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Interpretation of Chemical Substances Management Standard

Responsible Care Headquarters
Sanyo Chemical Industries, Ltd.



Our Chemical Substance Management

Chemical Substances are essential for industries and our daily life. However, in no small numbers, there are seriously hazardous substances for human being and ecosystems, and there are seriously dangerous substances such as flammable and explosive materials.

Although a lot of laws and regulations have been established in order to ensure safety using chemical substances formerly, these ways have their limits. Now, a voluntary management system by a company itself has been required.

Responsible Care (RC) activities are voluntary activities concerned with environmental conservation and safety through the lifecycle of chemical products, from development to final disposal via manufacturing, delivery and use.

When RC activities are implemented, it is necessary to know the kind of chemical hazards and levels of danger that chemical substances have, and level of risk (possibility) of damage and exposure. In addition, it is required to establish appropriate management systems for handling chemical substances.

Sanyo Chemical Industries, Ltd., has established Chemical Substances Management Standard for chemical substances used in our factories, laboratories and offices. The substances are classified and controlled in three levels (Prohibited, Limited Use and Controlled level), considering laws, regulations, social situation and effect to global environment, ecosystems and human being,

Hazard Evaluation of Chemical Substances

We evaluate and rank chemical substances according to the laws, regulations, hazard information, etc. as follows:

<Japanese law and regulations>

1. Pollution prevention laws of air, water, and soil e.g. Air Pollution Control Law, Water Pollution Control Law etc. in Japan
2. Environmental Quality Standards for air, water, soil and ground water
3. Law Concerning the Examination and Manufacture, etc. of Chemical Substances (Chemical Substance Control Law)
4. Law Concerning the Protection of the Ozone Layer through the Control of Specified Substances and Other Measures
5. Work Safety and Hygiene Law and its enforcement regulations and guidelines, etc.
6. Laws on the Prohibition of Chemical Weapons and the Regulation of Specific Chemicals
7. Poisonous and Toxic Substance Control Law
8. Law Concerning Special Measures against Dioxins
9. Law Concerning Reporting, etc. of Release into the Environment of Specific Chemical Substances and Promoting Improvements in their Management (Law for PRTR and Promotion of Chemical Management)
10. Toxicity of chemical substances subjected to the Act (Class I Designated Chemical Substances Summary Table)

<Other regulations and voluntary plans, etc.>

11. Strategic Programs on Environmental Endocrine Disruptors '98 (SPEED '98, Ministry of the Environment)
12. Air Pollutant Control Management Plan (Japan Chemical Industry Association, harmful air pollutant 12 substances)
e.g. dichloromethane, benzene, 1,3-butadiene, acrylonitrile, formaldehyde, etc.
13. Alkylphenol and their ethoxylate, which have the endocrine disrupting effects
14. Chemical substances regulated by EU Directives (RoHS, ELV, etc)
15. Chemical substances which we finished to use or continue to reduce in our voluntarily abolish plan
16. Hazardous chemical substances of which is required to strictly control by our customers

Management Level

All chemical substances are classified to the following three levels according to our risk assessment, considering both hazard evaluations and risk (possibility) of exposure in Sanyo Chemical.

Management Level		Definition
Level 1	Prohibited Substances	Substances to be prohibited without exception in all stages of corporation
Level 2	Limited Use Substances	Substances to be reduced by using substitute substances, which are expected not to be used, treated and generated at the point of environmental view.
Level 3	Controlled Substances	Substances which are all except level 1 and level 2, which emissions and/or transference to the environment in all corporations is to be reduced.

Management Method at Each Division

Classified substances are managed and controlled according to the following table.

Substances	Prohibited Substances	Limited Use Substances	Controlled Substances
Division			
Research & Development	Do not use, treat and generate in all corporate operations	i) Do not use in new product in principle ii) Promote substitution to another materials in present products	Consider measures to reduce emissions and transference to the environment Consider measures to reuse or recycle the waste
Production		Promote to reduce using in corporation with R&D	i) Keep safely and use properly according to laws and regulations ii) Measure or estimate amount of emission and transfer, then reduce them iii) Promote reusing and recycling the waste
Purchasing		Procure materials on the basis of Green Procurement Standard	
Sales & Marketing		Supply the product information to customers	

Review of Management Level

Prohibited Substances and Limited Use Substances may be revised at any time in accordance with laws, regulations, social trends, advances in technology and others.

Level 1 Prohibited Substances

No.	Substance Name	Other Name	Example of CAS No.
1001	Polychlorinated biphenyls	PCBs	001336-36-3
1002	Polychlorinated Naphthalenes (with more than 3 chlorine atoms)	-	
1003	Hexachlorobenzene	-	000118-74-1
1004	1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-exo-1,4-end-5,8-dimethanonaphtharene	Aldrin	000309-00-2
1005	1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-exo-1,4-end-5,8-dimethanonaphtharene	Dieldrin	000060-57-1
1006	1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-end-1,4-end-5,8-dimethanonaphtharene	Endrin	000072-20-8
1007	1,1,1-trichloro-2,2-bis(4-chlorophenyl)ethane	DDT	000050-29-3
1008	Chlordane or Heptachlor and their mixture	-	012789-03-6
1009	Bis(tributyltin)oxide	-	000056-35-9
1010	N,N'-Ditolyl-p-phenylenediamine, N-tolyl-N'-xylyl-p-phenylenediamine and N,N'-dixylyl-p-phenylenediamine	-	015017-02-2
1011	2,4,6-Tri-tert-butylphenol	-	000732-26-3
1012	Trichloroethylene	-	000079-01-6
1013	Tetrachloroethylene	-	000127-18-4
1014	Ozone Depleting Substance Group B II	(See the attached Table-1) Tetrachloromethane	000056-23-5
1015	Triphenyltin compounds	-	-
1016	Tributyltin compounds	-	-
1017	Ozone Depleting Substance Group A I	} (See the attached Table-1)	-
1018	Ozone Depleting Substance Group B I		
1019	Ozone Depleting Substance Group A II		
1020	Ozone Depleting Substance Group B III		
1021	Ozone Depleting Substance Group C II		
1022	Ozone Depleting Substance Group E I		
1023	Phosphorus (yellow)	-	007223-14-0
1024	Benzidine	-	000092-87-5
1025	Biphenyl-4-ylamine	-	000092-67-1
1026	Asbestos	-	001332-21-4
1027	4-Nitrobiphenyl	-	000092-93-3
1028	Oxybis[chloromethane]	-	000542-88-1
1029	2-Naphthylamine	-	000091-59-8
1031	Dichlorobenzidine	-	001331-47-1
1032	1-Naphthylamine	-	000134-32-7
1033	3,3'-Dimethylbenzidine	o-tolidine	000119-93-7
1034	3,3'-Dimethoxybenzidine	-	000119-90-4
1035	Beryllium and its compounds	-	-
1036	Benzylidene trichloride	-	000098-07-7
1063	Schradan	-	000152-16-9
1064	Tetraalkyl lead	-	000075-74-1
1065	Parathion	-	000056-38-2
1066	Methyl Demeton	-	008022-00-2
1067	Phosphamidon	-	013171-21-6
1068	Methyl Parathion	-	000298-00-0
1069	Tetraethyl pyrophosphate	TEPP	000107-49-3
1070	Fluoroacetic acid	-	000144-49-0
1071	2-Fluoroacetamide	-	000640-19-7
1072	Aluminum phosphide	-	-
1073	Dioxins	(See the attached Table-2)	-
1074	Benzene	-	000071-43-2
1075	Chromium(VI) compounds	-	-
1076	Arsenic and its inorganic compounds	-	-
1077	Cadmium and its compounds	-	-
1078	Mercury and its compounds	-	-
1079	1,2,3-Trichlorobenzene	-	000087-61-6
1080	1,2,4-Trichlorobenzene	-	000120-82-1
1081	Dodecachloropentacyclo[5.3.0.0(2.6).0(3.9).0(4.8)]decane	Mirex	002385-85-5
1082	Polychloro-2,2-dimethyl-3-methylidenbicyclo[2.2.1]heptane	Toxaphene	008001-35-2
1084	Ozone Depleting Substance Group C III	Bromochloromethane	000074-97-5

No.	Substance Name	Other Name	Example of CAS No.
1085	Polybrominated Biphenyls	PBBs	-
1086	Polybrominated Diphenyl ethers	PBDEs	-
1087	Azo colorants	(See the attached Table-3)	-
1088	Short Chain Chlorinated Paraffins	C10-13, chlorine%>60%	-
1089	Radioactive Substances	-	-
1090	1,1-dichloro-1-fluoroethane	HCFC141b	001717-00-6
1091	2,2,2-Trichloro-1,1-bis(4-chlorophenyl)ethanol	Kelthane; Dicofof	000115-32-2
1092	Hexachlorobuta-1,3-diene	-	000087-68-3
1093	1-(1,1-Dimethylethyl)-3,5-dimethyl-2,4,6-trinitrobenzene	-	000081-15-2
1094	1,5,9-Cyclododecatriene	-	004904-61-4
1095	Cyclododecane	-	000294-62-2
1096	1,2,5,6,9,10-Hexabromocyclododecane	-	003194-55-6
1097	Tetraphenylstannane	-	000595-90-4
1098	1,3,5-Tribromo-2-(2,3-dibromo-2-methylpropoxy)-benzene	-	036065-30-2
1099	Phosphonothioic acid, phenyl-, O-(2,4-dichlorophenyl) O-ethyl ester	-	003792-59-4
1100	1,3,5-Tris(1,1-dimethylethyl)-benzene	-	001460-02-2
1101	Decahydro-1-(1-methylethyl)-naphthalene	-	001010-74-8
1102	3,5-Bis(1,1-dimethylethyl)-[1,1'-biphenyl]-4-ol	-	002668-47-5
1103	Diisopropyl-naphthalene	-	024157-79-7
1104	Triisopropyl-naphthalene	-	035860-37-8
1105	2-(2H-Benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)-phenol	-	003846-71-7
1106	Diethylbiphenyl	-	013049-35-9
1107	Terphenyl, hydrogenated	-	001087-02-1
1108	Dibenzyltoluene	-	026898-17-9
1109	Dibutyltin hydrogen borate	-	075113-37-0
1999	Specific substances regulated by Laws on the Prohibition of Chemical Weapons and the Regulation of Specific Chemicals	(See the attached Table-4)	-

Attached Table-1 Ozone Depleting Sustances except HCFCs
CFCs, Halons and HBFCs in Montriol Protocol

No.	Group	Substance Name	Other Name	Chemical Formula	Example of CAS No.
1017-01	A I	CFC-11	CFC-11	CFCl ₃	000075-69-4
1017-02	A I	CFC-115	CFC-115	C ₂ F ₅ Cl	000076-15-3
1017-03	A I	CFC-12	CFC-12	CF ₂ Cl ₂	000075-71-8
1017-04	A I	CFC-113	CFC-113	C ₂ F ₃ Cl ₃	000076-13-1
1017-05	A I	CFC-114	CFC-114	C ₂ F ₄ Cl ₂	000076-14-2
1019-01	A II	Halon-1211	-	CF ₂ BrCl	000353-59-3
1019-02	A II	Halon-1301	-	CF ₃ Br	000075-63-8
1019-03	A II	Halon-2402	-	C ₂ F ₄ Br ₂	025497-30-7
1018-01	B I	CFC-214	CFC-214	C ₃ F ₄ Cl ₄	002268-46-4
1018-02	B I	CFC-13	CFC-13	CF ₃ Cl	000075-72-9
1018-03	B I	CFC-217	CFC-217	C ₃ F ₇ Cl	000422-86-6
1018-04	B I	CFC-112	CFC-112	C ₂ F ₂ Cl ₄	000076-12-0
1018-05	B I	CFC-215	CFC-215	C ₃ F ₅ Cl ₃	000076-17-5
1018-06	B I	CFC-211	CFC-211	C ₃ FCl ₇	135401-87-5
1018-07	B I	CFC-213	CFC-213	C ₃ F ₃ Cl ₅	134237-31-3
1018-08	B I	CFC-111	CFC-111	C ₂ FCl ₅	000354-56-3
1018-09	B I	CFC-216	CFC-216	C ₃ F ₆ Cl ₂	000661-97-2
1018-10	B I	CFC-212	CFC-212	C ₃ F ₂ Cl ₆	003182-26-1
1014	B II	Tetrachloromethane	-	CCl ₄	000056-23-5
1020	B III	1,1,1-Trichloroethane	-	C ₂ H ₃ Cl ₃	000071-55-6
1021-01	C II	Bromotrifluoropropane	-	C ₃ H ₄ F ₃ Br	-
1021-02	C II	Tribromofluoropropane	-	C ₃ H ₄ FBr ₃	-
1021-03	C II	Bromodifluoroethane	-	C ₂ H ₃ F ₂ Br	-
1021-04	C II	Bromodifluoropropane	-	C ₃ H ₅ F ₂ Br	-
1021-05	C II	Bromodifluoromethane	HBFC-22B1	CHF ₂ Br	001511-62-2
1021-06	C II	Bromotetrafluoroethane	-	C ₂ HF ₄ Br	-
1021-07	C II	Tribromotrifluoropropane	-	C ₃ H ₂ F ₃ Br ₃	-
1021-08	C II	Bromotrifluoroethane	-	C ₂ H ₂ F ₃ Br	-
1021-09	C II	Tribromotetrafluoropropane	-	C ₃ HF ₄ Br ₃	-
1021-10	C II	Bromofluoropropane	-	C ₃ H ₆ FBr	-
1021-11	C II	Bromofluoromethane	-	CH ₂ FBr	000373-52-4
1021-12	C II	Bromohexafluoropropane	-	C ₃ HF ₆ Br	-
1021-13	C II	Bromopentafluoropropane	-	C ₃ H ₂ F ₅ Br	-
1021-14	C II	Hexabromofluoropropane	-	C ₃ HBr ₆	-
1021-15	C II	Pentabromodifluoropropane	-	C ₃ HF ₂ Br ₅	-
1021-16	C II	Dibromodifluoroethane	-	C ₂ H ₂ F ₂ Br ₂	-
1021-17	C II	Tetrabromodifluoropropane	-	C ₃ H ₂ F ₂ Br ₄	-
1021-18	C II	Dibromotetrafluoropropane	-	C ₃ H ₂ F ₄ Br ₂	-
1021-19	C II	Dibromotrifluoroethane	-	C ₂ HF ₃ Br ₂	-
1021-20	C II	Dibromotrifluoropropane	-	C ₃ H ₃ F ₃ Br ₂	-
1021-21	C II	Dibromofluoroethane	-	C ₂ H ₃ FBr ₂	-
1021-22	C II	Dibromofluoropropane	-	C ₃ H ₅ FBr ₂	-
1021-23	C II	Dibromofluoromethane	-	CHFBr ₂	001868-53-7
1021-24	C II	Tribromofluoroethane	-	C ₂ H ₂ FBr ₃	-
1021-25	C II	Pentabromofluoropropane	-	C ₃ H ₂ FBr ₅	-
1021-26	C II	Dibromodifluoropropane	-	C ₃ H ₄ F ₂ Br ₂	-
1021-27	C II	Tetrabromotrifluoropropane	-	C ₃ HF ₃ Br ₄	-
1021-28	C II	Tetrabromofluoroethane	-	C ₂ HBr ₄	-
1021-29	C II	Tetrabromofluoropropane	-	C ₃ H ₃ FBr ₄	-
1021-30	C II	Tribromodifluoroethane	-	C ₂ HF ₂ Br ₃	-
1021-31	C II	Tribromodifluoropropane	-	C ₃ H ₃ F ₂ Br ₃	-
1021-32	C II	Dibromopentafluoropropane	-	C ₃ HF ₅ Br ₂	-
1021-33	C II	Bromofluoroethane	-	C ₂ H ₄ FBr	-
1021-34	C II	Bromotetrafluoropropane	-	C ₃ H ₃ F ₄ Br	-
1084	C III	Bromochloromethane	-	CH ₂ BrCl	000074-97-5
1022	E I	Methyl bromide	-	CH ₃ Br	000074-83-9

Attached Table-2 Dioxins

No.	Substance Name	
1073-001	polychlorinated dibenzofurans ; PCDFs	2,3,7,8-tetrachlorodibenzofuran
1073-002		1,2,3,7,8-pentachlorodibenzofuran
1073-003		2,3,4,7,8-pentachlorodibenzofuran
1073-004		1,2,3,4,7,8-hexachlorodibenzofuran
1073-005		1,2,3,6,7,8-hexachlorodibenzofuran
1073-006		1,2,3,7,8,9-hexachlorodibenzofuran
1073-007		2,3,4,6,7,8-hexachlorodibenzofuran
1073-008		1,2,3,4,6,7,8-heptachlorodibenzofuran
1073-009		1,2,3,4,7,8,9-heptachlorodibenzofuran
1073-010		octachlorodibenzofuran
1073-011		other polychlorodibenzofurans
1073-101	polychlorinated dibenzo-p-dioxins ; PCDDs	2,3,7,8-tetrachlorodibenzo-p-dioxin
1073-102		1,2,3,7,8-pentachlorodibenzo-p-dioxin
1073-103		1,2,3,4,7,8-hexachlorodibenzo-p-dioxin
1073-104		1,2,3,6,7,8-hexachlorodibenzo-p-dioxin
1073-105		1,2,3,7,8,9-hexachlorodibenzo-p-dioxin
1073-106		1,2,3,4,6,7,8-heptachlorodibenzo-p-dioxin
1073-107		octachlorodibenzo-p-dioxin
1073-108		other polychlorodibenzo-p-dioxins
1073-201	co-planar polychlorinated biphenyls ; Co-planar PCBs	3,4,4',5-tetrachlorobiphenyl
1073-202		3,3',4,4'-tetrachlorobiphenyl
1073-203		3,3',4,4',5-pentachlorobiphenyl
1073-204		3,3',4,4',5,5'-hexachlorobiphenyl
1073-205		2',3,4,4',5-pentachlorobiphenyl
1073-206		2,3',4,4',5-pentachlorobiphenyl
1073-207		2,3,3',4,4'-pentachlorobiphenyl
1073-208		2,3,4,4',5-pentachlorobiphenyl
1073-209		2,3',4,4',5,5'-hexachlorobiphenyl
1073-210		2,3,3',4,4',5-hexachlorobiphenyl
1073-211		2,3,3',4,4',5'-hexachlorobiphenyl
1073-212		2,3,3',4,4',5,5'-heptachlorobiphenyl
1073-213		other co-planar polychlorobiphenyls

Attached Table-3 Specific Azo Colorants

Azo colorants which is possible to generate specific carcinogenic amines shown below

Specific Amines

No.	Substance Name	Chemical Formula	Example of CAS No.
1087-01	4-Aminoazobenzene	C ₁₂ H ₁₁ N ₃	000060-09-3
1087-02	o-Anisidine	C ₇ H ₉ NO	000090-04-0
1087-03	2-Naphthylamine	C ₁₀ H ₉ N	000091-59-8
1087-04	3,3'-Dichlorobenzidine	C ₁₂ H ₁₀ Cl ₂ N ₂	000091-94-1
1087-05	Biphenyl-4-ylamine	C ₁₂ H ₁₁ N	000092-67-1
1087-06	Benzidine	C ₁₂ H ₁₂ N ₂	000092-87-5
1087-07	o-Toluidine	C ₇ H ₉ N	000095-53-4
1087-08	4-Chloro-o-toluidine	C ₇ H ₈ ClN	000095-69-2
1087-09	2,4-Toluenediamine	C ₇ H ₁₀ N ₂	000095-80-7
1087-10	o-Aminoazotoluene	C ₁₄ H ₁₅ N ₃	000097-56-3
1087-11	5-Nitro-o-toluidine	C ₇ H ₈ N ₂ O ₂	000099-55-8
1087-12	3,3'-Dichloro-4,4'-diaminodiphenylmethane	C ₁₃ H ₁₂ Cl ₂ N ₂	000101-14-4
1087-13	4,4'-Methylenedianiline	C ₁₃ H ₁₄ N ₂	000101-77-9
1087-14	4,4'-Diaminodiphenylether	C ₁₂ H ₁₂ N ₂ O	000101-80-4
1087-15	p-Chloroaniline	C ₆ H ₆ ClN	000106-47-8
1087-16	o-Dianisidine	C ₁₄ H ₁₆ N ₂ O ₂	000119-90-4
1087-17	3,3'-Dimethylbenzidine	C ₁₄ H ₁₆ N ₂	000119-93-7
1087-18	2-Methoxy-5-methylaniline	C ₈ H ₁₁ NO	000120-71-8
1087-19	2,4,5-Trimethylaniline	C ₉ H ₁₃ N	000137-17-7
1087-20	4,4'-Thiodianiline	C ₁₂ H ₁₂ N ₂ S	000139-65-1
1087-21	4-Methoxy-m-phenylenediamine	C ₇ H ₁₀ N ₂ O	000615-05-4
1087-22	4,4'-Methylenedi-o-toluidine	C ₁₅ H ₁₈ N ₂	000838-88-0

Attached Table-4 Specific substances regulated by Laws on the Prohibition of Chemical Weapons and the Regulation of Specific Chemicals

No.	Type	Substance Name	Example of CAS No.
1999-01	Hazardous Material	O-Alkyl ($\leq C10$, incl. cycloalkyl) alkyl -phosphonofluoridates (Me, Et, n-Pr or i-Pr)-phosphonofluoridates e.g. O-Isopropyl methylphosphonofluoridate; Sarin O-Pinacolyl methylphosphonofluoridate; Soman	- 000107-44-8 000096-64-0
1999-02		O-Alkyl ($\leq C10$, incl. cycloalkyl) N,N-dialkyl phosphoramidocyanidates e.g. Tabun: O-Ethyl N,N-dimethylphosphoramidocyanidate	- 000077-81-6
1999-03		O-Alkyl (H or $\leq C10$, 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. O-Ethyl S-2-diisopropylaminoethyl methyl phosphonothiolate; VX	- 050782-69-9
1999-04		2-Chloroethylchloromethylsulfide	002625-76-5
1999-05		Bis(2-chloroethyl)sulfide; Mustard gas	000505-60-2
1999-06		Bis(2-chloroethylthio)methane	063869-13-6
1999-07		1,2-Bis(2-chloroethylthio)ethane; Sesquimustard	003563-36-8
1999-08		1,3-Bis(2-chloroethylthio)-n-propane	063905-10-2
1999-09		1,4-Bis(2-chloroethylthio)-n-butane	142868-93-7
1999-10		1,5-Bis(2-chloroethylthio)-n-pentane	142868-94-8
1999-11		Bis(2-chloroethylthiomethyl)ether	063918-90-1
1999-12		Bis(2-chloroethylthioethyl)ether; O-Mustard	063918-89-8
1999-13		2-Chlorovinylchloroarsine; Lewisite 1	000541-25-3
1999-14		Bis(2-chlorovinyl)chloroarsine; Lewisite 2	040334-69-8
1999-15		Tris(2-chlorovinyl)arsine; Lewisite 3	040334-70-1
1999-16		Bis(2-chloroethyl)ethylamine; HN1	000538-07-8
1999-17		Bis(2-chloroethyl)methylamine; HN2	000051-75-2
1999-18		Tris(2-chloroethyl)amine; HN3	000555-77-1
1999-19		Saxitoxin	035523-89-8
1999-20		Ricin	009009-86-3
1999-21	Raw Materials	Alkyl (Me, Et, n-Pr or i-Pr) phosphonyldifluorides e.g. Methylphosphonyldifluoride; DF	- 000676-99-3
1999-22		O-Alkyl (H or $< C$, incl. cycloalkyl) O-2-dialkyl 10 (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. O-Ethyl O-2-diisopropylaminoethylmethyl phosphonite; QL	- 057856-11-8
1999-23		O-Isopropyl methylphosphonochloridate; Chlorosarin	001445-76-7
1999-24		O-Pinacolyl methylphosphonochloridate; Chlorosoman	007040-57-5

Level 2 Limited Use Substances

No.	Substance Name	Other Name	Example of CAS No.
2001	Ozone Depleting Substance Group C I except HCFC-141b	(See attached Table-5)	-
2005	Formaldehyde	-	000050-00-0
2006	1,2-Dichloroethane	-	000107-06-2
2007	Dichloromethane	Methylene dichloride	000075-09-2
2008	1,2-Dichloropropane	-	000078-87-5
2009	Alkyl phenols (Alkyl ; C5-9)	-	-
2010	Polyoxyethylen or polyoxypropylen alkyl phenyl ether (Alkyl ; C5-9)	-	-
2011	Chloroethylene	Vinyl chloride	000075-01-4
2012	9-Methoxy-7H-furo[3,2-g][1]benzopyran-7-one	Methoxsalen	000298-81-7
2013	Dimethyl 2,2-dichlorovinyl phosphate	DDVP ; dichlorvos	000062-73-7
2014	Dinitrotoluene	-	025321-14-6
2015	Pentachlorophenol	-	000087-86-5
2016	O,O-Diethyl S-2-(ethylthio)ethyl phosphorodithioate	Disulfoton ; ethylthiometon	000298-04-4
2017	O,O-Diethyl O-2-isopropyl-6-methyl-4-pyrimidinyl phosphorothioate	Diazinon	000333-41-5
2018	2,3-Dihydro-2,2-dimethyl-7-benzo[b]furan N-methylcarbamate	Carbofuran	001563-66-2
2019	O-Ethyl O-4-nitrophenyl phenylphosphonothioate	EPN	002104-64-5
2020	Thallium and its water-soluble compounds	-	-
2021	6,7,8,9,10,10-Hexachloro-1,5,5a,6,9,9a-hexahydro-6,9-methano-2,4,3-benzodioxathiepine 3-oxide	Endosulfan	000115-29-7
2022	O,O-Diethyl O-6-oxo-1-phenyl-1,6-dihydro-3-pyridazinyl phosphorothioate	Pyridaphenthion	000119-12-0
2023	O,O-Dimethyl O-3-methyl-4-nitrophenyl phosphorothioate	MEP ; fenitrothion	000122-14-5
2024	O,O-Diethyl O-3,5,6-trichloro-2-pyridyl phosphorothioate	Chlorpyrifos	002921-88-2
2025	Inorganic cyanide compounds (except complex salts and cyanates)	-	-
2026	Chromium and chromium(III) compounds	-	-
2027	Tribromomethane	Bromoform	000075-25-2
2028	p-Dichlorobenzene	-	000106-46-7
2029	Silver and its water-soluble compounds	-	-
2030	Cyanazine	-	021725-46-2
2031	1,1-Dichloroethylene	Vinylidene dichloride	000075-35-4
2032	cis-1,2-Dichloroethylene	-	000156-59-2
2033	1,1,2-Trichloroethane	-	000079-00-5
2034	1,3-Dichloropropene	D-D	000542-75-6
2035	Tetramethylthiuram disulfide	Thiram	000137-26-8
2036	2-Chloro-4,6-bis(ethylamino)-1,3,5-triazine	Shimazine, CAT	000122-34-9
2037	S-4-Chlorobenzyl N,N-diethylthiocarbamate	Thiobencarb	028249-77-6
2038	Selenium and its compounds	-	-
2039	3-Amino-1H-1,2,4-triazole	Amitrole	000061-82-5
2040	1-Naphthyl N-methylcarbamate	Carbaryl; NAC	000063-25-2
2041	2-Chloro-4-ethylamino-6-isopropylamino-1,3,5-triazine	Atrazine	001912-24-9
2042	O,O-Dimethyl S-1,2-bis(ethoxycarbonyl)ethyl phosphorodithioate	Malathion; Malathion	000121-75-5
2043	α, α, α -Trifluoro-2,6-dinitro-N,N-dipropyl-p-toluidine	Trifluralin	001582-09-8
2044	2,4-Dichlorophenoxyacetic acid	2,4-D, 2,4-PA	000094-75-7
2046	α -Cyano-3-phenoxybenzyl 2-(4-chlorophenyl)-3-methylbutyrate	Fenvalerate	051630-58-1
2047	Methyl N-[1-(N-n-butylcarbamoyl)-1H-2-benzimidazolyl]carbamate	Benomyl	017804-35-2
2048	2-Chloro-2',6'-diethyl-N-(methoxymethyl)acetanilide	Alachlor	015972-60-8
2049	Complex compounds of manganese N,N'-ethylenebis(dithiocarbamate) and zinc N,N'-ethylenebis(dithiocarbamate)	Mancozeb	008018-01-7
2050	Zinc N,N'-ethylenebis(dithiocarbamate)	Zineb	012122-67-7
2051	Manganese N,N'-ethylenebis(dithiocarbamate)	Maneb	012427-38-2
2052	Acetaldehyde	-	000075-07-0
2053	Chloroform	-	000067-66-3
2054	Lead and its compounds	-	-
2055	1,1-Bis(tert-butyl)-3,3,5-trimethylcyclohexane peroxide	-	006731-36-8
2056	1-Methyl-4-(1-methylethenyl)-cyclohexene dimer	-	057912-86-4
2057	2-(5-Chloro-2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)-phenol	-	003864-99-1
2901	Chemical products in which the Limited Use Substances are contained	-	-
2902	Chemical products confirmed to generate the Prohibited Substances or the Limited Use Substances by chemical reaction or decomposition in production process or customer's use	-	-
2903	Chemical products which are possible to generate the Prohibited Substances or the Limited Use Substances by biodegradation in the environment	-	-
2904	Chemical products which are confirmed to contain the Prohibited Substances unintentionally	-	-

Attached Table-5 Ozone Depleting Sustances C I

HCFCs Except HCFC141b

No.	Group	Substance	Chemical Formula	Example of CAS No.
2001-01	C I	HCFC-121	C_2HFCl_4	134237-32-4
2001-02	C I	HCFC-122	$C_2HF_2Cl_3$	041834-16-6
2001-03	C I	HCFC-123	$CHCl_2CF_3$	134237-33-5
2001-04	C I	HCFC-123*	$C_2HF_3Cl_2$	000306-83-2
2001-05	C I	HCFC-124	$CHFClCF_3$	063938-10-3
2001-06	C I	HCFC-124*	C_2HF_4Cl	002837-89-0
2001-07	C I	HCFC-131	$C_2H_2FCl_3$	134237-34-6
2001-08	C I	HCFC-132	$C_2H_2F_2Cl_2$	025915-78-0
2001-09	C I	HCFC-133	$C_2H_2F_3Cl$	001330-45-6
2001-10	C I	HCFC-141	$C_2H_3FCl_2$	025167-88-8
2001-12	C I	HCFC-142	CH_3CF_2Cl	025497-29-4
2001-13	C I	HCFC-142b*	$C_2H_3F_2Cl$	000075-68-3
2001-14	C I	HCFC-151	C_2H_4FCl	110587-14-9
2001-15	C I	HCFC-21	CH_2Cl_2	000075-43-4
2001-16	C I	HCFC-22	CHF_2Cl	000075-45-6
2001-17	C I	HCFC-221	C_3HFCl_6	134237-35-7
2001-18	C I	HCFC-222	$C_3HF_2Cl_5$	134237-36-8
2001-19	C I	HCFC-223	$C_3HF_3Cl_4$	134237-37-9
2001-20	C I	HCFC-224	$C_2HF_4Cl_3$	134237-38-0
2001-21	C I	HCFC-225	$C_3HF_5Cl_2$	127564-92-5
2001-22	C I	HCFC-225ca*	$CF_3CF_2CHCl_2$	000422-56-0
2001-23	C I	HCFC-225cb*	CF_2ClCF_2CHClF	000507-55-1
2001-24	C I	HCFC-226	C_3HF_6Cl	134308-72-8
2001-25	C I	HCFC-231	$C_3H_2FCl_5$	134190-48-0
2001-26	C I	HCFC-232	$C_3H_2F_2Cl_4$	134237-39-1
2001-27	C I	HCFC-233	$C_3H_2F_3Cl_3$	134237-40-4
2001-28	C I	HCFC-234	$C_3H_2F_4Cl_2$	127564-83-4
2001-29	C I	HCFC-235	$C_3H_2F_5Cl$	134237-41-5
2001-30	C I	HCFC-241	$C_3H_3FCl_4$	134190-49-1
2001-31	C I	HCFC-242	$C_3H_3F_2Cl_3$	134237-42-6
2001-32	C I	HCFC-243	$C_3H_3F_3Cl_2$	134237-43-7
2001-33	C I	HCFC-244	$C_3H_3F_4Cl$	134190-50-4
2001-34	C I	HCFC-251	$C_3H_4FCl_3$	134190-51-5
2001-35	C I	HCFC-252	$C_3H_4F_2Cl_2$	134190-52-6
2001-36	C I	HCFC-253	$C_3H_4F_3Cl$	134237-44-8
2001-37	C I	HCFC-261	$C_3H_5FCl_2$	134237-45-9
2001-38	C I	HCFC-262	$C_3H_5F_2Cl$	134190-53-7
2001-39	C I	HCFC-271	C_3H_6FCl	134190-54-8
2001-40	C I	HCFC-31	CH_2FCl	000593-70-4

* Discribed as a high potential name which is available