



Lao People's Democratic Republic
Peace Independence Democracy Unity Prosperity

Ministry of Industry and Commerce

No. 0389/MOIC.DIH
Vientiane Capital, 03 April 2018

Decision
On the List of Industrial Chemicals

- Pursuant to the Chemicals Control Law, No 07/NA, dated 10 November 2016.
- Decision of Prime Minister on the Organization and Implementation of Ministry of Industry and Commerce, No.230/PM, dated 24 July 2017.
- Pursuant to the requested of Department of Industry and Handicraft, No. 163/DHI, dated 20 February 2018.

Minister of Industry and Commerce issues the Decision

Article 1: Objective

This decision is set to be implemented Article 9 and article 64 of the Chemicals Control Law, No 07/NA, dated 10 November 2016.

Article 2: List of industrial chemicals

List of industrial chemicals are list of hazardous chemicals classified into four categories as set out in Article 9 of the Chemicals Control Law. Those are includes manufactured chemicals, import, export, possession and utilize in the industrial processing area, handicraft, energy, mining, education and trade.

Article 3: Table List of l chemicals industry

List chemicals industry of the categories are shown in the table 1,2,3 and 4 indicates their names in International and Lao language and code (CAS No) as the details below:

Table 1: Types of hazardous chemicals number 1

No	Chemicals name	CAS No.	Type	Remark
1	2,3-dibromopropan-1-ol	96-13-9	1	
2	2,3-epoxy-1-propanol or glycidol	57044-25-4	1	
3	2-ethyl-1,3-hexanediol	94-96-2	1	
4	2-bromopropane or isopropyl bromide	75-26-3	1	
5	{(+/-)tetrahydrofurfuryl-R-2-[4-(6-chloroquinoxalin-2-yloxy)phenoxy]propionate}	119738-06-6	1	
6	{(2RS,3RS)-3-(2chlorophenyl)-2,4-fluorophenyl)-(1h-1,2,4-triazol-1-yl-methyl]oxirane} or (epoxiconazole)	106325-08-0	1	
7	[I-1-choro-2,3-epoxypropane] or [I-epichlorohydrin]	51594-55-9	1	
8	{6-[4-hydroxy-3-(2-methoxyphenylazo)-2-sulfonato-7-naphthylamino]-1,3,5-triazine-2,4-diyl bis [(amino-1-methylethy)-ammonium] formate}	108225-03-2	1	
9	{1-3-5-tris-[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione}	59653-74-6	1	
10	2,4,5-tcp or 2,4,5-trichlorophenol	95-95-4	1	
11	2,5-dinitroantoluene	619-15-8	1	
12	3,4-dinitrotoluene	610-39-9	1	
13	{6-hydroxy-1-(3-isopropoxypropyl)-4-methyl-2-oxo-5-[4-(phenylazo)phenylazo]-1,2-dihydro-3-pyridinecarbonitrile}	85136-74-9	1	
14	methoxyacetic acid or 2-methoxyacetic acid or methyl ether	625-45-6	1	
15	chlorosarin : o-isopropyl methylphosphonochloridate	1445-76-7	1	
16	Chlorosaman : o-pinacolyl methylphosphonochloridate	7040-57-5	1	
17	chlorobenzilate	510-15-6	1	
18	chloropicrin : trichloronitromethane	76-06-2	1	
19	copper arsenate hydroxide	16102-92-4	1	
20	calcium arsenate	7778-54-3	1	
21	sulfur mustards: <ul style="list-style-type: none"> ➤ 2-chloroethylchloromethylsulfide ➤ mustard gas :bis (2-chloroethyl) sulfide ➤ bis (2-chloroethylthio) methane ➤ sesquimustard : 1,2-bis (2-chloroethylthio) ethane ➤ 1,3-bis (2-chloroethylthio)-n-propane ➤ 1,4-bis (2-chloroethylthio)-n-butane ➤ 1,5-bis (2-chloroethylthio)-n-pentane ➤ bis (2-chloroethylthiomethyl) ether ➤ o-mustard : bis (2-chloroethylthioethy) ether 	2625-76-5 505-60-2 63869-13-6 3563-36-8 63905-10-2 142868-93-7 142868-94-8 63918-90-1 63918-89-8	1	

22	saxitoxin	35523-89-8	1	
23	sodium chromate	7775-11-3	1	
24	sodium pentachlorophenate	131-52-2	1	
25	cyanogen or ethanedinitrile or oxalonitrile	460-19-5	1	
26	decabromobiphenyl	13654-09-6	1	Rotterdam Treaty
	[di (phenylmercury) dodeceny succinate] or [di (phenylmercury) dodeceny-3-succinate]	27236-65-3	1	
28	{ trisodium-[4'-(8-acetylamino-3-6-disulfonato-2-naphthylazo)-4''-(6-benzoylamino-3-sulfonato-2-naphthylazo) biphenyl-1,3',3'',1''''-tetraolato-0,o',0'',0'''] copper (II)}	164058-22-4	1	
29	thallium sulfate	7446-18-6	1	
30	thionyl chloride or sulfurous oxychloride	7719-09-7	1	Primary chemistry
31	nikel tetracarbonyl	13463-39-3	1	
32	nitrogen mustards: HN 1: bis (2-chloroethyl) ethylamine HN 2: bis (2-chloroethyl) methylamine HN 3: tris (2-chloroethyl) amine	538-07-8 51-75-2 556-77-1	1	
33	bis (chloromethyl) ether	542-88-1	1	
34	BZ: 3-quinuclidinyl benzilate	6581-06-2	1	
35	beryllium oxide	1304-56-9	1	
36	[PFIB : 1,1,3,3,3-pentafluoro-2-(trifluoromethyl)-1-propene]	382-21-8	1	
37	pentachlorophenol	87-86-5	1	
38	polychlorinated terphenyl	61788-33-8	1	Rotterdam Treaty
39	polychlorinated biphenyl	1336-36-3	1	
40	flumioxazin	103361-90-7	1	
41	phenyl glycidyl ether or 1,2-epoxy-3-phenoxy propane or [2-(phenoxyethyl) oxirane]	122-60-1	1	
42	phenylmercuric oleate	104-60-9	1	
43	phenylmercury acetate	62-38-4	1	
44	phenylhydrazinium sulphate	52033-74-6	1	
45	phenylhydrazine	100-63-0	1	
46	Methyl isocyanate	624-83-9	1	
47	Mirex	2385-85-5	1	
48	Ricin	9009-86-3	1	Hazardous chemicals according to List A1 of the

				Chemical Weapons Convention
49	Lewisite: Lewisite 1 : 2-chlorovinylchloroarsine	541-25-3	1	Hazardous chemicals according to List A1 of the Chemical Weapons Convention
50	Lewisite 2 : bis(2-chlorovinyl) chloroarsine	40334-69-8		
51	Lewisite 3 : tris (2-chlorovinyl) arsine	40334-70-1		
52	Lead arsenate	7784-40-9	1	
53	octabromobiphenyl	27858-07-7	1	Rotterdam Treaty
54	ethylene dibromide	106-93-4	1	
55	ethylidene diacetate or [1-(acetyloxy) ethyl acetate]	542-10-9	1	
56	N-methylacetamide	79-16-3	1	
57	Asbestos: crocidolite	12001-28-4	1	
58	tremolite	77536-68-6	1	
59	amosite	12172-73-5	1	
60	actinolite	77536-66-4	1	
61	anthophyllite	77536-67-5	1	
62	hexachlobenzene	118-74-1	1	
63	hexebromobiphenyl	36335-01-8	1	
64	Pseudoephedrine	90-82-4	1	Primary chemistry
Other chemical groups				
1	compound: N-[3-hydroxy-2-(2-methylacryloylamino-methoxy)propoxymethyl]-2-methylacrylamide; {N-[2,3-bis-(2-methylacryloyaminomethoxy)propoxymethyl]-2-methylacrylamide; methacrylamide; 2-methyl-N-(2-methyl-acryloylamino-methoxymethyl)-acrylamide; N-2,3-dihydroxypropoxymethyl}-2-methylacrylamide	-	1	
2	ທາດປະສົມຂອງ: 4-[[bis-(fluoro-phenyl)-methyl]methyl]-4H-1,2,4-triazole; 1-[[bis-(4-fluorophenyl) methyl-silyl] methyl]-1H-1,2,4-triazole	-	1	
3	ຖ້ານບັນຈຸໄຟແບບແຫ້ງ ທີ່ມີອົງປະກອບຂອງ mercury, cadmium	-	1	
Chemicals controlled by the Convention on the Prohibition of Chemical Weapons				
1	[O-alkyl(≤ C10, include cycloalkyl) (Me, Et, Pr, or i-pr)-phosphonofluoridates] ຕົວຢ່າງ sarin : O-isopropyl methylphos phonofluoridate O-pinacolyl methylphos phonofluoridate	107-44-8 96-64-0	1	List 1 (toxic chemicals) controlled hazardous chemicals in the Appendix A
				List 1 (toxic chemicals) controlled hazardous chemicals in the

2	[O-alkyl(\leq C10, include cycloalkyl) N,N-dialkyl (Me, Et, Pr, or i-pr) phosphoramidocyanidates] ԴՆՎՅՂ tabun: O-ethyl N,N-dimethyl phosphoramidocyanidate	77-81-6	1	Appendix A
3	[O-alkyl (H or \leq C10, include cycloalkyl) S-2-dialkyl (Me, Et, n-pr or i-pr)-aminoethyl alkyl (Me, Et, n-pr or i-pr) phosphonotiolates and corresponding alkylated or protonated salts] ԴՆՎՅՂ VX: O-ethyl S-2-diisopropyl aminoethyl methyl phosphonothiolate)	50782-69-9	1	List 1 (toxic chemicals) listed in the Annex to the Chemical Weapons Convention
4	[alkyl (Me, Et, n-pr, or i-pr) phosphonyldifluorides] ԴՆՎՅՂ DF: methylphosphonyldifluoride	676-99-3	1	List 1 hazard precursors (precursors) in the Annex Protocol to Ban Chemical Weapons
5	[O-alkyl (H or \leq C10, include cycloalkyl) O-2-diakyl (Me, Et, n-pr or i-pr)-aminoethyl alkyl (Me, Et, n-pr, i-pr) phosphonite and corresponding alkylated or protonated salts] ԴՆՎՅՂ QL: O-ethyl o-2-diisopropylaminoethyl methyl phosphonite	57856-11-8	1	List 1B hazard precursors (precursors) in the Annex Protocol to Ban Chemical Weapons
6	Amiton: O,O-Diethyl s-[2-(diethylaino)ethyl] phosphorothiolate and corresponding alkylated or protonated salts	78-53-5	1	List 2A toxic chemicals listed in the Annex to the Chemical Weapons Convention
Chemicals controlled by the Mongolia Convention on Chemicals that Destroys the Ozone Layer				
(Chlorofluorocarbons - CFCs)				
1	Trichlorofluoromethane or CFC-11 (CFCl ₃)	75-69-4	1	Mongolia Protocol
2	Dichlorodifluoromethane or CFC-12 (CF ₂ Cl ₂)	75-71-8	1	Mongolia Protocol
3	Trichlorotrifluoroethanes or CFC-113 (C ₂ F ₃ Cl ₃)	76-13-1	1	Mongolia Protocol
4	Dichlorotetrafluoroethanes or CFC-114 (C ₂ F ₄ Cl ₂)	76-14-2	1	Mongolia Protocol
5	Chloropentafluoroethane or CFC-115 (CClF ₂ CF ₃)	76-15-3	1	Mongolia Protocol

6	Chlorotrifluoromethane or CFC-13 (CF ₃ Cl)	75-72-9	1	Mongolia Protocol
7	Pentachlorofluoroethane or CFC-111 (C ₂ FCl ₅)	354-56-3	1	Mongolia Protocol
8	Tetrachlorodifluoroethane or CFC-112 (C ₂ F ₂ Cl ₄)	76-12-0	1	Mongolia Protocol
9	Heptachlorofluoropropane or CFC-211 (C ₃ FCl ₇)	422-78-6	1	Mongolia Protocol
10	Hexachlorodifluoropropane or CFC-212 (C ₃ F ₂ Cl ₆)	3182-26-1	1	Mongolia Protocol
11	Pentachlorotrifluoropropane or CFC-213 (C ₃ F ₃ Cl ₅)	2354-06-5	1	Mongolia Protocol
12	Tetrachlorotetrafluoropropane or CFC-214 (C ₃ F ₄ Cl ₄)	29255-31-0	1	Mongolia Protocol
13	Trichloropentafluoropropane or CFC-215 (C ₃ F ₅ Cl ₃)	1599-41-3	1	Mongolia Protocol
14	Dichlorohexafluoropropane or CFC-216 (C ₃ F ₆ Cl ₂)	661-97-2	1	Mongolia Protocol
15	Chloroheptafluoropropane or CFC-217 (C ₃ F ₇ Cl)	422-86-6	1	Mongolia Protocol
16	Compound CFCs (such: R-500 mixed with CFC-12, R-502 containing CFC-115)	-	1	Mongolia Protocol
Hydrochlorofluorocarbons - HCFCs				
1	Dichlorotrifluoroethanes or HCFC-123 (C ₂ HF ₃ Cl ₂)	306-83-2	1	Mongolia Protocol
2	Chlorotetrafluoroethanes or HCFC-124 (C ₂ HF ₄ Cl)	2837-89-0	1	Mongolia Protocol
3	Dichlorofluoroethanes or HCFC-141 (C ₂ H ₃ FCl ₂)	1717-00-6	1	Mongolia Protocol
4	1,1-dichloro-1-fluoroethane or HCFC-141b (CH ₃ CFCl ₂)	1717-00-6	1	Mongolia Protocol; Pre-blended Polyol containing HCFC-141b derivatives is also included in this list.
5	Chlorodifluoroethanes or HCFC-142 (C ₂ H ₃ F ₂ Cl)	75-68-3	1	Mongolia Protocol
6	1-chloro-1,1-difluoroethane or HCFC-142b (CH ₃ CF ₂ Cl)	75-68-3	1	Mongolia Protocol
7	Dichloropentafluoropropanes or HCFC-225 (C ₃ HF ₅ Cl ₂)	127564-92-5	1	Mongolia Protocol
Hydrobromofluorocarbons - HBFCs				
1	Bromodifluoromethane or HBFC-22B1 (CHF ₂ Br)	1511-62-2	1	Mongolia Protocol
Halons				
1	Bromochlorodifluoromethane or Halon-1211 (CF ₂ BrCl)	353-59-3	1	Mongolia Protocol
2	Bromotrifluoromethane or Halon-1301 (CF ₃ Br)	75-63-8	1	Mongolia Protocol
3	Dibromotetrafluoroethanes or Halon-2402 (C ₂ F ₄ Br ₂)	124-73-2	1	Mongolia Protocol
4	Tetrachloromethane or carbon tetrachloride (CCl ₄)	56-23-5	1	Mongolia

				Protocol
5	1,1,1-trichloroethane or methyl chloroform (C ₂ H ₃ Cl ₃)	71-55-6	1	Mongolia Protocol
6	Bromochloromethane (CH ₂ BrCl)	74-97-5	1	Mongolia Protocol
7	Methyl bromide (or Bromomethane) (CH ₃ Br)	74-83-9	1	Banning import by the Mongolian Convention. Only use for shading of agricultural products prior to export

Table 2: types of hazardous chemicals no 2

No	Chemicals name	CAS No.	type	remark
1	1,1,2-trichloroethylene	79-01-6	2	
2	1,2-dinitrobenzene	528-29-0	2	
3	1,3-dinitrobenzene	99-65-0	2	
4	1,3-butadiene or buta-1,3-diene	106-99-0	2	
5	1,4-dinitrobenzene	100-25-4	2	
6	1,4-butatanediol or 1,4-butylene glycol	110-63-4	2	
7	1,5-naphthalene diisocyanate	3173-72-6	2	
8	[2-(thiocyanomethylthio) benzothiazole]	21564-17-0	2	
9	2,2'-bioxirane or 1,3-butadiene diepoxide or 1,2:3,4-diepoxy butane	1464-53-5	2	
10	2,3-dinitrotoluene	602-01-7	2	
11	2,4,6-trimethylaniline	88-05-1	2	
12	2,4-dinitroaniline	97-02-9	2	
13	3,5-dinitrotoluene	618-85-9	2	
14	4-nitrodiphenyl	92-93-3	2	
15	4-aminodiphenyl	92-67-1	2	
16	2,2-diphenyl-2-hydroxyacetic acid	76-93-7	2	
17	gamma-hydroxyvaleric acid	13532-37-1	2	
18	chromic acid	7738-94-5	2	
19	sulfuric acid	7664-93-9	2	Primary chemistry
20	sulfuric acid, fuming or oleum	8014-95-7	2	
21	boric acid	10043-35-3	2	
22	picric acid or 2,4,6-trinitro phenol or picronic acid	88-89-1	2	
23	phosphonic acid or phosphorous acid	13598-36-2	2	
24	acetic acid	64-19-7	2	Primary chemistry
25	hydrochloric acid	7647-01-0	2	
26	fluorine gas	7782-41-4	2	
27	gamma-butyrolactone or butyrolatone	96-48-0	2	
28	glycolonitrile or hydroxyacetonitrile	107-16-4	2	

29	chlorpyrifos	2921-88-2	2	
30	chlorine	7782-50-5	2	
31	chloroform or trichloromethane	67-66-3	2	
32	quinuclidine-3-ol	1619-34-7	2	
33	copper (II) hydroxide	20427-59-2	2	
34	carbendazim	10605-21-7	2	
35	cuprous oxide	1317-39-1	2	
36	cadmium chloride	10108-64-2	2	
37	cadmium cyanide	542-83-6	2	
38	cadmium fluoride	7790-79-6	2	
39	cadmium oxide	1306-19-0	2	
40	cadmium iodide	7790-80-9	2	
41	cobalt carbonyl or cobalt tetra carbonyl or octacarbonyldicobalt	10210-68-1	2	
42	crotonaldehyde or (2-butenal)	4710-30-3	2	
43	chromic chloride	10025-73-7	2	
44	chromium trioxide	1333-82-0	2	
45	sulfur dichloride	10545-99-0	2	
46	sulfur dioxide	7446-09-5	2	
47	sulfur trioxide	7446-11-9	2	
48	sulfur monochloride	10025-67-9	2	
49	sulfur hexafluoride	2551-62-4	2	
50	zinc cyanide	557-21-1	2	
51	zineb	12122-67-7	2	
52	ziram	137-30-4	2	
53	selenium oxychloride	7791-23-3	2	
54	sec-butyl mercaptan or 2-butanethiol	513-53-1	2	
55	sodium chlorate	7775-09-9	2	
56	sodium cyanide	143-33-9	2	
57	sodium tetraborate pentahydrate	12179-04-3	2	
58	sodium tetra borate decahydrate or borax	1303-96-4	2	
59	sodium tetraborate anhydrous	1330-43-4	2	

60	cyclohexylamine or hexahydroanline or aminocyclohexane	108-91-8	2	
61	cypermethrin	52315-07-8	2	
62	cyanuric fluoride or 2,4,6-trifluoro-1,3,5-triazine	675-14-9	2	
63	cyanogen chloride	506-77-4	2	
64	dazomet	533-74-4	2	
65	[decaborane (14)]	17702-41-9	2	
66	diglycidyl ether	2238-07-5	2	
67	dichlorophen	97-23-4	2	
68	disodium octaborate tetrahydrate	12280-03-4	2	
69	dithiobiuret	541-53-7	2	
70	diborane or boron hydride	19287-45-7	2	
71	dibenzoyl peroxide	94-36-0	2	
72	diphenylmethane-4,4-diisocyanate or methylene-di-p-phenylene isocyanate or methylene bis pheny isocyanate	101-68-8	2	
73	dimethyl sulphate or methyl sulphate	77-78-1	2	
74	dimethylphosphorochloridothioate	2524-03-0	2	
75	dimethyl phosphite	868-85-9	2	
76	Diuron	330-54-1	2	
77	Diethyl sulphate or ethyl sulphate	64-67-5	2	
78	diethyl phosphite	762-04-9	2	
79	diethyl ether	60-29-7	2	Primary chemistry
80	tetramethyl lead	75-74-1	2	Rotterdam Treaty
81	tetraethyl tin	597-64-8	2	
82	tetraethyl lead	78-00-2	2	Rotterdam Treaty
83	tridecafluorohexane	355-37-3	2	
84	tributyl in fluoride	1983-10-4	2	
85	tributyl tin oxide	56-35-9	2	
86	trimethylchorosilane	75-77-4	2	
87	trimethyl phosphite	121-45-9	2	
88	triethanolamine	102-71-6	2	
89	triethyl phosphite	122-52-1	2	

90	trans-1,4-dichlorobutene-2	110-57-6	2	
91	trans-crotonaldehyde	123-73-9	2	
92	terbutryn	886-50-0	2	
93	toluene	108-88-3	2	Primary chemistry
94	toluene-2,4-diisocyanate	584-84-9	2	
95	toluene-2,6-diisocyanate	91-08-7	2	
96	thiram	137-26-8	2	
97	thiabendazole	148-79-8	2	
98	[thiodiglycol : bis (2-hydroxyethyl) sulfide]	111-48-8	2	
99	thiourea	62-56-6	2	
100	n-butyl mercaptan or 1-butanethiol	109-79-5	2	
101	n-propyl mercaptan	107-03-9	2	
102	naphthylamine	134-32-7	2	
103	nitric oxide or nitrogen monoxide	10102-43-9	2	
104	nitrosodimethylamine	62-75-9	2	
105	[bis (2-methoxyethyl) ether] or diethylene glycol dimethyl ether	111-96-6	2	
106	[bis (2-ethylhexyl) phthalate] or [di-(2-ethylhexyl) phthalate] or DEHP	117-81-7	2	
107	beta-propiolactone	57-57-8	2	
108	benzalkonium chloride or alkylbenzyltrimethylammoniumchloride	8001-54-5	2	
109	benzidine	92-87-5	2	
110	benzyl chloride	100-44-7	2	
111	benzene	71-43-2	2	
112	bromine	7726-95-6	2	
113	boron trichloride	10294-34-5	2	
114	boron trifluoride	7637-07-2	2	
115	perchloroethylene or tetrachloroethylene	127-18-4	2	
116	lead powder	7439-92-1	2	
117	paraquat dichloride	1910-42-5	2	
118	pinacolyl alcohol : 3,3-dimethylbutane-2-ol	464-07-3	2	
119	PFC C-318	115-25-3	2	
120	PFC-116	76-16-4	2	

121	PFC-14	75-73-0	2	
122	(PFC-218	76-19-7	2	
123	PFC-31-10	355-25-9	2	
124	PFC-14-12	678-26-2	2	
125	PFC-51-14	355-42-0	2	
126	PFC-91-18	306-94-5	2	
127	permethrin	52645-53-1	2	
128	potassium silver cyanide	506-61-6	2	
129	potassium cyanide	151-50-8	2	
130	propylene oxide or 2-methyl oxirane	75-56-9	2	
131	piperidine	110-89-4	2	Primary chemistry
132	formamide	75-12-7	2	
133	phosgene or carbonyl chloride	75-44-5	2	
134	phosphorus (white or yellow,red,and black)	7723-14-0	2	
135	Phosphorus trichloride	7719-12-2	2	Primary chemistry
136	phosphorus pentachloride	10026-13-8	2	
137	phosphorus pentasulfide	1314-80-3	2	
138	phosphorus pentoxide	1314-56-3	2	
139	Phosphorus oxychloride or phosphoryl chloride	10025-87-3	2	
140	fenuron	101-42-8	2	
141	ferbam	14484-64-1	2	
142	Methanethiol or methyl mercaptan	74-93-1	2	
143	Methyl 2-chloroacrylate	80-63-7	2	
144	Methyl vinyl ketone	78-94-4	2	
145	Methyl ethyl ketone	78-93-3	2	Primary chemistry
146	Methyl ethyl ketone peroxide	1338-23-4	2	
147	Methyl hidrazine	60-34-4	2	
148	Mercury II chloride	7487-94-7	2	
149	Mercury II chromate	13444-75-2	2	
150	Mercury II sulfide	1344-48-5	2	
151	Mercury II thiocyanate	592-85-8	2	

152	Mercury II oxide	21908-53-2	2	
153	Mercury	7439-97-6	2	
154	Lithium hydride	7580-67-8	2	
155	Lead II oxide or litharge or massicot	1317-36-8	2	
156	Lead suboxide	12059-89-1	2	
157	Lead sesquioxide or lead III oxide	1314-27-8	2	
158	Lead tetroxide	1314-41-6	2	
159	Lactonitrile or acetocyanohydrin	78-97-7	2	
160	Vinyl chloride or chloroethene	75-01-4	2	
161	vinyl bromide or bromoethene	593-60-2	2	
162	o-dichlorobenzene or 1,2-dichlorobenzene	95-50-1	2	
163	auramine or [4,4'-(imidocarbonyl) bis (N,N-dimethylaniline)]	492-80-8	2	
164	acrylyl chloride	814-68-6	2	
165	acrylonitrile	107-13-1	2	
166	aniline	62-53-3	2	
167	allyl alcohol or 2-propen-1-ol	107-18-6	2	
168	arsenic	7440-38-2	2	
169	arsenic trichloride or [arsenic (III) chloride]	7784-34-1	2	
170	arsenic trioxide	1327-53-3	2	
171	arsenic pentoxide or arsenic oxide	1303-28-2	2	
172	ethanethiol or ethyl mercaptan	75-08-1	2	
173	(HCFC-121) or (tetrachlorofluoroethane)	354-14-3	2	
174	(HCFC-122) or (trichlorodifluoroethane)	354-21-2	2	
175	(HCFC-131) or (trichlorofluoroethane)	359-28-4	2	
176	HCFC-133a or Monochlorotrifluoroethane	75-88-7	2	
177	(HCFC-151) or (chlorofluoroethane)	110587-14-9	2	
178	(HCFC-21) or (dichlorofluoromethane)	75-43-4	2	
179	(HCFC-221) or (hexachlorofluoropropane)	422-26-4	2	
180	(HCFC-222) or (pentachlorodifluoropropane)	422-49-1	2	
181	(HCFC-223) or (tetrachlorotrifluoropropane)	422-52-6	2	
182	(HCFC-224) or (trichlorotetrafluoropropane)	422-54-8	2	

183	(HCFC-226) or (Monochlorohexafluoropropane)	431-87-8	2	
184	(HCFC-231) or (pentachlorofluoropropane)	421-94-3	2	
185	(HCFC-232) or (tetrachlorodifluoropropane)	460-89-9	2	
186	(HCFC-233) or (trichlorotrifluoropropane)	7125-84-0	2	
187	(HCFC-234) or (dichlorotetrafluoropropane)	425-94-5	2	
188	(HCFC-235) or (chloropentafluoropropane)	460-92-4	2	
189	(HCFC-241) or (tetrachlorofluoropropane)	666-27-3	2	
190	(HCFC-242) or (trichlorodifluoropropane)	460-63-9	2	
191	(HCFC-243) or (dichlorotrifluoropropane)	460-69-5	2	
192	(HCFC-244) or (chlorotetrafluoropropane)	134190-50-4	2	
193	(HCFC-251) or (chlorotetrafluoropropane)	421-41-0	2	
194	(HCFC-252) or (dichlorodifluoropropane)	819-00-1	2	
195	(HCFC-253) or (chlorotrifluoropropane)	460-35-5	2	
196	(HCFC-261) or (Dichlorofluoropropane)	420-97-3	2	
197	(HCFC-262) or (chlorodifluoropropane)	421-02-03	2	
198	(HCFC-271) or (chlorofluoropropane)	430-55-7	2	
199	(HCFC-31) or (chlorofluoromethane)	593-70-4	2	
200	(HFC-134)	359-35-3	2	
201	(HFC-143)	430-66-0	2	
202	(HFC-152)	624-72-6	2	
203	(HFC-161)	353-36-6	2	
204	(HFC-227 ca)	2252-84-8	2	
205	(HFC-227 ea)	431-89-0	2	
206	(HFC-236 cb)	677-56-5	2	
207	(HFC-236ea)	431-63-0	2	
208	(HFC-236fa)	690-39-1	2	
209	(HFC-245ca)	679-86-7	2	
210	(HFC-365mfc)	406-58-6	2	
211	(HFC-14)	593-53-3	2	
212	(HFC-43-10mee)	138495-42-8	2	
213	(HFC-c-447-ef)	15290-77-4	2	

214	azobenzen or 1,2-diphenyldiazene	103-33-3	2	
215	ethyl chloride or chloroethane	75-00-3	2	
216	ethyl acrylate	140-88-5	2	
217	ethylene dichloride or 1,2-dichloroethane	107-06-2	2	
218	ethylene oxide or oxirane	75-21-8	2	
219	ethyleneimine or aziridine	151-56-4	2	
220	N,N-dimethylacetamide	127-19-5	2	
221	N-methyldiethanolamine	105-59-9	2	
222	N-ethyldiethanolamine	139-87-7	2	
223	isobutyronitrile or 2-methylpropanenitrile	78-82-0	2	
224	isophorone diisocyanate	4098-71-9	2	
225	iron pentacarbonyl	13463-40-6	2	
226	hexachlorocyclopentadiene	77-47-4	2	
227	hexamethylene diisocyanate	822-06-0	2	
228	hydroquinone	123-31-9	2	
229	hydrogen chloride,refrigerated liquid	7647-01-0	2	
230	hydrogen chloride, anhydrous	7647-01-0	2	
231	hydrogen sulfide	7783-06-4	2	
232	hydrogen cyanide	74-90-8	2	
233	hydrogen fluoride,anhydrous or hydrofluoric acid	7664-39-3	2	
234	Acetic anhydride	108-24-7	2	Primary chemistry
235	N-Acetylanthranilic acid	89-52-1	2	Primary chemistry
236	Ergometrine	60-79-7	2	Primary chemistry
237	Ergotamine	113-15-5	2	Primary chemistry
238	Epherdrine	299-42-3	2	Primary chemistry
239	ISO Safrole	120-58-1	2	Primary chemistry
240	Lysrgic acid	50-37-3	2	Primary chemistry
241	3,4Methylenedioxyphenyl-2-propanone	4676-39-5	2	Primary chemistry
242	Norephedrine	14838-15-4	2	Primary chemistry
243	Piperonal	120-57-0	2	Primary chemistry

244	Safrole	94-59-7	2	Primary chemistry
245	Acetone	67-64-1	2	Primary chemistry
246	Anthranilic acid	118-92-3	2	Primary chemistry
247	Barium sulphate	7727-43-7	2	Primary chemistry
248	Benzal dehyde	100-52-7	2	Primary chemistry
249	Diethylamine	109-89-7	2	Primary chemistry
250	1-Phenyl 2-Propanone	136675-26-8	2	Primary chemistry
251	Methylamine	74-89-5	2	Primary chemistry
252	Nitroethane	79-24-3	2	Primary chemistry
253	Phenylacetic acid	103-82-2	2	Primary chemistry
254	Potassium permanganate	7722-64-7	2	Primary chemistry
255	Pyridine	110-86-1	2	Primary chemistry
256	octabromodiphenyl ether <u>including:</u>	-	2	
257	- Hexabromodiphenyl ether	36483-60-0	2	Rotterdam treaty
258	- Heptabromodiphenyl ether	68928-80-3	2	Rotterdam treaty
259	Pentabromodiphenyl ether <u>including:</u>	-	2	Rotterdam treaty
260	- Tetrabromodiphenyl ether	40088-47-9	2	Rotterdam treaty
261	- Pentabromodiphenyl ether	32534-81-9	2	Rotterdam treaty
262	Perfluorooctane sulfonic acid, Perfluorooctane sulfonates, Perfluorooctane sulfonamides and Perfluorooctane sulfonyls <u>including:</u>		2	Rotterdam treaty
263	- Perfluorooctane sulfonic acid	1763-23-1	2	Rotterdam treaty
264	- Potassium Perfluorooctane sulfonate	2795-39-3	2	Rotterdam treaty
265	- Lithium Perfluorooctane sulfonate	29457-72-5	2	Rotterdam treaty
266	- Ammonium Perfluorooctane sulfonate	29081-56-9	2	Rotterdam treaty
267	- Diethanolammonium Perfluorooctane sulfonate	70225-14-8	2	Rotterdam treaty
268	- Tetraethylammonium Perfluorooctane sulfonate	56773-42-3	2	Rotterdam treaty
269	- Didecyldimethylammonium Perfluorooctane sulfonate	251099-16-8	2	Rotterdam treaty

270	- N-ethylPerfluorooctane sulfonamide	4151-50-2	2	Rotterdam treaty
271	- N-methylPerfluorooctane sulfonamide	31506-32-8	2	Rotterdam treaty
272	- N-ethyl-N-(2-hydroxyethyl) Perfluorooctane sulfonamide	1691-99-2	2	Rotterdam treaty
273	- N-(2hydroxyethyl)-N-methylPerfluorooctane sulfonamide	24448-09-7	2	Rotterdam treaty
274	- Perfluorooctane sulfonyl fluoride	307-35-7	2	Rotterdam treaty
275	Hexa-Polybrominated biphenyl (PBB)	36355-01-8	2	Rotterdam treaty
276	Tris (2,3-dibomopropyl) phosphate	126-72-7	2	Rotterdam treaty
Other chemical groups				
1	(Chlorofluorocarbons)	-	2	
2	(perfluorocarbons)	-	2	
3	(hydrochlorofluorocarbons)	-	2	
4	(hydrofluorocarbons)	-	2	
5	White oil or refined petroleum oil	-	2	
Chemicals controlled by the Convention on the Prohibition of Chemical Weapons				
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 futher carbon atoms Example - methylphosphonyl dichloride - Dimethyl methylphosphornate Except O-ethyl S-phenyl ethylphosphonothiolothionate	676-97-1 756-79-6 944-22-9	2	Regulatory Hazards List 2B (precursors) in the Annex Protocol to Ban Chemical Weapons
2	[N,N-dialkyl (Me, Et, n-pr or i-pr) phosphoramidic dihalides]	-	2	Regulatory Hazards List 2B (precursors) in the Annex Protocol to Ban Chemical Weapons
3	[diaalkyl (Me, Et, n-pr or i-pr) N,N-dialkyl (Me,Et, n-pr or i-pr)-phosphoramidates]	-	2	Regulatory Hazards List 2B (precursors) in the Annex Protocol to Ban Chemical

				Weapons
4	[N,N-dialkyl (Me, Et, n-pr or i-pr) aminoethane-2-chloride and corresponding protonated salts]	-	2	Regulatory Hazards List 2B (precursors) in the Annex Protocol to Ban Chemical Weapons
5	[N,N-dialkyl (Me, Et, n-pr or i-pr) aminoethane-2-ols and corresponding protonated salt] Except: - N,N-dimethylamoniethanol and corresponding protonated salts] - N,N-diethylamonoethanol and corresponding protonated salts]	108-01-0 100-37-8	2	Regulatory Hazards List 2B (precursors) in the Annex Protocol to Ban Chemical Weapons
6	[N,N-dialkyl (Me, Et, n-pr or i-pr) aminoethane-2-thiols and corresponding protonated salts]	-	2	Regulatory Hazards List 2B (precursors) in the Annex Protocol to Ban Chemical Weapons
Chemicals controlled by the Mongolia Convention on Chemicals that Destroys the Ozone Layer				
1	Chlorodifluoromethane or HCFC-22 (CHF ₂ Cl)	75-45-6	2	Mongolia Protocol
2	Compound HCFC-22	-	2	Mongolia Protocol
(Hydroflouorocarbons)				
1	1,1,1,2-Tetrafluoroethane or HFC-134a (CF ₃ CH ₂ F)	811-97-2	2	Mongolia Protocol
2	1,1-Difluoroethane or HFC-152a (CHF ₂ CH ₃)	75-37-6	2	Mongolia Protocol
3	Pentafluoroethane or HFC-125 (CF ₃ CHF ₂)	354-33-6	2	Mongolia Protocol
4	1.1.1-trifluoroethane or HFC-143a (CF ₃ CH ₃)	420-46-2	2	Mongolia Protocol
5	Difluoromethane or HFC-32 (CH ₂ F ₂)	75-10-5	2	Mongolia Protocol
6	Trifluoromethane or HFC-23 (CHF ₃)	75-46-7	2	Mongolia Protocol
7	1,1,1,3,3-Pentafluoropropane or HFC-245fa (CF ₃ CH ₂ CHF ₂)	460-73-1	2	Mongolia Protocol
8	2,3,3,3-Tetrafluoropropene or HFC-1,2,3,4yf (CH ₂ =CFCF ₃)	754-12-1	2	Mongolia Protocol

9	Compound of HFCs	-	2	Mongolia Protocol
(Halogen-free Refrigerants)				
1	Ammonia or R-717 (NH ₃)	7664-41-7	2	Mongolia Protocol
2	Carbon dioxide or R-744 (CO ₂)	124-38-9	2	Mongolia Protocol
3	Butane or R-600 (CH ₃ CH ₂ CH ₂ CH ₃)	106-97-8	2	Mongolia Protocol
4	Iso-Butane or R-600a (C ₄ H ₁₀)	75-28-5	2	Mongolia Protocol
5	Propane or R-290 (C ₃ H ₈)	74-98-6	2	Mongolia Protocol
Chemical waste list				
1	(used lubricating oil)	-	2	Excess volume of more than 20 kg or 20 L excludes objects in establishments that have specific laws governing the treatment or disposal of objects.
2	(metal and metal-bearing wastes)	-	2	
2.1	Metallic and organic waste comprises the following: antimony, arsenic, beryllium, cadmium, lead, mercury, selenium, tellurium, thallium	-	2	
2.2	Contaminated waste or contaminants as following: antimony, antimony compounds, beryllium, beryllium compounds, cadmium, cadmium compound, lead, lead compounds, selenium, selenium compounds, tellurium, tellurium compounds, (not included metal waste in massive form)	-	2	
2.3	Contaminated waste or contaminants as following: arsenic, arsenic compounds, mercury, mercury compounds, thallium, thallium compounds	-	2	
2.4	Waste with the following components: metal carbonyls, hexavalent chromium compounds	-	2	
2.5	(Galvanic sludges)	-	2	
2.6	Liquid waste caused by acid cleaning	-	2	
2.7	Waste from the process of zinc, fertilizer and sediment: jarosite, hematite, etc.	-	2	
2.8	lead and cadmium	-	2	
2.9	Ashes from burning copper wire wrap	-	2	

2.10	Dirt and gases from a gas filter in a copper smelter	-	2	
2.11	Soluble lead detergent from electrolyte separation process	-	2	
2.12	Sludge from the process of separating copper to electrolyte excluding anode slimes	-	2	
2.13	Solvent is already used in the composition of copper	-	2	
2.14	waste copper cyanide catalysts and/or cupric chloride	-	2	
2.15	Precious metallic ashes: gold, silver, platinum, palladium, iridium, osmium, rhodium, ruthenium, etc. \bar{U}	-	2	
2.16	Batteries - Acids that are in perfect condition and separate	-	2	
2.17	Unused recyclable battery waste	-	2	
2.18	Components of electronics and electronics or waste (excluding generators) with garden components, which contain capacitors and other batteries with mercury-based components of cathode-ray tubes and other light-emitting capacitors. (PCB) or (Cadmium), (Mercury) and (Lead Polychlorinated Biphenyl)	-	2	
3	(wastes containing principally inorganic constituents, which may contain metals and organic materials)		2	
3.1	(glass waste from cathode-ray tubes and other activated gasses)	-	2	
3.2	(waste inorganic fluorine compounds in the form of liquids or sludges)	-	2	
3.3	(waste catalysts)	-	2	
3.4	(waste gypsum from chemical industry processes)	-	2	
3.5	(waste asbestos in the form of dust and fibers)	-	2	
3.6	(coal-fired power plant fly-ash)	-	2	
4	(wastes containing principally organic constituents, which may contain metals and inorganic materials)		2	
4.1	(wastes from production of petroleum coke and/or bitumen)	-	2	
4.2	(wastes mineral oils unfit for their originally intended use)	-	2	
4.3	(wastes that consist of or are contaminated with leaded anti-knock compound sludges)	-	2	
4.4	[wastes thermal (heat transfer) fluid	-	2	
4.5	Waste from production, mixing and use: resins, latex, plasticizers and glues/adhesives	-	2	
4.6	nitrocellulose	-	2	
4.7	(wastes phenols, phenol compounds including chlorophenol in the form of liquids or sludges)	-	2	

4.8	Ethers	-	2	
4.9	(wastes leather dust, ash, sludges and flours when containing hexavalent chromium compounds or biocides)	-	2	
4.10	(wastes of leather or of composition leather not suitable for the manufacture of leather articles containing hexavalent chromium compounds or biocides)	-	2	
4.11	(fellingmongery wastes containing hexavalent chromium compounds or biocides or infectious substances)	-	2	
4.12	(fluff-light fraction from shredding)	-	2	
4.13	(wastes organic phosphorous compounds)	-	2	
4.14	(waste non –halogenated organic solvents)	-	2	
4.15	(waste halogenated organic solvents)	-	2	
4.16	(waste halogenated or unhalogenated non-aqueous distillation residues from organic solvent recovery operations)	-	2	
4.17	Waste from producing aliphatic hydrocarbons aliphatic halogenated hydrocarbons chloromethane, dichloro-ethane, vinyl chloride, vinylidene chloride, allyl chloride and epichlorhydrin)	-	2	
4.18	polychlorinated biphenyl (PCB), polychlorinated terphenyl (PBB), or any other polybrominated analogues of these compounds, At concentrations of 50 mg / kg and above..	-	2	
4.19) [waste tarry residues from refining, distillation and any pyrolytic treatment of organic materials (excluding asphalt)	-	2	
5	(wastes which may contain either inorganic or organic constituents)	-	2	
5.1	(wastes from the production and use of pharmaceutical products)	-	2	
5.2	(Wastes from medical, nursing, dental, veterinary, or similar practices, and wastes generated in hospitals or other facilities during the investigation or treatment of patients, or research projects).	-	2	
5.3	(wastes from the production, formulation and use of biocides and phytopharmaceuticals, including waste pesticides and herbicides which are off-specification, outdate, or unfit for their originally intended use)	-	2	
5.4	(wastes from the manufacture, formulation and use of wood-preserving chemicals excluding chemical-preserved wood)	-	2	
5.5	wastes consisting of or containing off specification or outdated chemicals: <ul style="list-style-type: none"> - Organic cyanides - Inorganic cyanides excepting precious-metal-bearing residues such as gold , 	-	2	

	silver, platinum, palladium, iridium, osmium, rhodium, ruthenium in solid form containing traces of inorganic cyanides)			
5.6	(wastes oil/water, hydrocarbons/water mixtures and emulsions)	-	2	
5.7	(wastes from the production, formulation and use of inks, dyes, pigments, paints, lacquers, and varnishes)	-	2	
5.8	(wastes of an explosive nature)	-	2	
5.9	(wastes acidic or basic solutions with PH less than 2 or greater than 11.5)	-	2	
5.10	wastes from industrial pollution control devices for cleaning of industrial off-gases)	-	2	
5.11	wastes consisting of or containing off specification or outdated chemicals: - Cogenor of polychlorinated dibenzo-furan - Cogenor of polychlorinated dibenzo-dioxin	-	2	
5.12	(wastes that contain, consist of or are contaminated with peroxides)	-	2	
5.13	(waste packages and containers contaminated with any chemical wastes excepting used lubricating oil)	-	2	
5.14	(wastes consisting of or containing off specification or outdated chemicals)	-	2	
5.15	wastes chemical substances from research and development or teaching activities which are not identified and /or are new and whose effects on human health and/or the environment are not know)	-	2	
5.16	(spent activated carbon)	-	2	
5.17	[bituminous(asphalt waste) from road construction and maintenance which constituent of tar]	-	2	
6	waste metal cables coated or insulated with plastic, containing or contaminated with coal tar, polychlorinated biphenyl (at concentration level of 50 mg/kg or more), lead, cadmium, and other organohalogen compounds]	-	2	
(Used electrical and electronic appliance)				
1	Appliance and electronics used such as refrigerators, television, radio, CD player, air conditioning, washing machine, rice cooker, Refrigerator Lev, many copiers, computers, printers ... the equipment electric or Lao Sin and electronic components which can be used repeatedly, modification, repair, processing, storage, separation, to reuse after processing ship or to a Management.	-	2	
2	Parts of used electrical appliances and accessories: refrigerator, TV, radio, CD player, air conditioner, washing machine, battery, microwave, ticket machine, computer, computer and more.	-	2	

Table 3: danger chemicals type 3

No	Chemicals name	CAS No.	type	remark
1	1,2-dichloroethylene	540-59-0	3	
2	2-chloroethyl alcohol or 2-chloroethanol	107-07-3	3	
3	2-enthylhexyl acrylate	103-11-7	3	
4	thioglycolic acid or 2-mercaptoacetic acid	68-11-1	3	
5	nitric acid	7697-37-2	3	
6	glucidol or 2,3-epoxy-1-propanpol	556-52-5	3	
7	chlorobenzene or phenyl chloride	108-90-7	3	
8	carbon disulfide	75-15-0	3	
9	tert-butyl mercaptan or 2-methyl-2-propanethiol	75-66-1	3	
10	nitrobenzene or oil of mirbane	98-95-3	3	
11	bronon tribromide	10294-33-4	3	
12	p-cresol or 4-methyl phenol	106-44-5	3	
13	formaldehyde or methanal	50-00-0	3	
14	phosphorus sesquisulfide or tetraphosphorus trisulfide	1314-85-8	3	
15	phenol	108-95-2	3	
16	furfural or 2-furraldehyde	98-01-1	3	
17	m-Cresol or 3-methyl phenol	108-39-4	3	
18	Methyl chloride or chloromethane	74-87-3	3	
19	Methyl methacrylate	80-62-6	3	
20	Methyl acrylate	96-33-3	3	
21	vinyl acetate	108-05-4	3	
22	styrene	100-42-5	3	
23	o-cresol or 2-methylphenol	95-48-7	3	
24	acrylamide or propenamide	79-06-1	3	
25	allyl chloride or 3-chloro-1-propene	107-05-1	3	
26	epichlorohydrin or 1-chloro-2,3-epoxypropane	106-89-8	3	
27	ammonium hydroxide	1336-21-6	3	
28	isobutyl mercaptan or 2-methyl-1-propanethiol	513-44-0	3	

29	chrysotile	12001-29-5	3	
30	Potassium nitrate	7757-79-1	3	
31	Ammonium nitrate	6484-52-2	3	
32	Ethyl acrylate	140-88-5	3	
33	(potassium hydroxide)	1310-58-3	3	
34	sodium hydroxide	1310-73-2	3	
35	sodium hypochlorite	7681-52-9	3	
36	Caffeine	58-08-2	3	Primary chemistry
37	Methyl iso-butyl ketone (MIBK)	108-10-1	3	Primary chemistry
38	Benzyl cyanide	140-29-4	3	Primary chemistry

Table 4: danger chemicals type 4

No	Chemicals name	CAS No.	type	remark
1	[(4-diethoxymethylsilyl) butylamine]	3037-72-7	4	
2	1,1,2-trichloroethane	79-00-5	4	
3	2,2-dichlorodiethyl ether or 1,1-oxybis-2-chloroethane	111-44-4	4	
4	2-chloroethanesulfonyl chloride	1622-32-8	4	
5	2-methyl-2-propene-1,1-diol diacetate	10476-95-6	4	

6	2-methyl-5-vinyl pyridine	140-76-1	4	
7	3-(trifluoromethyl) benzenamine	98-16-8	4	
8	3,3-bis(chloromethyl) oxetane	78-71-7	4	
9	3,4-dichlorophenyl isocyanate	102-36-3	4	
10	3-chloropropanenitrile	542-76-7	4	
11	4-nitropyridine-1-oxide	1124-33-0	4	
12	4-aminopropiophenone	70-69-9	4	
13	selenious acide	7783-00-8	4	
14	benzenearsonic acid	98-05-5	4	
15	polyphosphoric acid	8017-16-1	4	
16	pyrophosphoric acid	2466-09-3	4	
17	m-phosphoric acid	37267-86-0	4	
18	o-phosphoric acid	7664-38-2	4	
19	acrylic acid	79-10-7	4	
20	ozone	10028-15-6	4	
21	gallium trichloride	13450-90-3	4	
22	gold (I) cyanide	506-65-0	4	
23	gold sodium cyanide	15280-09-8	4	
24	gold potassium cyanide	13967-50-5	4	
25	chloroethyl chloroformate	627-11-2	4	
26	copper (I) cyanide	544-92-3	4	
27	copper (II) sulphate pentahydrate	7758-99-8	4	
28	copper (II) cyanide	14763-77-0	4	
29	calcium hypochlorite	7778-54-3	4	
30	Salcomine	14167-18-1	4	
31	sulfur tetrafluoride	7783-60-0	4	
32	sec-butyl acetate	105-46-4	4	
33	semicarbazide hydroxchloride	564-41-7	4	
34	sodium fluorosilicate or sodium hexafluorosilicate	16893-85-9	4	
35	xylylene dichloride	28347-13-9	4	
36	xilenol or dimethyl phenol	108-68-9	4	

37	dichloromethylphenylsilane	149-74-6	4	
38	dithiazanine iodide	514-73-8	4	
39	dimethylhydrazine	57-14-7	4	
40	diethyl chlorophosphonate or diethoxy phosphorus oxychloride	814-49-3	4	
41	diethylenetriamine (2,2-diaminodiethylamine)	111-40-0	4	
42	tetrachloroethane or acetylene tetra chloride or 1,1,2,2-tetrachloroethane	79-34-4	4	
43	trichloro (chloromethyl) silane	1558-25-4	4	
44	trichloro (dichlorophenyl) silane	27137-85-5	4	
45	trichlorophenylsilane	98-13-5	4	
46	trichloroacetyl chloride	76-02-8	4	
47	trimethyltin chloride	1066-45-1	4	
48	trimethylolpropane phosphite	824-11-3	4	
49	triethoxysilane	998-30-1	4	
50	triethylenetetramine	112-24-3	4	
51	{(trans-4)-dichloro {4,4-dimethylzinc-5{[(methylamino) carbonyl] oxy}-imino} pentanenitrile)}	58270-08-9	4	
52	thallous chloride	7791-12-0	4	
53	thallous carbonate	6533-73-9	4	
54	thallous malonate	2757-18-8	4	
55	titanium tetrachloride	7550-45-0	4	
56	thiocarbazide	2231-57-4	4	
57	thiosemicarbazide	79-19-6	4	
58	thiophenol	108-98-5	4	
59	n-butyl acetate	123-86-4	4	
60	nitrogen dioxide or dinitrogen tetroxide	10102-44-0	4	
61	nitrocyclohexane	1122-60-7	4	
62	benzotrichloride	98-07-7	4	
63	barium chlorate	13477-00-4	4	
64	barium chloride	10361-37-2	4	
65	barium carbonate	513-77-9	4	
66	barium sulfide	21109-95-5	4	

67	barium nitrate	10022-31-8	4	
68	bromoform or tribromomethane	75-25-2	4	
69	perchloromethylmercaptan	594-42-3	4	
70	paraformaldehyde	30525-89-4	4	
71	pentachloroethane	76-01-7	4	
72	pentadecylamine or pentadecan-1-amine	2570-26-5	4	
73	potassium fluoride	7789-23-3	4	
74	potassium arsenite	10124-50-2	4	
75	potassium hexafluorosilicate	16871-90-2	4	
76	propionitrile or ethyl cyanide	107-12-0	4	
77	pyrene	129-00-0	4	
78	formparanate	17702-57-7	4	
79	phenylsilatrane	2097-19-0	4	
80	Methacrylic anhydride	760-93-0	4	
81	Methacryloyl chloride	920-46-7	4	
82	Methacryloyloxyethyl isocyanate	30674-80-7	4	
83	Methanol or methyl alcohol	67-56-1	4	
84	Methyl acetate	79-20-9	4	
85	Methylene chloride or dichloromethane	75-09-2	4	
86	Manganese III oxide	1317-34-6	4	
87	Manganese III phosphate hydrate	104663-56-1	4	
88	Manganese oxide or manganese IV oxide	1313-13-9	4	
89	acetylene tetrabromide or 1,1,2,2-tetrabromoethane	79-27-6	4	
90	adiponitrile	111-69-3	4	
91	ethyl acetate	141-78-6	4	
92	ethylene glycol monobutyl ether or 2-butoxyethanol	111-76-2	4	
93	ethylene glycol monomethyl ether or 2-methoxyethanol	109-86-4	4	
94	ethylene glycol monoethyl ether or 2-ethoxyethanol	110-80-5	4	
95	ethylene glycol monoethyl ether acetate or 2-ethoxyethyl acetate	111-15-9	4	
96	ethylenediamine or 1,2-diaminoethane	107-15-3	4	
97	ethyltrichlorosilane	115-21-9	4	

98	N,N'-di-n-butyl-1,6-hexanediamine	4835-11-4	4	
99	N,N-dimethyl-1,2-phenylenediamine	2836-03-5	4	
100	N,N-dimethyl-1,3-phenylenediamine	2836-04-6	4	
101	N,N-dimethyl-1,4-phenylenediamine	99-98-9	4	
102	antimony trifluoride or antimony (III) fluoride	7783-56-4	4	
103	antimony pentafluoride or antimony (V) fluoride	7783-70-2	4	
104	ammonium fluoride	12125-01-8	4	
105	ammonium hexafluorosilicate	16919-19-0	4	
106	isopropyl chloroformate	108-23-6	4	
107	hydrogen peroxide	7722-84-1	4	

Article 4 Chemicals that are not listed in the list of chemicals

The industrial chemicals are not including in the control list based on Article 3 of this decision are chemicals which have toxic characteristics and are lower harm to health, life, property and environment.

The manufacture, import, export, control and utilize of such chemicals shall be subject to the same type of hazardous chemicals as defined in Article 13 of the Chemicals Control Law, No 07/NA, dated 10 November 2016.

Article 5 The adjust of table chemicals industry

The amendment of the industrial chemistry schedule is the addition, elimination or modification of any chemicals based on Article 3 of this decision.

The amendment of the industrial chemistry schedule is based on discovery of new harmful characteristics of the chemicals in according with international conventions in which the Lao PDR is a party or according to the request of the chemical importer (owners).

After the amendment of the chemistry schedule, the Ministry of Industry and Commerce shall inform to the chemicals traders in order to modify their business registration of chemistry.

Article 6 Determination of chemicals composition or mixed chemicals

The determination of chemicals composition or mixed chemicals are depends on which one of the chemicals is the most dangerous in the mixed or mixed chemicals that is identify type of chemical.

Article 7 Implementation

Department of Industry and Handicraft will coordinate with line agencies to implement this decision become effectively and efficiency.

Article 8 Effectiveness

This decision is effective after the date of signature and after 15 days since official public on Official Gazette.

Minister
(Signed and sealed)

Khemmani Pholsena