weight, in the form of a metal, alloys containing more that 50% zirconium by weight, or compounds, or manufactures wholly thereof; except: Zirconium the form of foil having thickness not exceeding 0.10 mm.**	**DL02C13A**	**8109.90.00**	• Other zirconium and articles thereof, includin and scrap
	*Note for **DL02C-13**:* ***DL02C-13** includes waste and scrap zirconium as defined here.*			
DL02C-14	**Tritium, tritium compounds, mixtures containing tritium in which the ratio of tritium to hydrogen atoms exceeds 1 part in 1,000, and products or devices containing any of the foregoing.**	**DL02C14A**	**2844.40.19**	• Other radioactive elements and isotopes and compounds excluding radium and its salts
	*Note for **DL02C-14**:* **DL02C-14** does **not** control a product or device containing less than 1.48 x 10^3 GBq (40 Ci) of tritium in any form.			
DL02C-15	**Alpha-emitting radionuclides having an alpha half-life of 10 days or greater but less than 200 years, in the following forms:**			
	a. Elemental;	**DL02C15A**	**2844.40.19**	• Other radioactive elements and isotopes and compounds excluding radium and its salts
	b. Compounds having a total alpha activity of 37 GBq/kg (1 Ci/kg) or greater;	**DL02C15B**	**2844.40.19**	• Other radioactive elements and isotopes and compounds excluding radium and its salts
	c. Mixtures having a total alpha activity of 37 GBq/kg (1 Ci/kg) or greater;	**DL02C15C**	**2844.40.19**	• Other radioactive elements and isotopes and compounds excluding radium and its salts
	d. Products or devices containing any of the foregoing.	**DL02C15D**	**2844.40.19**	• Other radioactive elements and isotopes and

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				compounds excluding radium and its salts
	*Note for **DL02C-15**:* **DL02C-15** does **not** control a product or device containing less than 3.7 GBq (100 millicuries) of alpha activity.			
DL02C-16	**Radium-226 (^{226}Ra) , radium-226 alloys, radium-226 componds, mixtures containing radium-226, manufactures thereof, and products or devices containing any of the foregoing.**	**DL02C16A**	**2844.40.11**	• Radium and its salts
	*Note for **DL02C-16**:* **DL02C-16** does **not** control the following: 1. Medical applicators; 2. A product or device containing less than 0.37 GBq (10 millicuries) of radium-226 in any form.			
DL02C-17	**Chlorine trifluoride (ClF_3)**	**DL02C17A**	**2812.90.00**	• Other halides and halide oxides of non-metals
DL02C-18	**High explosives, other than those specified in ML08, or substances or mixtures containing more than 2% by weight thereof, with a crystal density greater than 1.8 gm/cm^3 and having a detonation velocity greater than 8,000 m/s.**	**DL02C18A**	**3602.00.00**	• Prepared explosives, other than propellent po
DL02C-19	**Nickel powder and porous nickel metal, as follows:**			
	a. Nickel powder having both of the following characteristics: I. A nickel purity content of 99.0% or greater by weight; and II. A mean particle size of less than 10 micrometers (mm) measured by American Society for Testing and Materials ("ASTM") B330 standard; **except:** Filamentary nickel powders	**DL02C19A**	**7504.00.00**	• Nickel powders and flakes
	b. Porous nickel powder produced from materials specified in **DL02C-19.a**	**DL02C19B**	**7504.00.00**	• Nickel powders and flakes
	*Notes for **DL02C-19**:* **DL02C-19** does **not** control the following: 1. Filamentary nickel powders; 2. Single porous nickel sheets not exceeding 1,000 cm^2 per sheet. *Technical Note:*			

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	DL02C-19.b *refers to porous metal formed by compacting and sintering the materials in* ***DL02C-19.a*** *to form a metal material with fine pores interconnected throughout the structure.*			
DL03	**CATEGORY 3 – MATERIALS PROCESSING**			
	3A – SYSTEMS, EQUIPMENT AND COMPONENTS			
DL03A-01	**Crucibles made of materials resistant to liquid actinide metals, as follows:**		**6903.90.00** **8401.20.90**	• Other, other refractory ceramic goods (for eg. crucibles, muffles, nozzles, plugs, supports, c tubes, pipes, sheaths and rods), other than tho siliceous fossil meals or of similar siliceous e • Other parts of machinery and apparatus for is separation
	a. Crucibles with a volume of between 150 ml (cm^3) and 8 litres (8,000 cm^3) and made of or coated with any of the following materials having a purity of 98% or greater by weight: I. Calcium fluoride (CaF_2); II. Calcium zirconate (metazirconate) ($CaZrO_3$); III. Cerium sulphide (Ce_2S_3); IV. Erbium oxide (erbia) (Er_2O_3); V. Hafnium oxide (hafnia) (HfO_2); VI. Magnesium oxide (MgO); VII. Nitrided niobium-titanium-tungsten alloy (approximately 50% Nb, 30% Ti, 20% W); VIII. Yttrium oxide (yttria) (Y_2O_3); or IX. Zirconium oxide (zirconia) (ZrO_2).	**DL03A01A**	**6903.90.00** **8401.20.90**	• Other, other refractory ceramic goods (for eg. crucibles, muffles, nozzles, plugs, supports, c tubes, pipes, sheaths and rods), other than tho siliceous fossil meals or of similar siliceous e • Other parts of machinery and apparatus for is separation
	b. Crucibles with a volume of between 50 ml (cm^3) and 2 litres (2,000 cm^3) and made of or lined with tantalum, having a purity of 99.9% or greater;	**DL03A01B**	**6903.90.00** **8401.20.90**	• Other, other refractory ceramic goods (for eg. crucibles, muffles, nozzles, plugs, supports, c tubes, pipes, sheaths and rods), other than tho siliceous fossil meals or of similar siliceous e • Other parts of machinery and apparatus for is separation
	c. Crucibles with a volume of between 50 ml (cm^3) and 2 litres (2,000	**DL03A01C**	**6903.90.00**	• Other, other refractory ceramic goods (for eg.

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	cm^3), made of or lined with tantalum (having a purity of 98% or greater) and coated with tantalum carbide, nitride or boride (or any combination of these).		8401.20.90	crucibles, muffles, nozzles, plugs, supports, c tubes, pipes, sheaths and rods), other than tho siliceous fossil meals or of similar siliceous e • Other parts of machinery and apparatus for is separation
DL03A-02	**Valves having all of the following characteristics:** I. A nominal size of 5 mm or greater; II. Having a bellows seal; III. Wholly made of or lined with aluminium, aluminium alloy, nickel, or nickel alloy containing more than 60% nickel by weight.	**DL03A02A**	**8401.20.90**	• Other parts of machinery and apparatus for is separation *[Declarant needs to provide technical specs.]*
	*Note for **DL03A-02:*** For valves with different inlet and outlet diameters, the **nominal size** above refers to the smallest diameter.			
	3B - TEST, INSPECTION AND PRODUCTION EQUIPMENT			
DL03B-01	**Machine tools, as follows, for removing or cutting metals, ceramics or "composites", which, according to the manufacturer's technical specification , can be equipped with electronic devices for simultaneous "contouring control" in two or more axes:**		**8459.61.00** **8459.69.10** **8459.69.20** **8401.20.90**	• Other milling machines : numerically control • Other milling machines : electrically operatec • Other milling machines : not electrically oper • Other parts of machinery and apparatus for is separation
	a. Machine tools for milling, having any of the following characteristics: I. Positioning accuracies with "all compensations available" equal to or less better) than 6 µm (0.006 mm) along any linear axis (overall positioning); or II. Two or more contouring rotary axes.	**DL03B01A**		
	b. Machine tools for grinding, having any of the following characteristics: I. Positioning accuracies with "all compensations available" equal to or less (better) than 4 µm (0.004 mm) along any linear axis (overall positioning); or II. Two or more contouring rotary axes.	**DL03B01B**	**8460.21.00** **8460.29.10**	• Other grinding machines, in which the positic any one axis can be set up to an accuracy of a 0.01 mm : numerically controlled • Other, other grinding machines, in which the positioning in any one axis can be set up to ar accuracy of at least 0.01 mm : electrically ope operated

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			8460.29.20 **8401.20.90**	• Other, other grinding machines, in which the positioning in any one axis can be set up to ar accuracy of at least 0.01 mm : not electrically operated operated • Other parts of machinery and apparatus for is separation
	*Notes for **DL03B-01:*** a. **DL03B-01.a** does **not** control milling machines having the following characteristics: I. X-axis travel greater than 2m; and II. Overall positioning accuracy on the x-axis more (worse) than 30 µm (0.030 mm) b. **DL03B-01.b** does **not** control the following grinding machines: 1. Cylindrical external, internal, and external-internal grinding machines having all of the following characteristics: I. Limited to cylindrical grinding; II. A maximum workpiece outside diameter or length of 150 mm; III. Not more than two axes that can be coordinated simultaneously for "contouring control"; and IV. No contouring c axis; 2. Jig grinders with axes limited to x, y, c and a where c axis is used to maintain the grinding wheel normal to the work surface , and the a axis is configured to grind barrel cams; 3. Tool or cutter grinding machines with "software" specially designed for the production of tools or cutters; or 4. Crankshaft or camshaft grinding machines.			
DL03B-02	**"Isostatic presses", and related equipment, as follows:**	**DL03B02A**	**8462.99.30** **8462.99.40**	• Other presses for working metal or metal cart electrically operated • Other presses for working metal or metal cart not electrically operated
	a. "Isostatic presses" having both of the following characteristics: I. Capable of achieving a maximum working pressure of 69 MPa or greater; and II. A chamber cavity with an inside diameter in excess of 152 mm			

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	b. Dies, moulds and controls, specially designed for "isostatic presses" specified in **DL03B-02.a**		**8480.41.00** **8207.20.00**	• Moulds for metal or metal carbides : Injectior compression types • Dies for drawing or extruding metal
	*Note for **DL03B-02:*** *The inside chamber dimension is that of the chamber in which both the working temperature and the working pressure are achieved and does not include fixtures. That dimension will be the smaller of either the inside diameter of the pressure chamber or the inside diameter of the insulated furnace chamber, depending on which of the two chambers is located inside the other.*			
DL03B-03	**Dimensional inspection machines, instruments or systems, as follows:**			
	a. Computer controlled or numerically controlled dimensional inspection machines having both of the following characteristics: I. Two or more axes; and II. A one-dimensional length "measurement uncertainty" equal to or less (better) than (1.25 + L/1 000) µm tested with a probe of an "accuracy" of less (better) than 0.2 µm (L is the measured length in millimeters)	**DL03B03A**	**9031.80.92**	• Other than cable test equipment : electrically operated
	b. Systems for simultaneously linear-angular inspection of hemishells, having both of the following characteristics: I. "Measurement uncertainty" along any linear axis equal to or less (better) than 3.5 µm per 5 mm; and II. "Angular position deviation" equal to or less than 0.02^{0};	**DL03B03B**	**9031.80.92**	• Other than cable test equipment : electrically operated
	*Notes for **DL03B-03:*** a. Machine tools that can be used as measuring machines are controlled if they meet or exceed the criteria specified for the machine tool function or the measuring machine function. b. A machine specified in **DL03B-03** is controlled if it exceeds the control threshold anywhere within its operating range. c. All parameters of measurement values in **DL03B-03** represent plus/minus, i.e. not total band.			

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DL03B-04	**"Robots" or "end-effectors", specially designed to comply with national safety standards applicable to handling high explosives (for example, meeting electrical code ratings for high explosives) and specially designed controllers therefor**	**DL03B04A**	**8479.50.90**	• Other industrial robots, not elsewhere specifi included
DL03B-05	**Flow forming machines, spin forming machines capable of flow forming functions, and mandrels**, as follows:			
	a. Machines having both of the following characteristics: I. Three or more rollers (active or guiding); and II. Which, according to the manufacturer's technical specification, can be equipped with "numerical control" units or a computer control	**DL03B05A**	**8462.99.50** **8462.99.60**	• Other than hydraulic presses, electrically ope • Other than hydraulic presses, not electrically
	b. Rotor-forming mandrels designed to form cylindrical rotors of inside diameter between 75 mm and 400 mm;	**DL03B05B**	**8462.99.50** **8462.99.60**	• Other than hydraulic presses, electrically ope • Other than hydraulic presses, not electrically
	*Note for **DL03B-05:*** ***DL03B-05** includes machines which have only a single roller designed to deform metal plus two auxiliary rollers which support the mandrel, but do not participate directly in the deformation process.*			
DL03B-06	**Remote manipulators that can be used to provide remote actions in radiochemical separation operations and hot cells, as follows:**			
	a. Having a capability of penetrating 0.6 m or more of hot cell wall (through-the-wall operation); or	**DL03B06A**	**8428.90.90**	• Other teleferics, chair-lifts, ski-draglines; trac mechanisms for funiculars
	b. Having a capability of bridging over the top of a hot cell wall with a thickness of 0.6 m or more (over-the-wall operation);	**DL03B06B**	**8428.90.90**	• Other teleferics, chair-lifts, ski-draglines; trac mechanisms for funiculars
	*Note for **DL03B-06:*** Remote manipulators provide translation of human operator actions to a remote operating arm and terminal fixture. They may be of master/slave type or operated by joystick or keypad.			

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DL03B-07	**Vacuum or controlled environment (inert gas) induction furnaces capable of operation above 1,123 K (850^{0}C) and having induction coils 600 mm or less in diameter, and designed for power inputs of 5 kW or more, and power supplies specially designed therefor with a specified power output 5 kW or more.**	**DL03B07A**	**8417.80.90**	• Other industrial or laboratory furnaces and ov
	*Note for **DL03B-07:*** ***DL03B-07*** *does* ***not*** *control furnaces designed for the processing of semiconductor wafers.*			
DL03B-08	**Vacuum or other controlled atmosphere metallurgical melting and casting furnaces and related equipment, as follows:**			
	a. Arc remelt and casting furnaces with consumable electrode capacities between 1,000 cm^3 and 20,000 cm^3, capable of operating with melting temperatures above 1,973 K (1,700^{0}C);	**DL03B08A**	**8417.80.90**	• Other industrial or laboratory furnaces and ov
	b. Electron beam melting and plasma atomization and melting furnaces, with a power of 50 kW or greater, capable of operating with melting temperatures above 1,473 K (1,200^{0}C).	**DL03B08B**	**8417.80.90**	• Other industrial or laboratory furnaces and ov
DL03B-09	**Rotor fabrication or assembly equipment, rotor straightening equipment, bellows-forming mandrels and dies, as follows:**			
	a. Rotor assembly equipment for assembly of gas centrifuge rotor tube sections, baffles and end caps, including associated precision mandrels, clamps and shrink fit machines;	**DL03B09A**	**8401.20.10**	• Machinery and apparatus
	b. Rotor straightening equipment for alignment of gas centrifuge rotor tube sections to a common axis;	**DL03B09B**	**8401.20.10**	• Machinery and apparatus
	*Note for **DL03B-09.b**:* *Normally such equipment will consist of precision measuring probes linked to a computer that subsequently controls the action of, for example, pneumatic rams used for aligning the rotor tube sections.*			
	c. Bellows-forming mandrels and dies for producing single-convolution bellows.	**DL03B09C**	**8401.20.10**	• Machinery and apparatus

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	*Notes for **DL03B-09.c**:* *The bellows have all of the following characteristics:* 1. *Inside diameter 75 mm to 400 mm;* 2. *Length equal to or greater than 12.7 mm;* 3. *Single convolution depth greater than 2 mm; and* 4. *Made of high-srength aluminium alloys, maraging steel or high strength "fibrous or filamentary materials".*			
DL03B-10	**Centrifugal multiplane balancing machines, fixed or portable, horizontal or vertical, as follows:**			
	a. Centrifugal balancing machines designed for balancing flexible rotors having a length of 600 mm or more and having all of the following characteristics: I. A swing or journal diameter of 75 mm or more; II. Mass capability of from 0.9 to 23 kg; and III. Capable of balancing speed of revolution more than 5,000 rpm	**DL03B10A**	**9031.10.10**	• Machines for balancing mechanical parts : electrically operated
	b. Centrifugal balancing machines designed for balancing hollow cylindrical rotor components and having all of the following characteristics: I. A journal diameter of 75 mm or more; II. Mass capability of from 0.9 to 23 kg; III. Capable of balancing to a residual imbalance of 0.01 kg x mm/kg per plane or better; and IV. Belt drive type.	**DL03B10B**	**9031.10.10**	• Machines for balancing mechanical parts : electrically operated
DL03B-11	**"Pressure transducers" capable of measuring absolute pressures at any point in the range 0 to 13 kPa and having both the following characteristics:**	**DL03B11A**	**9026.20.30** **9026.20.40**	• Other than for measuring or checking pressur electrically operated • Other than for measuring or checking pressur electrically operated
	I. Pressure sensing elements made of or protected by aluminium, aluminium alloy, nickel or nickel alloy with more than 60% nickel by weight; and			
	II. Having either of the following characteristics: i. A full scale of less than 13 kPa and an "accuracy" of better than ±1% (full-scale); or ii. A full scale of 13 kPa or greater and an "accuracy" of better			

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DUALUSE CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	than ±130 Pa.			
	*Note for **DL03B-10**:* For the purposes of **DL03B-11**, "accuracy" includes non-linearity, hysteresis and repeatability at ambient temperature.			
DL03B-12	**Vacuum pumps with an input throat size of 380 mm or greater with a pumping speed of 15,000 litres/s (15 m^3/s)or greater and capable of producing an ultimate vacuum better than 13 mPa.**	**DL03B12A**	**8414.10.10** **8414.10.20**	• Vacuum pumps electrically operated • Vacuum pumps not electrically operated
	*Notes for **DL03B-11**:* a. The ultimate vacuum is determined at the input of the pump with the input of the pump blocked off. b. The pumping speed is determined at the measurement point with nitrogen gas or air.			
DL03B-13	**Multistage light gas guns or other high-velocity gun systems (coil, electromagnetic, and electrothermal types and other advanced systems) capable of accelerating projectiles to 2 km/s or greater.**	**DL03B13A**	**9304.00.90**	• Other, other arms, for eg. spring, air or gas gu pistols, truncheons), excluding those of headi 93.07
DL04	**CATEGORY 4 – ELECTRONICS**			
	4A – SYSTEMS, EQUIPMENT AND COMPONENTS			
DL04A-01	**Electronic components, as follows:**			
	a. Capacitors with the following characteristics: I. Voltage rating greater than 1.4 kV, energy storage greater than 10 J, capacitance greater than 0.5 µF and series inductance less than 50 nH; or II. Voltage rating greater than 750 V, capacitance greater than 0.25 µF and series inductance less than 10 Nh	**DL04A01A**	**8532.90.10** **8532.90.90**	• Parts used with capacity of 500 kVA or more • Other parts used with capacity of 500 kVA or
	b. Superconducting solenoidal electromagnets having all of the following characteristics: I. Capable of creating magnetic fields of more than 2 teslas (20	**DL04A01B**	**8543.89.90**	• Other, other machines and apparatus, having individual functions

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	kilogauss); II. With a ratio of length to inner diameter greater than 2; III. With an inner diameter greater than 300 mm; and IV. With a magnetic field uniform to better than 1% over the central 50% of the inner volume			
	c. Flash X-ray generators or pulsed electron accelerators having either of the following sets of characteristics: I. An accelerator peak electron energy of 500 keV or greater but less than 25 MeV; and with a 'figure of merit' (K) of 0.25 or greater; or II. An accelerator peak electron energy of 25MeV a 'peak power' greater than 50 MW.	**DL04A01C**	**8543.19.00** **9022.90.90**	• Other particle accelerators • Other apparatus based on the use of alpha, be gamma radiations, not for medical, surgical, c veterinary uses, including radiography or radiotherapy apparatus
	*Notes for **DL04A-01**:* a. **DL04A-01.b** does **not** control magnets specially designed for and exported as part of medical nuclear magnetic resonance (NMR) imaging systems. The phrase "as part of" does not necessarily mean physical part in the same shipment; separate shipments from different sources are allowed, provided the related export documents clearly specify that the shipments are dispatched 'as part of' the imaging systems. b. For **DL04A-01.c**, accelerators that are component parts of devices designed for purposes other than electron beam or X-ray radiation (electron microscopy, for example) and those designed for medical purposes. *Technical Note:* a. *The 'figure of merit' K is defined as:* $K = 1.7 \times 10^3 V^{2.65} Q$, *V is the peak electron energy in million electron volts.* *If the accelerator beam pulse duration is less than or equal to 1 μs, then Q is the total accelerated charge in Coulombs. If the accelerator beam pulse duration is greater than 1 μs, then Q is the maximum accelerated charge in 1 μs.* *Q equals the integral of i with respect to t, over the lesser of 1μs or the time duration of the beam pulse (Q = [integral] idt), where i is beam current in amperes and t is time in seconds)* b. *'Peak power' = (peak potential in volts) x (peak beam current in*			

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	amperes) c. *In machines based on microwave accelerating cavities, the time duration of the beam pulse is the lesser of 1 μs or the duration of the bunched beam packet resulting from one microwave modulator pulse.* d. *In machines based on microwave accelerating cavities, the peak beam current is the average current in the time duration of a bunched beam packet.*			
DL04A-02	**Frequency changers (also known as converters or inverters) or generators, having all of the following characteristics:**	**DL04A02A**	**8504.32.99** **8504.40.40** **8504.40.90** **8543.89.90**	• Other transformers of a power handling capac exceeding 10 kVA • Other inverters • Other static converters other than for automat processing machines and units thereof, and telecommunications apparatus [ITA1/A-024] • Other, other machines and apparatus, having individual functions
	I. A multiphase output capable of providing a power of 40 W or more;			
	II. Capable of operating in the frequency range between 600 and 2,000 Hz;			
	III. Total harmonic distortion better (less) than 10%; and			
	IV. Frequency control better (less) than 0.1%.			
DL04A-03	**Direct current high-power supplies, capable of continuously producing, over a time period of 8 hours, 100 V or greater with current output of 500 A or greater and with current or voltage stability better than 0.1% over a time period of 8 hours.**	**DL04A03A**	**8501.32.29**	• Generators of an output exceeding 37.5 kW
DL04A-04	**High-voltage direct current power supplies, capable of continuously producing, over a time period of 8 hours, 20,000 V (20 kV) or greater with current output of 1 A or greater and with current or voltage regulation better than 0.1% over a time period of hours.**	**DL04A04A**	**8501.32.22** **8543.89.90**	• Generators of an output exceeding 10 kW but exceeding 37.5 kW • Other, other machines and apparatus, having individual functions
DL04A-05	**Switching devices, as follows**:			
	a. Cold-cathode tubes (including gas krytron tubes and vacuum sprytron	**DL04A05A**	**8540.79.90**	• Other microwave tubes other than for use wit

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	tubes), whether gas filled or not, operating similarly to a spark gap, containing three or more electrodes, and having all of the following characteristics: I. Anode peak voltage rating of 2,500 V or more; II. Anode peak current rating of 100 A or more; and III. Anode delay time of 10 µs or less;		**8401.20.90**	articles of heading 85.25 • Other parts of machinery and apparatus for is separation
	b. Triggered spark-gaps having an anode delay time of 15 µs or less and rated for a peak current of 500 A or more;	**DL04A05B**	**8543.89.90**	• Other, other machines and apparatus, having individual functions
	c. Modules or assemblies with a fast switching function having all of the following characteristics: I. Anode peak voltage rating greater than 2,000 V; II. Anode peak current rating of 500 A or more; and III. Turn-on time of 1 µs or less.	**DL04A05C**	**8535.90.10**	• Bushing assemblies, tap changer assemblies, connectors and terminals, for electricity distri and power transformers
DL04A-06	**Firing sets and equivalent high-current pulse generators (for controlled detonators), as follows**:			
	a. Explosive detonator firing sets designed to drive multiple controlled detonators specified in **DL04A-9**;	**DL04A06A**	**3603.00.90**	• Other safety fuses, detonating fuses, percussi detonating caps, igniters, electric detonators
	b. Modular electrical pulse generators (pulsers) designed for portable, mobile or ruggedized use (including xenon flash-lamp drivers) having all the following characteristics: I. Capable of delivering their energy in less than 15 µs; II. Having an output greater than 100 A; III. Having a 'rise time' of less than 10 µs into loads of less than 40 ohms; IV. Enclosed in a dust-tight enclosure; V. No dimension greater than 254 mm; VI. Weight less than 25 kg; and VII. Specified for use over an extended temperature range (223 K (-50°C) to 373 K (100°C)) or specified as suitable for aerospace applications.	**DL04A06B**	**8543.89.90**	• Other electrical machines and apparatus, havi individual functions
	*Notes for **DL04A-06**:* The 'rise time' is the time interval from 10% to 90% current amplitude when driving a resistive load.			

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DL04A-07	**High-speed pulse generators with output voltage greater than 6 volts into a less than 55 ohms resistive load, and with 'pulse transition time' less than 500 picoseconds (ps).**	**DL04A07A**	**8543.89.90**	• Other electrical machines and apparatus, havi individual functions, not specified or includec elsewhere in this Chapter
	*Notes for **DL04A-07**:* 'Pulse transition time' is defined as the time interval between 10% and 90% voltage amplitude.			
DL04A-08	**Neutron generator systems, including tubes, designed for operation without an external vacuum system and utilising electrostatic acceleration to induce a tritium-deuterium nuclear reaction.**	**DL04A08A**	**8543.19.00**	• Other particle accelerators
DL04A-09	**Detonators and multipoint initiation system,** as follows:			
	a. Electrically driven explosive detonators, as follows: 1. Exploding bridge (EB); 2. Exploding bridge wire (EBW); 3. Slapper; 4. Exploding foil initiators (EFI); 5.	**DL04A09A**	**3603.00.90**	• Other safety fuses, detonating fuses, percussi detonating caps, igniters, electric detonators
	b. Arrangements using single or multiple detonators designed to nearly simultaneously initiate an explosive surface (over greater than 5,000 mm^2) from a single firing signal (with an initiation timing spread over the surface of less than 2.5 µs);	**DL04A09B**	**3603.00.90**	• Other safety fuses, detonating fuses, percussi detonating caps, igniters, electric detonators
	*Notes for **DL04A-09**:* **DL04A-09** does **not** control detonators using only primary explosives, such as lead azide *Technical Note:* *The detonators of concern all utilise a small electrical conductor (bridge, bridge wire or foil) that explosively vapourises when a fast, high-current electrical pulse is passed through it. In nonslapper types, the exploding conductor starts a chemical detonation in a contacting high-explosive material such as PETN (Pentaerythritoltetranitrate). In slapper detonators, the explosive vaporization of the electrical conductor drives a flyer or slapper across a gap and the impact of the slapper on an explosive starts a chemical detonation. The slapper in some designs is driven by a magnetic*			

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	force. The term exploding foil detonator may refer to either an EB or a slapper-type detonator. Also, the word initiator is sometimes used in place of the word detonator.			
DL04A-10	**Mass spectrometers, capable of measuring ions of 230 atomic mass units or greater and having a resolution of better than 2 parts in 230, as follows, and ion sources therefor:**		**9027.30.10** **9027.30.20**	• Spectrometers, spectrophotometers and specti using optical radiations (UV, visible, IR) : [IT 108] electrically operated • Spectrometers, spectrophotometers and specti using optical radiations (UV, visible, IR) : [IT 108] not electrically operated
	a. Inductively coupled plasma mass spectrometers (ICP/MS);	**DL04A10A**	**9027.30.10**	• Spectrometers, spectrophotometers and spectrographs using optical radiations (U visible, IR) : [ITA1/A-108] electrically o
	b. Glow discharge mass spectrometers (GDMS);	**DL04A10B**	**9027.30.10**	• Spectrometers, spectrophotometers and specti using optical radiations (UV, visible, IR) : [IT 108] electrically operated
	c. Thermal ionization mass spectrometers (TIMS);	**DL04A10C**	**9027.30.10**	• Spectrometers, spectrophotometers and specti using optical radiations (UV, visible, IR) : [IT 108] electrically operated
	d. Electron bombardment mass spectrometers which have a source chamber constructed from, lined with or plated with materials resistant to UF_6;	**DL04A10D**	**9027.30.10**	• Spectrometers, spectrophotometers and specti using optical radiations (UV, visible, IR) : [IT 108] electrically operated
	e. Molecular beam mass spectrometers having either of the following characteristics: I. A source chamber constructed from, lined with or plated with stainless steel or molybdenum and equipped with a cold trap capable of cooling to 193 K (-80^0C) or less; or II. A source chamber constructed from, lined with or plated with materials resistant to UF6;	**DL04A10E**	**9027.30.10**	• Spectrometers, spectrophotometers and specti using optical radiations (UV, visible, IR) : [IT 108] electrically operated
	f. Mass spectrometers equipped with a microfluorination ion source designed for use with actinide or actinide fluorides.	**DL04A10F**	**9027.30.10** **9027.30.20**	• Spectrometers, spectrophotometers and specti using optical radiations (UV, visible, IR) : [IT 108] electrically operated • Spectrometers, spectrophotometers and specti using optical radiations (UV, visible, IR) : [IT

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				108] not electrically operated
DL05	**CATEGORY 5 – TELECOMMUNICATIONS AND "INFORMATION SECURITY"**			
	"Information Security"			
	Notes on Category 5: a. The control status of "information security" equipment, "software", systems, application specific "electronic assemblies", modules, integrated circuits, components or functions is determined in this category even if they are components or "electronic assemblies" of other equipment. b. Products when accompanying their user for the user's personal use are **not** controlled. Cryptography Note: a. Items that meet all of the following are **not** controlled: 1. Generally available to the public by being sold, without restriction, from stock at retail selling points by means of any of the following: (a) Over-the-counter transactions; (b) Mail order transaction; (c) Electronic transactions; or (d) Telephone call transactions; 2. The cryptographic functionality cannot easily be changed by the user; 3. Designed for installation by the user without further substantial support by the supplier; *Technical Note:* In this category, parity bits are not included in the key length.			
	5A - SYSTEMS, EQUIPMENT AND COMPONENTS			
DL05A-01	**Systems, equipment, application specific "electronic assemblies",**			

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	modules and integrated circuits for "information security", as follows, and other specially designed components therefor:			
	a. Designed or modified to use "cryptography" employing digital techniques performing any cryptographic function other than authentication or digital signature having any of the following: 1. A "symmetric algorithm" employing a key length in excess of 56 bits; or 2. An "asymmetric algorithm" where the security of the algorithm is based on any of the following: (a) Factorisation of integers in excess of 512 bits (e.g., RSA);	**DL05A01A**	**8517.80.10** **8517.80.20** **8517.80.30** **8517.80.40** **8517.80.50** **8517.80.60** **8517.80.70** **8517.80.91** **8517.80.92** **8517.80.99**	▪ Scramblers, including speech inverters and or cypher equipment ▪ Data security equipment ▪ Encryption devices ▪ Public Key Infrastructure (PKI) ▪ Digital Subscriber Line (DSL) ▪ Virtual Private Network (VPN) ▪ Computer Telephony Integration (CTI) ▪ Other apparatus for telephonic use ▪ Other apparatus for telegraphic use ▪ Other apparatus other than for telephonic and telegraphic use
	*Technical Notes for **DL05A-01.a.1**:* a. *Authentication and digital signature functions include their associated key management function.* b. *Authentication includes all aspects of access control where there is no encryption of files or text except as directly related to the protection of passwords, Personal Identification Numbers (PINs) or similar data to prevent unauthorized access.* c. *"Cryptography" does not include "fixed" data compression or coding techniques.* d. *Items in this category includes equipment designed or modified to use "cryptography" employing analogue principles when implemented with digital techniques.*			
	(b) Computation of discrete logarithms in a multiplicative group of a finite field of size greater than 512 bits (e.g., Diffie-Hellman over Z/pZ); or			
	(c) Discrete logarithms in a group other than mentioned sub-item a.1.(b)(ii) in excess of 112 bits (e.g., Diffie-Hellman over an elliptic curve);			
	b. Designed or modified to perform cryptanalytic functions; c. Specially designed or modified to reduce the compromising emanations of information-bearing signals beyond what is necessary for health,	**DL05A01B** **DL05A01C**	**8517.80.10** **8517.80.20** **8517.80.30**	▪ Scramblers, including speech inverters and or cypher equipment ▪ Data security equipment ▪ Encryption devices

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	safety or electromagnetic interference standards; d. Designed or modified to use cryptographic techniques to generate the spreading code for "spread spectrum" including the hopping code for "frequency hopping" systems; e. Designed or modified to provide certified or certifiable "multilevel security" or user isolation at a level exceeding Class B2 of the Trusted Computer System Evaluation Criteria (TCSEC) or equivalent; f. Communications cable systems designed or modified using mechanical, electrical or electronic means to detect surreptitious intrusion.	**DL05A01D** **DL05A01E** **DL05A01F**	**8517.80.40** **8517.80.50** **8517.80.60** **8517.80.70** **8517.80.91** **8517.80.92** **8517.80.99**	▪ Public Key Infrastructure (PKI) ▪ Digital Subscriber Line (DSL) ▪ Virtual Private Network (VPN) ▪ Computer Telephony Integration (CTI) ▪ Other apparatus for telephonic use ▪ Other apparatus for telegraphic use ▪ Other apparatus other than for telephonic and telegraphic use
	*Technical Notes for **DL05A-01**:* *This category does **not** control:* a. *"Personalized smart cards" where the cryptographic capability is restricted for use in equipment or systems excluded from control under Notes (2) to (6) following. If a "personalized smart card" has multiple functions, the control status of each function is assessed individually;* b. *Receiving equipment for radio broadcast, pay television or similar restricted audience broadcast of the consumer type, without digital encryption except that exclusively used for sending the billing or programme-related information back to the broadcast providers;* c. *Equipment where the cryptographic capability is not user-accessible and which is specially designed and limited to allow any of the following:* *1. Execution of copy-protected software;* *2. Access to any of the following:* *(a) Copy-protected read-only media; or* *(b) Information stored in encrypted form on media (e.g., in connection with the protection of intellectual property rights) when the media is offered for sale in identical sets to the public; or* *(c) One-time copying of copyright protected audio/video data;* d. *Cryptographic equipment specially designed and limited for banking*			

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	use or "money transactions"; "Money transactions" in this note includes the collection and settlement of fares or credit functions. e. *Portable or mobile radiotelephones for civil use (e.g. for use with commercial civil cellular radio-communication systems) that are not capable of end-to-end encryption* f. *Cordless telephone equipment not capable of end-to-end encryption where the maximum effective range of unboosted cordless operation (i.e. a single, unrelayed hop between terminal and home base station) is less than 400 metres according to the manufacturer's specifications.*			
	5B - TEST, INSPECTION AND PRODUCTION EQUIPMENT			
DL05B-01	a. Equipment specially designed for: 1. The "development" of equipment or functions controlled under this category, including measuring or test equipment; 2. The "production" of equipment or functions controlled under this category, including measuring, test, repair or production equipment;	**DL05B01A**	**8517.80.10** **8517.80.20** **8517.80.30** **8517.80.40** **8517.80.50**	▪ Scramblers, including speech inverters and or cypher equipment ▪ Data security equipment ▪ Encryption devices ▪ Public Key Infrastructure (PKI) ▪ Digital Subscriber Line (DSL)
			8517.80.60 **8517.80.70** **8517.80.91** **8517.80.92** **8517.80.99**	▪ Virtual Private Network (VPN) ▪ Computer Telephony Integration (CTI) ▪ Other apparatus for telephonic use ▪ Other apparatus for telegraphic use ▪ Other apparatus other than for telephonic and telegraphic use
	b. Measuring equipment specially designed to evaluate and validate the "information security" functions controlled under this category.	**DL05B01B**	**8517.80.10** **8517.80.20** **8517.80.30** **8517.80.40** **8517.80.50** **8517.80.60** **8517.80.70** **8517.80.91** **8517.80.92** **8517.80.99**	▪ Scramblers, including speech inverters and or cypher equipment ▪ Data security equipment ▪ Encryption devices ▪ Public Key Infrastructure (PKI) ▪ Digital Subscriber Line (DSL) ▪ Virtual Private Network (VPN) ▪ Computer Telephony Integration (CTI) ▪ Other apparatus for telephonic use ▪ Other apparatus for telegraphic use ▪ Other apparatus other than for telephonic and

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				telegraphic use
	5D – SOFTWARE			
DL05D-01	a. "Software" specially designed or modified for the "development", "production" or "use" of equipment or "software" controlled under this category; b. "Software" specially designed or modified to support "technology" controlled under this category; c. Specific "software", as follows: 1. "Software" having the characteristics, or performing or simulating the functions of the equipment controlled under this category; 2. "Software" to certify "software" controlled under this category;	**DL05D01A** **DL05D01B** **DL05D01C**		*[Declarant needs to provide technical specifica*
	*Note for **DL05D-01**:* This category does **not** control: a. "Software" required for the "use" of equipment excluded from control under the introductory Note to this category; b. "Software" providing any of the functions of equipment excluded from control under the introductory Note to this category.			
Deleted: -	**CATEGORY 5E – TECHNOLOGY**			
DL05E-01	**"Technology" for the "development", "production" or "use" of equipment or "software" controlled under this category.**	**DL05E01A**		*[Declarant needs to provide technical specifica*
DL06	**CATEGORY 6 – SENSORS AND "LASERS"**			
	6A – SYSTEMS, EQUIPMENT AND COMPONENTS			
DL06A-01	**Photomultiplier tubes having both of the following characteristics:**	**DL06A01A**	**8540.20.90**	▪ Other television camera tubes; image convert

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	I. Photocathode area of greater than 20 cm2; and II. Anode pulse rise time of less than 1 ns;		**8540.89.90**	intensifiers; other photo-cathode tubes: ▪ Other valves and tubes
DL06A-02	**Cameras and components, as follows:**			
	a. Mechanical rotating mirror cameras, as follows, and specially designed components therefor: 1. Framing cameras with recording rates greater than 225,000 frames per second; or 2. Streak cameras with writing speeds greater than 0.5 mm per microsecond	**DL06A02A**	**9006.59.90**	▪ Other cameras other than laser photo plotters image setters with raster image processor
	*Note for **DL06A-02.a**:* Components of such cameras include their synchronizing electronic units and rotor assemblies consisting of turbines, mirrors and bearings.			
	b. Electronic streak cameras, electronic framing cameras, tubes and devices, as follows: 1. Electronic streak cameras capable of 50 ns or less time resolution and streak tubes therefore; 2. Electronic (or electronically shuttered) framing cameras capable of 50 ns or less frame exposure time; 3. Framing tubes and solid-state imaging devices for use with cameras specified above, as follows: (a) Proximity focused image intensifier tubes having the photocathode deposited on a transparent conductive coating to decrease photocathode sheet resistance; (b) Gate silicon intensifier target (SIT) videcon tubes, where a fast system allows gating the photoelectrons from the photocathode before they impinge on the SIT plate; (c) Kerr or pockel cell electro-optical shuttering; or	**DL06A02B**	**9006.59.90**	▪ Other cameras other than laser photo plotters image setters with raster image processor
	(d) Other framing tubes and solid-state imaging devices having a fast-image gating time of less than 50 ns specially designed for cameras specified above			▪
	c. Radiation-hardened TV cameras, or lenses therefor, specially designed or rated as radiation hardened to withstand a total radiation dose greater than 50 x 10^3 Gy(silicon) (5 x 10^6 rad (silicon)) without operational degradation.	**DL06A02C**	**8525.30.90**	▪ Other television cameras

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	*Note for **DL06A-02.c**:* *The term Gy(silicon) refers to the energy in Joules per kilogram absored by an unshielded silicon sample when exposed to ionising radiation.*			
DL06A-03	**"Lasers", "laser" amplifiers and oscillators**, as follows:			
	a. Argon ion "lasers" having both of the following characteristics: I. Operating at wavelengths between 400 nm and 515 nm ; and II. An average output power greater than 40 W	**DL06A03A**	**9013.20.00**	▪ Lasers, other than laser diodes
	b. Tunable pulsed single-mode dye laser oscillators having all of the following characteristics: I. operating at wavelengths between 300 nm and 800 nm; II. an average output power of greater than 1 W; III. a repetition rate greater than 1 kHz; and a pulse width less than 100 ns	**DL06A03B**	**9013.20.00**	▪ Lasers, other than laser diodes
	c. Tunable pulsed dye "laser" amplifiers and oscillators, having all of the following characteristics: I. operating at wavelengths between 300 nm and 800 nm; II. an average output power greater than 30 W; III. a repetition rate greater than 1 kHz; and IV. pulse width less than 100 ns	**DL06A03C**	**9013.20.00**	▪ Lasers, other than laser diodes
	*Note for **DL06A-03c**:* ***DL06A-03.c** does not control single mode oscillators*			
	d. Pulsed carbon dioxide "lasers" having all of the following characteristics: I. operating at wavelengths between 9,000 nm and 11,000 nm; II. a repetition rate greater than 250 Hz; III. an average output power greater than 500 W; and Pulse width of less than 200 ns;	**DL06A03D**	**9013.20.00**	▪ Lasers, other than laser diodes
	e. Para-hydrogen Raman shifters designed to operate at 16 micrometre output wavelength and at a repetition rate greater than 250 Hz	**DL06A03E**	**9013.20.00**	▪ Lasers, other than laser diodes
	f. Pulse-excited, Q-switched Neodymium-doped (other than glass) "lasers", having all of the following characteristics: I. An output wavelength exceeding 1,000 nm but not exceeding	**DL06A03F**	**9013.20.00**	▪ Lasers, other than laser diodes

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Important Note:

- The HS code only serve as useful guide and are not exhaustive. An item is controlled if it meets the technical specifications indicated in colu "Description of Item".
- The category code for items not in the control list but are known or suspected for weapons of mass desctuction purposes, is "WMD01"

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DUALUSE CODE	DESCRIPTION OF ITEM	CATEGORY CODE	(2003) HS CODE	HS CODE DESCRIPTION
	1,100 nm; II. A pulse duration equal to or more than 1 ns; and III. A multiple-transverse mode output having an average power exceeding 50 W.			
DL06A-04	**Velocity interferometers for measuring velocities exceeding 1 km/s during time intervals of less than 10 microseconds.**	**DL06A04A**	**9031.49.90**	▪ Other, other optical instruments and appliance
	*Note for **DL06A-04**:* ***DL06A-04** includes velocity interferometers such as VISARs (Velocity interferometer systems for any reflector) and DLIs (Doppler laser interferometers).*			
DL06A-05	**Pressure sensors, as follows:** a. Manganin gauges for pressures greater than 10 Gpa; or	**DL06A05A**	**9026.20.30** **9026.20.40**	▪ Other pressure gauges other than for motor ve electrically operated ▪ Other pressure gauges other than for motor ve not electrically operated
	b. Quartz pressure transducers for pressures greater than 10 Gpa.	**DL06A05B**	**9026.20.30** **9026.20.40**	▪ Other pressure gauges other than for motor ve electrically operated ▪ Other pressure gauges other than for motor ve not electrically operated

Important Note:

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