

**'TORAY'**

**TORAY PLASTICS (MALAYSIA) SDN BERHAD** (46619-P)

2628, MK. 1, SPT., Lorong Perusahaan 4, Prai Free Industrial Zone, 13600 Prai, Penang, Malaysia.

GST Registration No.: 002048270336 Website: <http://www.torayplastics.com.my> Tel. No.: +6 04-3988088 (General Line)

Fax No.: +6 04-3908975 (MD / Sales / IPC Div.), 04-3908977 (Technology Centre), 04-3974039 (Finance / Administration),  
04-3990563 (Purchasing), 04-3977357 (Logistics), 04-3997502 (Engineering), 04-3997503 (Production)

To Whom It May Concern:

From :

  
KL Yee

Division Manager

Technical & Quality Division

Date: 16<sup>th</sup> January 2018

Dear Valued Customers,

**Re: Non-Inclusion of Prohibited Chemical Substances in TOYOLAC<sup>TM</sup> Resin**

We wish to express our deepest appreciation for your excellent support towards our TOYOLAC<sup>TM</sup> resin. Toray Plastics (Malaysia) Sdn. Bhd. (TPM) herein declares that all resin products as listed in **Table 1: TOYOLAC<sup>TM</sup> Resins** (Natural and Black color) below supplied by our company to your company and any of its affiliates and subsidiaries follow and comply with the following requirements:

- European Union (EU) RoHS Directive 2011/65/EU
- REACH regulation EC No. 1907/2006
- Banned Phthalate Plasticizers 1999/815/EEC
- Montreal Protocol on Substances that Deplete the Ozone Layer
- Azo Dyes and Pigments Forming Specified Amines 2002/61/EC
- Conflict Mineral of Democratic Republic of the Congo
- Level 1 TPM Prohibited Substances

Chemical substances listed in **Attachment 1: List of Prohibited Chemical Substances (Rev. 16)**, are not intentionally added in any production stage of the mentioned TOYOLAC<sup>TM</sup> resins, to best of our knowledge.

In view of the many factors that may affect processing and application of our products, these information do not relieve user from carrying out own investigation and test, neither do these data imply any guarantee, or warranty for certain properties, uses, suitability, safety, hazards or health effects. This information relates only to the above mentioned materials as delivered in their original packaging. Besides, it does not relate to any product made of these materials with or without the inclusion of further additives. Thus, TPM makes no warranties, express or implied and assumes no liabilities in any use of the information.

Should you need further clarification, please feel free to contact us.

**Table 1: TOYOLAC™ Resins**

<b>TYPES</b>	<b>GRADE NAME</b>	
<b>Transparent MABS</b>	TOYOLAC™ 920 555 TOYOLAC™ 900 352A	TOYOLAC™ 900 352 TOYOLAC™ 912 X01
<b>General Purpose ABS</b>	TOYOLAC™ 100 322 TOYOLAC™ 100 X01 TOYOLAC™ 250 X10 TOYOLAC™ 500 322 TOYOLAC™ 532 X02	TOYOLAC™ 700 314 TOYOLAC™ 700 X01 TOYOLAC™ 700 SG5 TOYOLAC™ 600 X50 TOYOLAC™ 600 X52
<b>Glass Fiber Reinforced AS/ABS</b>	TOYOLAC™ ABSG 100G-10 TOYOLAC™ ABSG 100G-20 TOYOLAC™ ABSG 100G-30 TOYOLAC™ ABSG 100G-10T1	TOYOLAC™ ASG-10 TOYOLAC™ ASG-20 TOYOLAC™ ASG-30
<b>High Heat ABS</b>	TOYOLAC™ 420Y MH1 TOYOLAC™ 440Y MH1 TOYOLAC™ 440Y MH5 TOYOLAC™ 450Y MH1	TOYOLAC™ 450Y MH5 TOYOLAC™ 450Y X10 TOYOLAC™ 460Y MH1 TOYOLAC™ 470Y MH1
<b>High Heat Glass Fiber Reinforced ABS</b>	TOYOLAC™ 450G-10R TOYOLAC™ 450G-30R	TOYOLAC™ 450G-20R TOYOLAC™ 450G-20S
<b>Chemical Resistant ABS</b>	TOYOLAC™ AX05 X03 TOYOLAC™ AX05 X08	TOYOLAC™ AX05 X32
<b>Flame Retardant ABS</b>	TOYOLAC™ 884 X01	TOYOLAC™ NH82C X01
<b>Painting ABS</b>	TOYOLAC™ 100 MPF TOYOLAC™ 100 MPJ	TOYOLAC™ 100 MPM TOYOLAC™ 100 MPK
<b>Plating ABS</b>	TOYOLAC™ 315 X01 TOYOLAC™ 335 MPL	TOYOLAC™ 325
<b>AS</b>	TOYOLAC™ A20C 333	TOYOLAC™ A37C 333
<b>Alloy Grades</b>	TOYOLAC™ PX10 X06 TOYOLAC™ PX10 X07 TOYOLAC™ VX10G20	TOYOLAC™ RNX84 X01 TOYOLAC™ RNX86 X01 TOYOLAC™ RFX10 X01

## List of Prohibited Chemical Substances

No.	CAS No./ Chemical Formula	Substance
<b>Annex A : European Union (EU) RoHS Directive 2011/65/EU</b>		
A01	-	Lead (Pb) and its compounds
A02	-	Mercury (Hg) and its compounds
A03	-	Cadmium (Cd) and its compounds
A04	-	Hexavalent chromium (Cr <sup>6+</sup> ) compounds
A05	-	Polybrominated biphenyls (PBB)
A06	-	Polybrominated diphenyl ethers (PBDE)
A07	117-81-7	Bis(2-ethylhexyl) phthalate (DEHP)
A08	85-68-7	Benzyl butyl phthalate (BBP)
A09	84-74-2	Dibutyl phthalate (DBP)
A10	84-69-5	Diisobutyl phthalate (DIBP)
A11	25637-99-4	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified
	134237-50-6	Alpha-hexabromocyclododecane
	134237-51-7	Beta-hexabromocyclododecane
	134237-52-8	Gamma-hexabromocyclododecane
<b>Annex B : REACH Regulation EC No. 1907/2006</b>		
B01	96-18-4	1,2,3-trichloropropane
B02	68515-51-5 68648-93-1	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)
B03	71888-89-6	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich
B04	68515-42-4	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters
B05	68515-50-4	1,2-Benzenedicarboxylic acid, dihexylester, branched and linear
B06	84777-06-0	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear
B07	112-49-2	1,2-bis(2-methoxyethoxy)ethane (TEGDME, triglyme)
B08	107-06-2	1,2-Dichloroethane
B09	629-14-1	1,2-Diethoxyethane
B10	110-71-4	1,2-dimethoxyethane, ethylene glycol dimethyl ether (EGDME)
B11	2451-62-9	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)
B12	59653-74-6	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC)
B13	1120-71-4	1,3-propanesultone
B14	106-94-5	1-bromopropane (n-propyl bromide)
B15	872-50-4	1-Methyl-2-pyrrolidone (NMP)
B16	101-14-4	2,2'-dichloro-4,4'-methylenedianiline
B17	3864-99-1	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)
B18	121-14-2	2,4-Dinitrotoluene
B19	25973-55-1	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)
B20	36437-37-3	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)
B21	3846-71-7	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)
B22	110-80-5	2-Ethoxyethanol
B23	111-15-9	2-Ethoxyethyl acetate
B24	15571-58-1	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)
B25	90-04-0	2-Methoxyaniline, o-Anisidine
B26	109-86-4	2-Methoxyethanol
B27	143860-04-2	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine
B28	101-77-9	4,4'- Diaminodiphenylmethane (MDA)
B29	561-41-1	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]
B30	90-94-8	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)
B31	80-05-7	4,4'-isopropylidenediphenol
B32	838-88-0	4,4'-methylenedi-o-toluidine
B33	101-80-4	4,4'-oxydianiline and its salts
B34	140-66-9	4-(1,1,3,3-tetramethylbutyl)phenol

## List of Prohibited Chemical Substances

No.	CAS No./ Chemical Formula	Substance
B35	-	4-(1,1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]
B36	60-09-3	4-Aminoazobenzene
B37	-	4-Heptylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]
B38	95-80-7	4-methyl-m-phenylenediamine (toluene-2,4-diamine)
B39	-	4-Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]
B40	-	4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof]
B41	-	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [2] [covering any of the individual stereoisomers of [1] and [2] or any combination thereof]
B42	81-15-2	5-tert-butyl-2,4,6-trinitro-m-xylene (Musk xylene)
B43	120-71-8	6-methoxy-m-toluidine (p-cresidine)
B44	548-62-9	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]
B45	2580-56-5	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]
B46	69011-06-9	[Phthalato(2-)]dioxotrilead
B47	51404-69-4	Acetic acid, lead salt, basic
B48	7738-94-5 13530-68-2	Acids generated from chromium trioxide and their oligomers. Names of the acids and their oligomers: Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid.
B49	79-06-1	Acrylamide
B50	85535-84-8	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)
B51	-	Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm) c) alkaline oxide and alkali earth oxide (Na <sub>2</sub> O+K <sub>2</sub> O+CaO+MgO+BaO) content less or equal to 18% by weight
B52	7789-09-5	Ammonium dichromate
B53	3825-26-1	Ammonium pentadecafluorooctanoate (APFO)
B54	120-12-7	Anthracene
B55	90640-80-5	Anthracene oil
B56	90640-81-6	Anthracene oil, anthracene paste
B57	91995-15-2	Anthracene oil, anthracene paste, anthracene fraction

## List of Prohibited Chemical Substances

No.	CAS No./ Chemical Formula	Substance
B58	91995-17-4	Anthracene oil, anthracene paste, distn. lights
B59	90640-82-7	Anthracene oil, anthracene-low
B60	7778-39-4	Arsenic acid
B61	56-55-3 1718-53-2	Benz[a]anthracene
B62	50-32-8	Benzo[def]chrysene
B63	85-68-7	Benzyl butyl phthalate (BBP)
B64	92-67-1	Biphenyl-4-ylamine
B65	117-81-7	Bis (2-ethylhexyl)phthalate (DEHP)
B66	111-96-6	Bis(2-methoxyethyl) ether
B67	117-82-8	Bis(2-methoxyethyl) phthalate
B68	1163-19-5	Bis(pentabromophenyl) ether (decabromodiphenyl ether) (DecaBDE)
B69	56-35-9	Bis(tributyltin) oxide (TBTO)
B70	10043-35-3 11113-50-1	Boric acid
B71	7440-43-9	Cadmium
B72	513-78-0	Cadmium Carbonate
B73	10108-64-2	Cadmium chloride
B74	7790-79-6	Cadmium fluoride
B75	21041-94-2	Cadmium hydroxide
B76	10022-68-1 10325-94-7	Cadmium nitrate
B77	1306-19-0	Cadmium oxide
B78	10124-36-4 31119-53-6	Cadmium sulphate
B79	1306-23-6	Cadmium sulphide
B80	7778-44-1	Calcium arsenate
B81	1333-82-0	Chromium trioxide
B82	218-01-9 1719-03-5	Chrysene
B83	7646-79-9	Cobalt dichloride
B84	513-79-1	Cobalt(II) carbonate
B85	71-48-7	Cobalt(II) diacetate
B86	10141-05-6	Cobalt(II) dinitrate
B87	10124-43-3	Cobalt(II) sulphate
B88	85-42-7 13149-00-3 14166-21-3	Cyclohexane-1,2-dicarboxylic anhydride [1], cis-cyclohexane-1,2-dicarboxylic anhydride [2], trans-cyclohexane-1,2-dicarboxylic anhydride [3] [The individual cis- [2] and trans- [3] isomer substances and all possible combinations of the cis- and trans-isomers [1] are covered by this entry]
B89	1303-28-2	Diarsenic pentaoxide
B90	1327-53-3	Diarsenic trioxide
B91	123-77-3	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) (ADCA)
B92	1303-86-2	Diboron trioxide
B93	84-74-2	Dibutyl phthalate (DBP)
B94	683-18-1	Dibutyltin dichloride (DBTC)
B95	24613-89-6	Dichromium tris(chromate)
B96	64-67-5	Diethyl sulphate
B97	84-75-3	Dihexyl phthalate
B98	84-69-5	Diisobutyl phthalate
B99	605-50-5	Diisopentylphthalate
B100	77-78-1	Dimethyl sulphate
B101	88-85-7	Dinoseb (6-sec-butyl-2,4-dinitrophenol)
B102	12578-12-0	Dioxobis(stearato)trilead
B103	131-18-0	Dipentyl phthalate (DPP)
B104	573-58-0	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)

## List of Prohibited Chemical Substances

No.	CAS No./ Chemical Formula	Substance
B105	1937-37-7	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38)
B106	1303-96-4 1330-43-4 12179-04-3	Disodium tetraborate, anhydrous
B107	-	Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"™)
B108	91031-62-8	Fatty acids, C16-18, lead salts
B109	25214-70-4	Formaldehyde, oligomeric reaction products with aniline
B110	75-12-7	Formamide
B111	110-00-9	Furan
B112	2058-94-8	Henicosafuoroundecanoic acid
B113	376-06-7	Heptacosafuorotetradecanoic acid
B114	25637-99-4 3194-55-6 134237-50-6 134237-51-7 134237-52-8	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane
B115	25550-51-0 19438-60-9 48122-14-1 57110-29-9	Hexahydromethylphthalic anhydride [1], Hexahydro-4-methylphthalic anhydride [2], Hexahydro-1-methylphthalic anhydride [3], Hexahydro-3-methylphthalic anhydride [4] [The individual isomers [2], [3] and [4] (including their cis- and trans- stereo isomeric forms) and all possible combinations of the isomers [1] are covered by this entry]
B116	302-01-2 7803-57-8	Hydrazine
B117	96-45-7	Imidazolidine-2-thione (2-imidazoline-2-thiol)
B118	13814-96-5	Lead bis(tetrafluoroborate)
B119	7758-97-6	Lead chromate
B120	12656-85-8	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)
B121	20837-86-9	Lead cyanamidate
B122	301-04-2	Lead di(acetate)
B123	13424-46-9	Lead diazide, Lead azide
B124	10099-74-8	Lead dinitrate
B125	6477-64-1	Lead dipicrate
B126	7784-40-9	Lead hydrogen arsenate
B127	1317-36-8	Lead monoxide (lead oxide)
B128	12036-76-9	Lead oxide sulfate
B129	15245-44-0	Lead styphnate
B130	1344-37-2	Lead sulfochromate yellow (C.I. Pigment Yellow 34)
B131	12060-00-3	Lead titanium trioxide
B132	12626-81-2	Lead titanium zirconium oxide
B133	17570-76-2	Lead(II) bis(methanesulfonate)
B134	625-45-6	Methoxyacetic acid
B135	75-56-9	Methyloxirane (Propylene oxide)
B136	101-61-1	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)
B137	127-19-5	N,N-dimethylacetamide
B138	68-12-2	N,N-dimethylformamide
B139	79-16-3	N-methylacetamide
B140	776297-69-9	N-pentyl-isopentylphthalate
B141	98-95-3	Nitrobenzene
B142	335-76-2 3108-42-7 3830-45-3	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts
B143	97-56-3	o-aminoazotoluene
B144	95-53-4	o-Toluidine
B145	1314-41-6	Orange lead (lead tetroxide)
B146	80-46-6	p-(1,1-dimethylpropyl)phenol

## List of Prohibited Chemical Substances

No.	CAS No./ Chemical Formula	Substance
B147	72629-94-8	Pentacosafluorotridecanoic acid
B148	335-67-1	Pentadecafluorooctanoic acid (PFOA)
B149	12065-90-6	Pentalead tetraoxide sulphate
B150	49663-84-5	Pentazinc chromate octahydroxide
B151	-	Perfluorohexane-1-sulphonic acid and its salts
B152	375-95-1 21049-39-8 4149-60-4	Perfluorononan-1-oic-acid and its sodium and ammonium salts
B153	77-09-8	Phenolphthalein
B154	65996-93-2	Pitch, coal tar, high temp.
B155	7789-00-6	Potassium chromate
B156	7778-50-9	Potassium dichromate
B157	11103-86-9	Potassium hydroxyoctaoxidizincatedichromate
B158	8012-00-8	Pyrochlore, antimony lead yellow
B159	-	reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)
B160	-	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP)
B161	68784-75-8	Silicic acid (H <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> ), barium salt (1:1), lead-doped [with lead (Pb) content above the applicable generic concentration limit for 'toxicity for reproduction' Repr. 1A (CLP) or category 1 (DSD),the substance is a member of the group entry of lead compounds, with index number 082-001-00-6 in Regulation (EC) No 1272/2008]
B162	11120-22-2	Silicic acid, lead salt
B163	7775-11-3	Sodium chromate
B164	7789-12-0 10588-01-9	Sodium dichromate
B165		Sodium perborate,perboric acid, sodium salt
B166	7632-04-4	Sodium peroxometaborate
B167	7789-06-2	Strontium chromate
B168	62229-08-7	Sulfurous acid, lead salt, dibasic
B169	12267-73-1	Tetraboron disodium heptaoxide, hydrate
B170	78-00-2	Tetraethyllead
B171	12202-17-4	Tetralead trioxide sulphate
B172	79-01-6	Trichloroethylene
B173	307-55-1	Tricosafafluorododecanoic acid
B174	15606-95-8	Triethyl arsenate
B175	1319-46-6	Trilead bis(carbonate) dihydroxide
B176	3687-31-8	Trilead diarsenate
B177	12141-20-7	Trilead dioxide phosphonate
B178	115-96-8	Tris(2-chloroethyl)phosphate
B179	25155-23-1	Trixylyl phosphate
B180	-	Zirconia Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm). c) alkaline oxide and alkali earth oxide (Na <sub>2</sub> O+K <sub>2</sub> O+CaO+MgO+BaO) content less or equal to 18% by weight

## List of Prohibited Chemical Substances

No.	CAS No./ Chemical Formula	Substance
B181	6786-83-0	$\alpha,\alpha$ -Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) [with $\geq 0.1\%$ of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]
<b>Annex C : Phthalate Plasticizers 1999/815/EEC</b>		
C01	117-81-7	Di(2-ethylhexyl) phthalate (DEHP)
C02	26761-40-0	Di-iso-decyl phthalate (DIDP)
C03	28553-12-0	Di-iso-nonyl phthalate (DINP)
C04	84-74-2	Di-n-butyl phthalate (DBP)
C05	117-84-0	Di-n-octyl phthalate (DNOP)
C06	85-68-7	Butyl benzyl phthalate (BBP)
C07	84-75-3	Di-n-hexyl phthalate (DNHP)
<b>Annex D: Conflict Minerals</b>		
D01	-	Columbite-tantalite (Tantalum)
D02	-	Cassiterite (Tin)
D03	-	Wolframite (Tungsten)
D04	-	Gold
<b>Annex E1 : Montreal Protocol on Substances that Deplete the Ozone Layer (Document A)</b>		
<b>Group I</b>		
E01	$\text{CFCl}_3$	Trichlorofluoromethane (CFC-11)
E02	$\text{CF}_2\text{Cl}_2$	Dichlorodifluoromethane (CFC-12)
E03	$\text{C}_2\text{F}_3\text{Cl}_3$	Trichlorotrifluoroethane (CFC-113)
E04	$\text{C}_2\text{F}_4\text{Cl}_2$	Dichlorotetrafluoroethane (CFC-114)
E05	$\text{C}_2\text{F}_5\text{Cl}$	Chloropentafluoroethane (CFC-115)
<b>Group II</b>		
E06	$\text{CF}_2\text{BrCl}$	Bromochlorodifluoromethane (Halon 1211)
E07	$\text{CF}_3\text{Br}$	Bromotrifluoromethane (Halon 1301)
E08	$\text{C}_2\text{F}_4\text{Br}_2$	Dibromotetrafluoroethane (Halon 2402)
<b>Annex E2 : Montreal Protocol on Substances that Deplete the Ozone Layer (Document B)</b>		
<b>Group I</b>		
E09	$\text{CF}_3\text{Cl}$	Chlorotrifluoromethane (CFC-13)
E10	$\text{C}_2\text{FCl}_5$	Pentachlorofluoroethane (CFC-111)
E11	$\text{C}_2\text{F}_2\text{Cl}_4$	Tetrachlorodifluoroethane (CFC-112)
E12	$\text{C}_3\text{FCl}_7$	Heptachlorofluoropropane (CFC-211)
E13	$\text{C}_3\text{F}_2\text{Cl}_6$	Hexachlorodifluoropropane (CFC-212)
E14	$\text{C}_3\text{F}_3\text{Cl}_5$	Pentachlorotrifluoropropane (CFC-213)
E15	$\text{C}_3\text{F}_4\text{Cl}_4$	Tetrachlorotetrafluoropropane (CFC-214)
E16	$\text{C}_3\text{F}_5\text{Cl}_3$	Trichloropentafluoropropane (CFC-215)
E17	$\text{C}_3\text{F}_6\text{Cl}_2$	Dichlorohexafluoropropane (CFC-216)
E18	$\text{C}_3\text{F}_7\text{Cl}$	Chloroheptafluoropropane (CFC-217)
<b>Group II</b>		
E19	$\text{CCl}_4$	Tetrachloromethane (Carbon tetrachloride)
<b>Group III</b>		
E20	$\text{C}_2\text{H}_3\text{Cl}_3$	1,1,1-Trichloroethane (Methyl chloroform)
<b>Annex E3 : Montreal Protocol on Substances that Deplete the Ozone Layer (Document C)</b>		
<b>Group I</b>		
E21	$\text{CHFCl}_2$	Dichlorofluoromethane (HCFC-21)
E22	$\text{CHF}_2\text{Cl}$	Chlorodifluoromethane (HCFC-22)
E23	$\text{CH}_2\text{FCl}$	Chlorofluoromethane (HCFC-31)
E24	$\text{C}_2\text{HFCl}_4$	Tetrachlorofluoroethane (HCFC-121)
E25	$\text{C}_2\text{HF}_2\text{Cl}_3$	Trichlorofluoroethane (HCFC-122)
E26	$\text{C}_2\text{HF}_3\text{Cl}_2$	Dichlorotrifluoroethane (HCFC-123)
E27	$\text{CHCl}_2\text{CF}_3$	Dichlorotrifluoroethane (HCFC-123)
E28	$\text{C}_2\text{HF}_4\text{Cl}$	Chlorotetrafluoroethane (HCFC-124)
E29	$\text{CHFClCF}_3$	Chlorotetrafluoroethane (HCFC-124)
E30	$\text{C}_2\text{H}_2\text{FCl}_3$	Trichlorofluoroethane (HCFC-131)



## List of Prohibited Chemical Substances

No.	CAS No./ Chemical Formula	Substance
E31	C <sub>2</sub> H <sub>2</sub> F <sub>2</sub> Cl <sub>2</sub>	Dichlorodifluoroethane (HCFC-132)
E32	C <sub>2</sub> H <sub>2</sub> F <sub>3</sub> Cl	Chlorotrifluoroethane (HCFC-133)
E33	C <sub>2</sub> H <sub>3</sub> FCl <sub>2</sub>	Dichlorofluoroethane (HCFC-141)
E34	CH <sub>3</sub> CFCl <sub>2</sub>	Dichlorofluoroethane (HCFC-141b)
E35	C <sub>2</sub> H <sub>3</sub> F <sub>2</sub> Cl	Chlorodifluoroethane (HCFC-142)
E36	CH <sub>3</sub> CF <sub>2</sub> Cl	Chlorodifluoroethane (HCFC-142b)
E37	C <sub>2</sub> H <sub>4</sub> FCI	Chlorofluoroethane (HCFC-151)
E38	C <sub>3</sub> HFCl <sub>6</sub>	Hexachlorofluoropropane (HCFC-221)
E39	C <sub>3</sub> HF <sub>2</sub> Cl <sub>5</sub>	Pentachlorodifluoropropane (HCFC-222)
E40	C <sub>3</sub> HF <sub>3</sub> Cl <sub>4</sub>	Tetrachlorotrifluoropropane (HCFC-223)
E41	C <sub>2</sub> HF <sub>4</sub> Cl <sub>3</sub>	Trichlorotetrafluoropropane (HCFC-224)
E42	C <sub>3</sub> HF <sub>5</sub> Cl <sub>2</sub>	Dichloropentafluoropropane (HCFC-225)
E43	CF <sub>3</sub> CF <sub>2</sub> CHCl <sub>2</sub>	Dichloropentafluoropropane (HCFC-225ca)
E44	CF <sub>2</sub> CICF <sub>2</sub> CHCIF	Dichloropentafluoropropane (HCFC-225cb)
E45	C <sub>3</sub> HF <sub>6</sub> Cl	Chlorohexafluoropropane (HCFC-226)
E46	C <sub>3</sub> H <sub>2</sub> FCl <sub>5</sub>	Pentachlorofluoropropane (HCFC-231)
E47	C <sub>3</sub> H <sub>2</sub> F <sub>2</sub> Cl <sub>4</sub>	Tetrachlorodifluoropropane (HCFC-232)
E48	C <sub>3</sub> H <sub>2</sub> F <sub>3</sub> Cl <sub>3</sub>	Trichlorotrifluoropropane (HCFC-233)
E49	C <sub>3</sub> H <sub>2</sub> F <sub>4</sub> Cl <sub>2</sub>	Dichlorotetrafluoropropane (HCFC-234)
E50	C <sub>3</sub> H <sub>2</sub> F <sub>5</sub> Cl	Chloropentafluoropropane (HCFC-235)
E51	C <sub>3</sub> H <sub>3</sub> FCl <sub>4</sub>	Tetrachlorofluoropropane (HCFC-241)
E52	C <sub>3</sub> H <sub>3</sub> F <sub>2</sub> Cl <sub>3</sub>	Trichlorodifluoropropane (HCFC-242)
E53	C <sub>3</sub> H <sub>3</sub> F <sub>3</sub> Cl <sub>2</sub>	Dichlorotrifluoropropane (HCFC-243)
E54	C <sub>3</sub> H <sub>3</sub> F <sub>4</sub> Cl	Chlorotetrafluoropropane (HCFC-244)
E55	C <sub>3</sub> H <sub>4</sub> FCl <sub>3</sub>	Trichlorofluoropropane (HCFC-251)
E56	C <sub>3</sub> H <sub>4</sub> F <sub>2</sub> Cl <sub>2</sub>	Dichlorodifluoropropane (HCFC-252)
E57	C <sub>3</sub> H <sub>4</sub> F <sub>3</sub> Cl	Chlorotrifluoropropane (HCFC-253)
E58	C <sub>3</sub> H <sub>5</sub> FCl <sub>2</sub>	Dichlorofluoropropane (HCFC-261)
E59	C <sub>3</sub> H <sub>5</sub> F <sub>2</sub> Cl	Chlorodifluoropropane (HCFC-262)
E60	C <sub>3</sub> H <sub>6</sub> FCI	Chlorofluoropropane (HCFC-271)
<b>Group II</b>		
E61	CHFBr <sub>2</sub>	Dibromo-fluoromethane
E62	CHF <sub>2</sub> Br	Dibromo-difluoromethane
E63	C <sub>2</sub> HF <sub>2</sub> Br <sub>3</sub>	Tribromo-difluoroethane
E64	C <sub>2</sub> HF <sub>4</sub> Br	Bromo-tetrafluoroethane
E65	C <sub>2</sub> H <sub>2</sub> F <sub>2</sub> Br <sub>2</sub>	Dibromo-difluoroethane
E66	C <sub>2</sub> H <sub>3</sub> FBr <sub>2</sub>	Dibromo-fluoroethane
E67	C <sub>2</sub> H <sub>4</sub> FBr	Bromofluoroethane
E68	C <sub>3</sub> HF <sub>2</sub> Br <sub>5</sub>	Pentabromo-difluoropropane
E69	C <sub>3</sub> HF <sub>4</sub> Br <sub>3</sub>	Tribromo-tetrafluoropropane
E70	C <sub>3</sub> HF <sub>6</sub> Br	Bromo-hexafluoropropane
E71	C <sub>3</sub> H <sub>2</sub> F <sub>2</sub> Br <sub>4</sub>	Tetrabromo-fluoropropane
E72	C <sub>3</sub> H <sub>2</sub> F <sub>4</sub> Br <sub>2</sub>	Dibromo-tetrafluoropropane
E73	C <sub>3</sub> H <sub>3</sub> FBr <sub>4</sub>	Tetrabromo-fluoropropane
E74	C <sub>3</sub> H <sub>3</sub> F <sub>3</sub> Br <sub>2</sub>	Dibromo-trifluoropropane
E75	C <sub>3</sub> H <sub>4</sub> FBr <sub>3</sub>	Tribromo-fluoropropane
E76	C <sub>3</sub> H <sub>4</sub> F <sub>3</sub> Br	Bromo-trifluoropropane
E77	C <sub>3</sub> H <sub>5</sub> F <sub>2</sub> Br	Bromo-difluoropropane
E78	CH <sub>2</sub> FBr	Bromo-fluoromethane
E79	C <sub>2</sub> HFBr <sub>4</sub>	Tetrabromo-fluoroethane
E80	C <sub>2</sub> HF <sub>3</sub> Br <sub>2</sub>	Dibromo-trifluoroethane
E81	C <sub>2</sub> H <sub>2</sub> FBr <sub>3</sub>	Tribromo-fluoroethane
E82	C <sub>2</sub> H <sub>2</sub> F <sub>3</sub> Br	Bromo-trifluoroethane

## List of Prohibited Chemical Substances

No.	CAS No./ Chemical Formula	Substance
E83	C <sub>2</sub> H <sub>3</sub> F <sub>2</sub> Br	Bromo-difluoroethane
E84	C <sub>3</sub> HFBr <sub>6</sub>	Hexabromo-fluoropropane
E85	C <sub>3</sub> HF <sub>3</sub> Br <sub>4</sub>	Tetrabromo-trifluoropropane
E86	C <sub>3</sub> HF <sub>5</sub> Br <sub>2</sub>	Dibromo-pentafluoropropane
E87	C <sub>3</sub> H <sub>2</sub> FBr <sub>5</sub>	Pentabromo-fluoropropane
E88	C <sub>3</sub> H <sub>2</sub> F <sub>3</sub> Br <sub>3</sub>	Tribromo-trifluoropropane
E89	C <sub>3</sub> H <sub>2</sub> F <sub>5</sub> Br	Bromo-pentafluoropropane
E90	C <sub>3</sub> H <sub>3</sub> F <sub>2</sub> Br <sub>3</sub>	Tribromo-difluoropropane
E91	C <sub>3</sub> H <sub>3</sub> F <sub>4</sub> Br	Bromo-tetrafluoropropane
E92	C <sub>3</sub> H <sub>4</sub> F <sub>2</sub> Br <sub>2</sub>	Dibromo-difluoropropane
E93	C <sub>3</sub> H <sub>5</sub> FBr <sub>2</sub>	Dibromo-fluoropropane
E94	C <sub>3</sub> H <sub>6</sub> FBr	Bromo-fluoropropane
<b>Group III</b>		
E95	CH <sub>2</sub> BrCl	Bromochloromethane
<b>Annex</b>		
<b>E4 : Montreal Protocol on Substances that Deplete the Ozone Layer (Document E)</b>		
E96	CH <sub>3</sub> Br	Bromomethane
<b>Annex F: Azo Dyes and Pigments Forming Specified Amines 2002/61/EC</b>		
F01	60-09-3	4-Amino azobenzene
F02	90-04-0	o-Anisidine 2-Methoxyaniline
F03	91-59-8	2-Naphthylamine
F04	91-94-1	3,3'-Dichlorobenzidine 3,3'-Dichlorobiphenyl-4,4'-ylenediamine
F05	92-67-1	Biphenyl-4-ylamine 4-Aminobiphenyl Xenylamine
F06	92-87-5	Benzidine
F07	95-53-4	o-Toluidine 2-Aminotoluene
F08	95-69-2	4-Chloro-o-toluidine
F09	95-80-7	4-Methyl-m-phenylenediamine
F10	97-56-3	o-Aminoazotoluene 4-Amino-2',3-dimethylazobenzene 4-o-Tolylazo-o-toluidine
F11	99-55-8	5-Nitro-o-toluidine
F12	101-14-4	4,4'-Methylene-bis-(2-chloro-aniline) 2,2'-Dichloro-4,4'-methylene-dianiline
F13	101-77-9	4,4'-Methylenedianiline 4,4'-Diaminodiphenylmethane
F14	101-80-4	4,4'-Oxydianiline
F15	106-47-8	4-Chloroaniline
F16	119-90-4	3,3'-Dimethoxybenzidine o-Dianisi-dine
F17	119-93-7	3,3'-Dimethylbenzidine 4,4'-Bi-o-toluidine
F18	120-71-8	6-Methoxy-m-toluidine p-Cresidine

## List of Prohibited Chemical Substances

No.	CAS No./ Chemical Formula	Substance
F19	137-17-7	2,4,5-Trimethylaniline
F20	139-65-1	4,4'-Thiodianiline
F21	615-05-4	4-Methoxy-m-phenylenediamine
F22	838-88-0	4,4'-Methylenedi-o-toluidine
<b>Annex G: Level 1 TPM Prohibited Substances</b>		
G01	107-06-2	1,2-Dichloroethane
G02	542-75-6	1,3-Dichloropropene (Telone)
G03	3173-72-6	1,5-Naphthalene diisocyanate
G04	-	2,2,3,3,4,5,5-Heptafluoro-4-(perfluorobutyl)oxolane or 2,2,3,3,4,4,5-Heptafluoro-4-(perfluorobutyl)oxolane
G05	3846-71-7	2-(2H-1,2,3-benzotriazole-2-yl)-4,6-di-tert-butylphenol
G06	732-26-3	2,4,6-Tri-tert-butylphenol
G07	80-05-7	4,4'-Dihydroxy-2,2-diphenylpropane (Bisphenol A)
G08	92-93-3	4-Nitrobiphenyls
G09	309-00-2	Aldrin (= 1 $\alpha$ ,2,3,4 $\alpha$ ,10,10-Hexachloro-1,4,4a $\beta$ ,5 $\beta$ ,8 $\beta$ ,8a $\beta$ -hexahydro-1 $\beta$ ,4 $\beta$ :5 $\alpha$ ,8 $\alpha$ -dimethanonaphthalene)
G10	12172-73-5	Amosit
G11	1331-21-4	Asbestos
G12	-	Azo compounds (Compounds that might produce substances in Annex F after degradation)
G13	71-43-2	Benzene
G14	-	Beryllium (Be) and its compounds
G15	542-88-1	Bis(chloromethyl) ether
G16	57-74-9	Chlordane
G17	3734-48-3, 76-44-8	Chlordene or Heptachlor and their mixture
G18	-	Chlorinated paraffin
G19	108-90-7	Chlorobenzene
G20	2921-88-2	Chlorpyrifos (= Phosphorothioic acid O,O-diethyl O-(3,5,6-trichloro-2-pyridyl))
G21	156-59-2	Cis-1,2-dichloroethylene
G22	-	Cobalt (Co) and its compounds
G23	12001-28-4	Crocidolite
G24	50-29-3	DDT (4,4'-Dichlorodiphenyltrichloroethane)
G25	-	Dibutyltin (DBT) compounds
G26	75-09-2	Dichloromethane
G27	115-32-2	Dicofol
G28	60-57-1	Dieldrin
G29	84-66-2	Diethyl phthalate
G30	624-49-7	Dimethyl fumarate (DMF)
G31	-	Diocetyl tin (DOT) compounds
G32	72-20-8	Endrin
G33	106-89-8	Epichlorohydrin
G34	50-00-0	Formaldehyde
G35	118-74-1	Hexachlorobenzene
G36	87-68-3	Hexachlorobutadiene
G37	2385-85-5	Mirex
G38	-	N,N'-ditolyl-p-phenylenediamine
G39	-	N,N'-dixyllyl-p-phenylenediamine
G40	91-20-3	Naphthalene
G41	7440-02-0	Nickel (Ni) and its compounds
G42	-	N-tolyl-N-xyllyl-p-phenylenediamine
G43	27417-40-9,	N,N'-Ditolyl-p-phenylenediamine compounds or N-(Dimethylphenyl)-N'-(tolylphenyl)-p-phenylenediamine compounds or N,N'-bis(Dimethylphenyl)-p-phenylenediamine compounds
G44	-	Hydrofluorocarbons (HFC) and Perfluorocarbons (PFC)
G45	-	Organic brominated compounds other than PBB and PBDE
G46	1763-23-1	Perfluorooctane sulfonate and its salts (PFOS)
G47	335-67-1	Perfluorooctanoic acid

## List of Prohibited Chemical Substances

No.	CAS No./ Chemical Formula	Substance
G48	307-55-1	Perfluorododecanoic acid
G49	72629-94-8	Perfluorotridecanoic acid
G50	376-06-7	Perfluorotetradecanoic acid
G51	-	Perfluoropentadecanoic acid
G52	67905-19-5	Perfluorohexadecanoic acid
G53	335-57-9	Perfluoroheptane
G54	307-34-6	Perfluorooctane
G55	-	Polychlorinated biphenyls (PCB)
G56	-	Polychlorinated naphthalene (PCN) (3 or more chlorine atoms)
G57	61788-33-8	Polychlorinated terphenyls (PCT)
G58	-	Polycyclic aromatic hydrocarbons (PAH)
G59	-	Polyvinylchloride (PVC) and its mixtures
G60	-	Radioactive substances
G61	-	Rubber cement containing benzene beyond 5wt%
G62	127-18-4	Tetrachloroethylene (Perchloroethylene)
G63	-	Tetraphosphorus
G64	62-56-6	Thiourea
G65	8001-35-2	Toxaphene
G66	-	Tributyl tin compounds and Triphenyl tin compounds
G67	75-01-4	Vinyl chloride
G68	75-35-4	Vinylidene chloride
G69	1330-20-7	Xylene
G70	7723-14-0	Yellow phosphorus
G71	3864-99-1	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)
G72	3846-71-7	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)
G73	25973-55-1	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)
G74	36437-37-3	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)