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Product	IGBT	Package	All of transistor package
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Below products have not included the Substances of Very High Concerns (SVHC) in the Candidate List.

Control value :below 0.1% (each homogeneous materials)

## SVHC List (168 substances)

1	Anthracene	120-12-7
2	4,4'-Diaminodiphenylmethane (MDA)	101-77-9
3	Dibutyl phthalate (DBP)	84-74-2
4	Cobalt dichloride	7646-79-9
5	Diarsenic pentaoxide	1303-28-2
6	Diarsenic trioxide	1327-53-3
7	Sodium dichromate	7789-12-0 10588-01-9
8	5-tert-butyl-2,4,6-trinitro-m-xylene	81-15-2
9	Bis(2-ethylhexyl)phthalate (DEHP)	117-81-7
10	Hexabromocyclododecane(HBCDD) and all major diastereoisomers identified ( $\alpha$ -HBCDD, $\beta$ -HBCDD, $\gamma$ -HBCDD)	25637-99-4 3194-55-6 (134237-50-6,51-7,52-8)
11	Alkanes C10-C13 chloro (Short chain chlorinated paraffins, SCCP)	85535-84-8
12	Bis(tributyltin) oxide (TBTO)	56-35-9
13	Lead hydrogen arsenate	7784-40-9
14	Benzylbutylphthalate (BBP)	85-68-7
15	Triethyl arsenate	15606-95-8
16	Anthracene oil	90640-80-5
17	Anthracene oil, anthracene paste, anthracene lights	91995-17-4
18	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2
19	Anthracene oil, anthracene- low	90640-82-7
20	Anthracene oil, anthracene paste	90640-81-6
21	Pitch, coal tar, high temperature	65996-93-2
22	2,4-Dinitrotoluene	121-14-2
23	Diisobutyl phthalate (DIBP)	84-69-5
24	Lead chromate	7758-97-6
25	Lead Chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8
26	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2
27	Tris (2-chloroethyl) phosphate	115-96-8
28	Trichloroethylene	79-01-6
29	Boric acid	10043-35-3 11113-50-1
30	Disodium tetraborate, anhydrous	1330-43-4 12179-04-3 1303-96-4
31	Tetraboron disodium heptaoxide, hydrate	12267-73-1
32	Sodium chromate	7775-11-3
33	Potassium chromate	7789-00-6
34	Ammonium dichromate	7789-09-5
35	Potassium dichromate	7778-50-9
36	Acrylamide	79-06-1

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37	Chromium trioxide	1333-82-0
38	2-Ethoxyethanol	110-80-5
39	2-Methoxyethanol	109-86-4
40	Cobalt(II) carbonate	513-79-1
41	Cobalt(II) diacetate	71-48-7
42	Cobalt(II) dinitrate	10141-05-6
43	Cobalt(II) sulphate	10124-43-3
44	Acids generated from chromium trioxide and their oligomers group containing Chromic acid ,Dichromic acid ,Oligomers of chromic acid and dichromic acid	7738-94-5 13530-68-2
45	2-ethoxyethyl acetate	111-15-9
46	Strontium chromate	7789-06-2
47	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4
48	Hydrazine	302-01-2 7803-57-8
49	1-methyl-2-pyrrolidone	872-50-4
50	1,2,3-trichloropropane	96-18-4
51	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6
52	Dichromium tris (chromate)	24613-89-6
53	Potassium hydroxyoctaoxodizincatedi-chromate	11103-86-9
54	Pentazinc chromate octahydroxide	49663-84-5
55	Aluminosilicate Refractory Ceramic Fibres	N/A
56	Zirconia Aluminosilicate Refractory Ceramic Fibres	N/A
57	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4
58	Bis(2-methoxyethyl) phthalate	117-82-8
59	2-Methoxyaniline; o-Anisidine	90-04-0
60	4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol)	140-66-9
61	1,2-Dichloroethane	107-06-2
62	Bis(2-methoxyethyl) ether	111-96-6
63	Arsenic acid	7778-39-4
64	Calcium arsenate	7778-44-1
65	Trilead diarsenate	3687-31-8
66	N,N-dimethylacetamide (DMAC)	127-19-5
67	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4
68	Phenolphthalein	77-09-8
69	Lead azide Lead diazide	13424-46-9
70	Lead styphnate	15245-44-0
71	Lead dipicrate	6477-64-1
72	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2
73	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4
74	Diboron trioxide	1303-86-2
75	Formamide	75-12-7
76	Lead(II) bis(methanesulfonate)	17570-76-2
77	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione(TGIC )	2451-62-9
78	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione(β-TGIC)	59653-74-6
79	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8
80	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1
81	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Violet 3) *	548-62-9
82	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene] cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) *	2580-56-5
83	α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) *	6786-83-0
84	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol *	561-41-1
85	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5

## SVHC List (168 substances)

86	Pentacosafuorotridecanoic acid	72629-94-8
87	Tricosafuorododecanoic acid	307-55-1
88	Henicosafuoroundecanoic acid	2058-94-8
89	Heptacosafuorotetradecanoic acid	376-06-7
90	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3
91	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].	85-42-7 13149-00-3 14166-21-3
92	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]	25550-51-0 19438-60-9 48122-14-1 57110-29-9
93	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]	-
94	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	-
95	Methoxyacetic acid	625-45-6
96	N,N-dimethylformamide	68-12-2
97	Dibutyltin dichloride (DBTC)	683-18-1
98	Lead monoxide (Lead oxide)	1317-36-8
99	Orange lead (Lead tetroxide)	1314-41-6
100	Lead bis(tetrafluoroborate)	13814-96-5
101	Trilead bis(carbonate)dihydroxide	1319-46-6
102	Lead titanium trioxide	12060-00-3
103	Lead titanium zirconium oxide	12626-81-2
104	Silicic acid, lead salt	11120-22-2
105	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]	68784-75-8
106	1-bromopropane (n-propyl bromide)	106-94-5
107	Methyloxirane (Propylene oxide)	75-56-9
108	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0
109	Diisopentylphthalate (DIPP)	605-50-5
110	N-pentyl-isopentylphthalate	776297-69-9
111	1,2-diethoxyethane	629-14-1
112	Acetic acid, lead salt, basic	51404-69-4
113	Lead oxide sulfate	12036-76-9
114	[Phthalato(2-)]dioxotrilead ※6	69011-06-9
115	Dioxobis(stearato)trilead	12578-12-0
116	Fatty acids, C16-18, lead salts	91031-62-8
117	Lead cyanidate	20837-86-9
118	Lead dinitrate	10099-74-8
119	Pentalead tetraoxide sulphate	12065-90-6
120	Pyrochlore, antimony lead yellow	8012-00-8
121	Sulfurous acid, lead salt, dibasic	62229-08-7
122	Tetraethyllead	78-00-2
123	Tetralead trioxide sulphate	12202-17-4
124	Trilead dioxide phosphonate	12141-20-7

## SVHC List (168 substances)

125	Furan	110-00-9
126	Diethyl sulphate	64-67-5
127	Dimethyl sulphate	77-78-1
128	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2
129	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7
130	4,4'-methylenedi-o-toluidine	838-88-0
131	4,4'-oxydianiline and its salts	101-80-4
132	4-aminoazobenzene	60-09-3
133	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7
134	6-methoxy-m-toluidine (p-cresidine)	120-71-8
135	Biphenyl-4-ylamine	92-67-1
136	o-aminoazotoluene [(4-o-tolylazo-o-toluidine)]	97-56-3
137	o-toluidine	95-53-4
138	N-methylacetamide	79-16-3
139	Cadmium	7440-43-9
140	Cadmium oxide	1306-19-0
141	Dipentyl phthalate (DPP)	131-18-0
142	4-Nonylphenol, branched and linear, ethoxylated	-
143	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
144	Pentadecafluorooctanoic acid (PFOA)	335-67-1
145	Cadmium sulphide	1306-23-6
146	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)] bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0
147	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)	1937-37-7
148	Dihexyl phthalate	84-75-3
149	Imidazolidine-2-thione (2-imidazoline-2-thiol)	96-45-7
150	Lead di(acetate)	301-04-2
151	Trixylyl phosphate	25155-23-1
152	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4
153	Cadmium chloride	10108-64-2
154	Sodium perborate; perboric acid, sodium salt	-
155	Sodium peroxometaborate	7632-04-4
156	Cadmium fluoride (CdF <sub>2</sub> )	7790-79-6
157	Cadmium sulphate	10124-36-4;
158	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7
159	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1
160	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1
161	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)	-
162	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)	68515-51-568648-93-1
163	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]	-

REACH,SVHC\_E

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