

**TI Restricted Chemicals  
and Materials List**

Originator: Tim Yeakley	Date: 02/28/01	Engineer: Tim Yeakley	Date: 02/28/01
Designer:	Date:	Approved: WDM	Date: 09/18/07
Checker:	Date:	Released: WDM	Date: 09/18/07
Code Ident <b>01295</b>	Document number <b>6494169</b>	Rev <b>S</b>	Sheet 1 of 32

Chemical or Material	Manufacturers threshold based on customer requirements	Industry & Regulatory References <sup>1</sup>
<b>Arsenic &amp; compounds</b>	Except materials used as dopants in SC silicon die manufacturing, in metal alloys as an impurity at $\leq 200$ ppm and as Gallium Arsenide substrate.	EU 76/769/EEC
<b>Asbestos</b>	No exceptions	IEC 62474, EU 76/769/EEC
<b>Azo-based materials (Table A)</b>	No exceptions	IEC 62474, EU 76/769/EEC
<b>Beryllium &amp; compounds</b>	Impurities & metal alloys $\leq 500$ ppm, Beryllium Oxide substrates are exempt.	IEC 62474
<b>Select Bromine Compounds (Table B)</b>	$\leq 0.09\%$ (900ppm) except when otherwise specifically approved by TI and/or defined by regulation.	IEC 62474
<b>- PBB's and PBDE's</b>	$\leq 0.1\%$ (1000ppm)	IEC 62474, EU 2002/95/EC
<b>Cadmium &amp; compounds (Table C)</b>	$\leq 5$ ppm for plastic materials. See Note 2 for Packing Materials. $\leq 100$ ppm for all other materials, other RoHS exemptions may apply.	IEC 62474, EU 2002/95/EC & 76/769/EEC
<b>Chloroparaffins</b>	No Exceptions for C10-13, Cl $\geq 50\%$	IEC 62474, EU REACH
<b>Chromium VI &amp; Chromium compounds (Table D)</b>	$\leq 10$ ppm for Materials is allowable. See Note 2 for Packing Materials.	IEC 62474, EU 2002/95/EC
<b>Class I &amp; II Ozone Depleting Substances (ODS's) (Table S)</b>	Except when used in closed loop refrigeration systems and phased out of use in accordance with the Montreal Protocol	IEC 62474, Montreal Protocol
<b>Creosote compounds (Table E)</b>	No exceptions	EU 76/769/EEC
<b>Select Chlorine compounds (Table F)</b>	Must not exceed 0.09% (900ppm) except when specifically approved by TI and/or defined by regulation. PVC is exempt for shipping tubes and retail packaging for TI's consumer products.	Various
<b>Ethylene Glycol Ethers (Table G)</b>	No exceptions	Semiconductor Industry
<b>Select Fluorine compounds (Table H)</b>	Except for PFOS and PFOA additives used in photoresists and anti-reflective coatings. No exceptions for new uses.	Various
<b>Lead &amp; compounds (Table I)</b>	$\leq 0.1\%$ by weight (1,000ppm) of homogeneous materials. $\leq 0.01\%$ by weight (100ppm) of lead in plastics. Exceptions and EU RoHS exemptions may apply, in particular: 5(a) Lead in glass of cathode ray tubes 7(a) Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead), 7(b) Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signaling, transmission and network management for telecommunication, 7(c)-I Electric and electronic components containing lead in glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectric devices, or in a glass or ceramic matrix compound 14: Lead in solders consisting of more than two elements for the connection between the pins and the package of microprocessors with a lead content of more than 80 % and less than 85 % by weight, 15: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages, - See Note 2 for Packing Materials	IEC 62474, EU Directive 2002/95/EC; China MII Methods; Korea RoHS; Japan J-MOSS; 76/769/EEC
<b>Mercury &amp; compounds (Table J)</b>	$\leq 5$ ppm for materials is allowable. See Note 2 for Packing Materials.	IEC 62474, EU 2002/95/EC
<b>Select Phthalate compounds (Table K)</b>	$\leq 0.1\%$ by weight (1,000ppm) of homogeneous materials. $\leq 0.1\%$ by weight (1,000ppm) of plasticized material (DINP, DIDP, DNO)	IEC 62474, EU 76/769/EEC, 2009/425/EC
<b>Polychlorinated biphenyls &amp; naphthalene's (PCB's &amp; PCN's)</b>	PCB's No exceptions PCN's - Where Cl $\geq 3$ , No exceptions	IEC 62474, Class 1 Chemical Substance (Japanese Law)
<b>Radioactive Substances</b>	No exceptions for Intentionally added elements.	IEC 62474
<b>Select Trivalent Organotin compounds (Table L)</b>	Except for use in heat seal film connector used in TI's consumer electronic products.	IEC 62474, R Class 1 Chemical Substance (Japanese Law)
<b>Pesticides, Herbicides (Table N)</b>	No exceptions	POP's Convention
<b>Miscellaneous Substances - Inc. Short Chained Chlorinated Paraffin's (Table O)</b>	Not intentionally added	Various, REACH SVHC
<b>Select Perfluorinated &amp; hydrofluorocarbon compounds (Table P)</b>	Except when used in closed loop refrigeration systems or for use in manufacturing when residues will not remain on TI's final product.	IEC 62474, EU Reg. No. 842/2006
<b>Select Polycyclic aromatic Hydrocarbons (Table Q)</b>	$\leq 0.1\%$ by weight (1,000ppm) of homogeneous materials.	IEC 62474, German Safety Mark
<b>Select halogenated dioxins and furans (Table R)</b>	No exceptions	IEC 62474, Class 1 Chemical Substance (Japanese Law)

Note 1: Regulatory references are not meant to be all inclusive but representative of the regulations driving TI's decisions. The industry reference is the International Electrotechnical Commission (IEC) standard IEC 62474 Material Declaration for Products of and for the Electrotechnical Industry.

Note 2: Per Regulatory requirements, the sum of Lead, Mercury, Hexavalent Chromium and Cadmium can not exceed 100ppm. Cadmium must not exceed 5 ppm.

Code Ident <b>01295</b>	Document number <b>6494169</b>	Rev <b>S</b>	Sheet 2 of 32
-------------------------	--------------------------------	--------------	---------------

<b>TABLE A Azo-Based Materials</b>	
(This is the complete listing of compounds in the category considered Banned when the chemical will become part of the TI product)	
<b>CAS#</b>	<b>Chemical or Material Name</b>
1689-82-3	2-Hydroxyazobenzene
134-32-7	1-Naphthylamine & salts
137-17-7	2,4,5-Trimethylaniline & salts
615-05-4	2,4-Diaminoanisole & salts
95-80-7	2,4-Diaminotoluene (Toluene-2,4-Diamine) & salts
99-55-8	2-Amino-4-nitrotoluene & salts also 5-Nitro-o-toluidine
91-59-8	2-Naphthylamine & salts; Alpha-Naphthylamine
119-93-7	3,3'-Dichlorobenzidine & salts
91-94-1	3,3'-Dichlorobenzidine & salts
838-88-0	3,3'-Dimethyl-4,4' diaminodiphenylmethane & salts
119-90-4	3,3'-Dimethoxybenzidine & salts
101-77-9	4,4'-Diaminodiphenylmethane & salts
101-14-4	4,4'Methylenebis-(2-chloroaniline) or 3,3-Dichloro 4,4-Diaminodiphenyl Methane & salts
101-80-4	4,4'-Oxydianiline & salts
139-65-1	4,4'-Thiodianilene (4,4'-thiobisbenzenamine) & salts
92-67-1	4-Aminobiphenyl and 4-Aminodiphenly & salts
95-69-2	4-Chloro-o-toluidine (4-chloro-2-methylaniline) & salts
92-87-5	Benzidine and its salts and the derivatives
27417-40-9	N,N-Ditolyl-p-Phenylenediamine
97-56-3	o-Aminoazotoluene & salts
90-04-0	o-Anisidine
95-53-4	o-Toluidine & salts
106-47-8	p-Chloroaniline & salts
120-71-8	6-methoxy-m-toluidine (p-cresidine)
60-09-3	4-Aminoazobenzene; 4-Phenylazoaniline
2429-74-5	C.I. Direct Blue 15
123-77-3	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))

<b>TABLE B Brominated Flame Retardants and Brominated Compounds</b>	
(This is the complete listing of compounds in the category considered Banned when the chemical will become part of the TI product)	
<b>CAS#</b>	<b>Chemical or Material Name</b>
25637-99-4 or 3194-55-6	Hexabromocyclododecane or 1,2,5,6,9,10-Hexabromocyclododecane (HBCDD), & ( $\alpha$ -HBCDD, $\beta$ -HBCDD, $\gamma$ -HBCDD)
65701-47-5	rel-(1R,2S,5R,6S,9S,10R)-1,2,5,6,9,10-Hexabromocyclododecane
4736-49-6	rel-(1R*,2S*,5R*,6S*,9R*,10S*)-1,2,5,6,9,10-hexabromocyclododecane
138257-18-8	(1R,2R,5R,6S,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane
138257-19-9	(1R,2S,5S,6R,9S,10S)-1,2,5,6,9,10-Hexabromocyclododecane
169102-57-2	(1R,2S,5S,6S,9S,10R)-1,2,5,6,9,10-Hexabromocyclododecane
678970-15-5	(1R,2R,5S,6R,9R,10S)-1,2,5,6,9,10-Hexabromocyclododecane
678970-16-6	(1R,2S,5R,6S,9S,10S)-1,2,5,6,9,10-Hexabromocyclododecane
678970-17-7	(1R,2R,5R,6S,9S,10R)-1,2,5,6,9,10-Hexabromocyclododecane
540-51-2	2-bromoethanol
75-25-2	Bromoform
106-93-4	1,2-dibromoethane
1867-11-4	2-bromoethanol
25376-38-9	2,3,4-tribromophenol
106-94-5 (or)	1-bromopropane
26446-77-5	
75-26-3	2-bromopropane
31780-26-4	Poly-dibromo-styrene
5292-43-3	Tert-butyl 2-bromoacetate
593-60-2	Vinylbromide (Bromoethylene)
608-71-9	Pentabromophenol
76253-60-6	Dichloro[(dichlorophenyl)methyl]methylbenzene (DBBT)
79-27-6	Acetylene tetrabromide
87-82-1	Hexabromobenzene
96-32-2	Methyl bromoacetate
42757-55-1	TBBS bis-(2,3-dibromo-propyl-ether)
1529-68-6	1,2,3,4-tetrabromobutane
30178-92-8	Tetrabromocyclododecane
30262-03-4	Octabromohexadecane
608-90-2	Pentabromobenzene
1837-91-8	1,2,3,4,5,6-hexabromo-cyclohexane
36511-36-1	1,5-dibromopentanediol
58965-66-5	Tetra-decabromo-diphenoxy-benzene
75-95-6	Pentabromoethane
79-28-7	Tetrabromoethylene
85-22-3	Pentabromoethylbenzene
99688-47-8	Bromobenzylbromotoluene (DBBT)

# Texas Instruments

# Semiconductor Operations

134237-50-6	Alpha-hexabromocyclododecane
134237-51-7	Beta-hexabromocyclododecane
134237-52-8	Gamma-hexabromocyclododecane
99788-47-8	Monomethyldibromo Diphenyl Methane
1163-19-5	Bis(pentabromophenyl)ether (DecaBDE)
69882-11-7	Poly(2,6-dibromo-phenylene oxide)
58965-66-5	Tetra-decabromo-diphenoxy-benzene
37853-59-1	1,2-Bis(2,4,6-tribromo-phenoxy) ethane
79-94-7	3,5,3',5'-Tetrabromo-bisphenol A (TBBPA)
30496-13-0	TBBA, unspecified
40039-93-8	TBBA-epichlorhydrin oligomer
70682-74-5	TBBA-TBBA-diglycidyl-ether oligomer
28906-13-0	TBBA carbonate oligomer
94334-64-2	TBBA carbonate oligomer, phenoxy end capped
71342-77-3	TBBA carbonate oligomer, 2,4,6-tribromo-phenol terminated
32844-27-2	TBBA-bisphenol A-phosgene polymer
139638-58-7	Brominated epoxy resin end-capped with tribromophenol
135229-48-0	Brominated epoxy resin end-capped with tribromophenol
21850-44-2	TBBA-(2,3-dibromo-propyl-ether)
4162-45-2	TBBA bis-(2-hydroxy-ethyl-ether)
25327-89-3	TBBA-bis-(allyl-ether)
37853-61-5	TBBA-dimethyl-ether
39635-79-5	Tetrabromo-bisphenol S
615-58-7	2,4-Dibromo-phenol
118-79-6	2,4,6-tribromo-phenol
608-71-9	Pentabromo-phenol
3278-89-5	2,4,6-Tribromo-phenyl-allyl-ether
26762-91-4	Tribromo-phenyl-allyl-ether, unspecified
55481-60-2	Bis(methyl)tetrabromo-phthalate
26040-51-7	Bis(2-ethylhexyl)tetrabromo-phthalate
20566-35-2	2-Hydroxy-propyl-2-(2-hydroxy-ethoxy)-ethyl-TBP
75790-69-1	TBPA, glycol-and propylene-oxide esters
32588-76-4	N,N'-Ethylene -bis-(tetrabromo-phthalimide)
52907-07-0	Ethylene-bis(5,6-dibromo-norbornane-2,3-dicarboximide)
3234-02-4	2,3-Dibromo-2-butene-1,4-diol
3296-90-0	Dibromo-neopentyl-glycol
96-13-9	Dibromo-propanol
36483-57-5	Tribromo-neopentyl-alcohol
57137-10-7	Poly tribromo-styrene
61368-34-1	Tribromo-styrene
171091-06-8	Dibromo-styrene grafted PP
68955-41-9	Bromo-/Chloro-paraffins
82600-56-4	Bromo-/Chloro-alpha-olefin
593-60-2	Vinylbromide

Code Ident **01295**

Document number **6494169**

Rev **S**

Sheet 5 of 32

52434-90-9	Tris-(2,3-dibromo-propyl)-isocyanurate
49690-63-3	Tris(2,4-Dibromo-phenyl) phosphate
19186-97-1	Tris(tribromo-neopentyl) phosphate
125997-20-8	Chlorinated and brominated phosphate ester
87-83-2	Pentabromo-toluene
38521-51-6	Pentabromo-benzyl bromide
68441-46-3	1,3-Butadiene homopolymer,brominated
59447-55-1	Pentabromo-benzyl-acrylate, monomer
59447-57-3	Pentabromo-benzyl-acrylate, polymer
84852-53-9	Decabromo-diphenyl-ethane
59789-51-4	Tribromo-bisphenyl-maleinimide
155613-93-7	Octabromo-1,1,3-trimethyl-1-phenylindane (FR-1808)
31454-48-5	Tetrabromo-cyclo-octane
3322-93-8	1,2-Dibromo-4-(1,2 dibromo-ethyl)-cyclo-hexane
25357-79-3	Tetrabromophthalic acid Na salt
632-79-1	Tetrabromo phthalic anhydride
74-97-5	Bromochloromethane
75-61-6	Dibromodifluoromethane

**TABLE C Cadmium and Cadmium Compounds**

(This list is not a complete list but is meant to provide examples of compounds banned by manufacturing)

CAS#	Chemical or Material Name
7440-43-9	Cadmium
1306-19-0	Cadmium Oxide
1306-23-6	Cadmium Sulfide
10108-64-2	Cadmium Chloride
10124-36-4 or	Cadmium Sulfate
31119-53-6	
7790-79-6	Cadmium Fluoride

<b>TABLE D Chromium VI and Chromium VI Compounds</b>	
(This list is not a complete list but is meant to provide examples of compounds banned by manufacturing)	
<b>CAS#</b>	<b>Chemical or Material Name</b>
1333-82-0	Chromium (VI) Oxide
10294-40-3	Barium Chromate
13765-19-0	Calcium Chromate
7758-97-6	Lead (II) Chromate
7775-11-2	Sodium Chromate
10588-01-9 or	Sodium Dichromate
7789-12-0	
7778-50-9	Potassium Dichromate
7789-00-6	Potassium Chromate
7738-94-5	Chromic Acid
13530-68-2	Dichromic Acid
13530-65-0	Zinc Chromate
24613-89-6	Dichromium tris(chromate)
49663-84-5	Pentazine chromate octahydroxide
11103-86-9	Zinc Potassium Chromate
7789-06-2	Strontium chromate
7789-09-5	Ammonium dichromate

<b>TABLE E Cresote Compounds</b>	
(This list is not a complete list but is meant to provide examples of compounds banned by manufacturing)	
<b>CAS#</b>	<b>Chemical or Material Name</b>
65996-93-2	Coal tar acids and coal tar pitches/oils-Coal Tar Pitch Volatiles
70321-79-8	Coal tar acids and coal tar pitches/oils-Creosote Oil, High-Boiling Distillate
70321-80-1	Coal tar acids and coal tar pitches/oils-Creosote Oil, Low-Boiling Distillate
8001-58-9	Coal tar acids and coal tar pitches/oils-Creosote, Coal Tar
8007-45-2	Coal tar acids and coal tar pitches/oils-Coal Tar
8021-39-4	Coal tar acids and coal tar pitches/oils-Creosote, Wood
90640-84-9	Coal tar acids and coal tar pitches/oils-Creosote Oil, Acenaphthene Fraction
90640-85-0	Coal tar acids and coal tar pitches/oils-Creosote Oil, Acenaphthalene Fraction, Acenaphthalene-Free
61789-28-4	Coal tar acids and coal tar pitches/oils-Creosote Oil
266-028-2	Pitch, coal tar, high temp
92061-94-4	Residues (coal tar), pitch distn.
91995-52-5	Distilates (coal tar), pitch, pyrene fraction
91995-42-5	Distilates (coal tar), heavy oils, pyrene fraction
90640-86-1	Distilate (coal tar), heavy oils

**TABLE F Select Chlorine Compounds**

(This is the complete listing of compounds in the category considered Banned when the chemical will become part of the TI product)

CAS#	Chemical or Material Name
156-59-2	cis-1,2-Dichloroethylene (1,2-Dichloroethylene)
107-06-2	1,2-Dichloroethane (Ethylene Dichloride)
107-30-2	Methyl Chloromethyl Ether (Chloromethyl Methyl Ether)
127-18-4	Tetrachloroethylene (1,1,2,2-Tetrachloroethylene)
630-20-6	1,1,1,2-Tetrachloroethane
67-66-3	Trichloromethane (Chloroform)
67-72-1	Hexachloroethane
74-97-5	Chlorobromomethane
75-01-4	Vinyl Chloride (monomer)
9002-86-2	Polyvinyl chloride
75-09-2	Dichloromethane (Methylene Chloride)
75-35-4	1,1-Dichloroethylene
76-01-7	Pentachloroethane
79-00-5	1,1,2-Trichloroethane
79-01-6	Trichloroethylene (TCE or Trichloroethene)
79-34-5	1,1,2,2-Tetrachloroethane
87-68-3	Hexachlorobutadiene
87-86-5	Pentachlorophenol (PCP) Salts and Compounds or Esters
131-52-2	Sodium Pentachlorophenol (and others)
96-23-1	1,3-Dichloro-2-propanol
7646-79-9	Cobalt Dichloride
85535-84-8	Short Chain Chlorinated Paraffin's (C10-C13)
57-74-9	Chlordanes/ chordane
27304-13-8	Chlordanes/ oxychlordane
26880-48-8	Chlordanes/ oxychlordane
39765-80-5	Chlordanes/ trans-nonachlor
29555-44-0	Chlordanes/ trans-nonachlor
85535-85-9	Chloroparaffins-C12-60% Chlorine, C23-43% Chlorine (Chlorinated paraffins) Alkanes, C14-17, Chloro
85535-86-0	Chloroparaffins-C12-60% Chlorine, C23-43% Chlorine (Chlorinated paraffins) Alkanes, C18-28, Chloro
61788-76-9	Chloroparaffins-C12-60% Chlorine, C23-43% Chlorine (Chlorinated paraffins) Alkanes, Chloro
108171-26-2	Chloroparaffins-C12-60% Chlorine, C23-43% Chlorine (Chlorinated paraffins) Chlorinated Paraffins (C12, 60% Chlorine)
108171-27-3	Chloroparaffins-C12-60% Chlorine, C23-43% Chlorine (Chlorinated paraffins) Chlorinated Paraffins (C23, 43% Chlorine)
85422-92-0	Chloroparaffins-C12-60% Chlorine, C23-43% Chlorine (Chlorinated paraffins) Paraffin Oils and Hydrocarbon Oils, Chloro



56509-64-9	Chloroparaffins-C12-60% Chlorine, C23-43% Chlorine (Chlorinated paraffins) Paraffin waxes and hydrocarbon waxes, chlorinated (C23, 43%)
56730-95-1	Chloroparaffins-C12-60% Chlorine, C23-43% Chlorine (Chlorinated paraffins) Paraffin waxes and hydrocarbon waxes, chlorinated (C23, 43%)
63449-39-8	Chloroparaffins-C12-60% Chlorine, C23-43% Chlorine (Chlorinated paraffins) Paraffin waxes and hydrocarbon waxes, Chloro
8029-39-8	Chloroparaffins-C12-60% Chlorine, C23-43% Chlorine (Chlorinated paraffins) Paraffin waxes and hydrocarbon waxes, Chloro
97553-43-0	Chloroparaffins-C12-60% Chlorine, C23-43% Chlorine (Chlorinated paraffins) Paraffins (Petroleum), Normal C10, Chloro
505-60-2	Dichlorodiethyl sulfide (Mustard Gas)
51-75-2	Diethylamine, 2,2'-dichloro-N-methyl- (Nitrogen mustard) (Mechlorethamine)
96-18-4	1,2,3-Trichloropropane
548-62-9	C.I. Basic Violet 3
81161-70-8	Monomethyldichloro Diphenyl Methane
74-87-3	Chloromethane
71011-12-6	Alkanes, C12-13, chloro
38051-10-4	Tetrakis(2-chloroethyl)dichloroisopentyldiphosphate
66108-37-0	Tris(2,3-dichloro-1-propyl)phosphate

**TABLE G Select Ethylene Glycol Ethers**

(This is the complete listing of compounds in the category considered Banned when the chemical will become part of the TI product)

CAS#	Chemical or Material Name
110-80-5 or 96231-36-6	Ethylene Glycol Ethyl Ether
111-15-9	Ethylene Glycol Monoethyl Ether Acetate
109-86-4	Ethylene Glycol Methyl Ether
110-49-6	Ethylene Glycol Methyl Ether Acetate
111-96-6	Diethylene Glycol Dimethyl Ether
112-49-2	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)
110-71-4	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)

**TABLE H Select Fluorine Compounds**

(This list is not a complete list but is meant to provide examples of compounds banned by manufacturing)

CAS#	Chemical or Material Name
62-74-8	Sodium Fluoroacetate
640-19-7	Fluoroacetamide (Monofluoroacetamide)
144-49-0	Monofluoroacetate (Acetic Acid, fluoro-)
376-06-7	Vinyl Fluoride
1763-23-1	Perfluorooctanesulfonic acid (PFOS)
307-35-7	Perfluorooctanesulfonyl fluoride (POSF)
335-67-1 or 68141-02-6	Pentadecafluorooctanoic acid (PFOA) or Perfluorooctanoic acid
3825-26-1	Ammoniumpentadecafluorooctanate or Pentadecafluorooctanoate (APFO)
75-02-5	Pentacosafuorotridecanoic acid
72629-94-8	Tricosafuorododecanoic acid
307-55-1	Henicosafuoroundecanoic acid
2058-94-8	Heptacosafuorotetradecanoic acid
3825-26-1	Pentadecafluorooctanoic acid ammonium salt
335-95-5	Sodium perfluorooctanoate
2395-00-8	Potassium perfluorooctanoate
335-93-3	Silver perfluorooctanoate
335-66-0	Perfluorooctanoyl fluoride
376-27-2	Methyl perfluorooctanoate
3108-24-5	Ethyl perfluorooctanoate
375-95-1	Perfluorononan-1-oic-acid
21049-39-8	Sodium heptadecafluorononanoate
4149-60-4	Nonanoic acid,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-heptadecafluoro-, ammonium salt
335-76-2	Nonadecafluorodecanoic acid
3830-45-3	Decanoic acid, nonadecafluoro-, sodium salt
3108-42-7	Ammonium nonadecafluorodecanoate
2991-51-7	Glycine, N-ethyl-N-[(heptadecafluorooctyl)sulfonyl]-, potassium salt
306975-62-2	2-Propenoic acid, 2-methyl-, dodecyl ester, polymers with 2-[methyl]((perfluoro-C4-8-alkyl)- sulfonyl)amino]ethyl acrylate and vinylidene chloride
-----	Perfluorohexane-1-sulphonic acid and its salts PFHxS

**TABLE I Lead and Lead Compounds**

(This list is not a complete list but is meant to provide examples of compounds banned by manufacturing)

CAS#	Chemical or Material Name
7439-92-1	Lead
7446-14-2	Lead (II) sulfate
598-63-0	Lead (II) carbonate
1319-46-6	Lead hydrocarbonate
301-04-2	Lead acetate
6080-56-4	Lead (II) acetate, trihydrate
7446-27-7	Lead phosphate
12069-00-0	Lead selenide
1309-60-0	Lead (IV) oxide
1314-41-6	Lead (II,IV) oxide
1314-87-0	Lead (II) sulfide
1317-36-8	Lead (II) oxide
1344-36-1	Lead hydroxidcarbonate
12656-85-8	Lead chromate molybdate sulfate red (C.I. Pigment Red 104)
12060-00-3	Lead (II) titanate
15739-80-7	Lead sulfate, sulphuric acid, lead salt
12202-17-4	Lead sulphate, tribasic
1072-35-1	Lead stearate
1344-37-2	Lead Sulfochromate yellow
592-05-2	Lead Cyanide
6477-64-1	Lead depicrate
180129-52-6	Lead, [N'-[2-(dimethylamino-kN)ethyl]-N,N,N'-trimethyl-1,2-ethanediamine]bis(2,2,6,6-tetramethyl-3,5-heptanedionato-kO,kO')- (9CI)
150178-00-0	3,5-Heptanedione, 2,2,6,6-tetramethyl-, ion(1-), lead(2+)
17570-76-2	Lead(II) bis(methanesulfonate)
51404-69-4	Acetic acid, lead salt, basic
12578-12-0	Dioxobis(stearato)trilead
91031-62-8	Fatty acids, C16-18, lead salts
13814-96-5	Lead bis(tetrafluoroborate)
10099-74-8	Lead dinitrate
12626-81-2	Lead Titanium Zirconium Oxide
12065-90-6	Pentalead tetraoxide sulphate
8012-00-8	Pyrochlore, antimony lead yellow
68784-75-8	Silicic acid, barium salt, lead-doped
62229-08-7	Sulfurous acid, lead salt, dibasic
12141-20-7	Trilead dioxide phosphonate
78-00-2	Tetraethyl Lead
20837-86-9	Lead cynamidate
12036-76-9	Lead oxide sulfate (basic lead sulfate)

<b>TABLE J Mercury and Mercury Compounds</b>	
(This list is not a complete list but is meant to provide examples of compounds banned by manufacturing)	
<b>CAS#</b>	<b>Chemical or Material Name</b>
7439-97-6	Mercury
33631-63-9	Mercuric chloride
7487-94-7	Mercury (II) chloride
7783-35-9	Mercuric sulfate
10045-94-0	Mercuric nitrate
21908-53-2	Mercuric (II) oxide
1344-48-5	Mercuric sulfide
1335-31-5	Mercury (II) Cyanide Oxide

<b>TABLE K Phthalate Compounds</b>	
(This is the complete listing of compounds in the category considered Banned when the chemical will become part of the TI product)	
<b>CAS#</b>	<b>Chemical or Material Name</b>
3648-21-3	Diheptyl Phthalate
120-61-6	Dimethyl Terephthalate
117-84-0	Di-N-Octyl Phthalate (DNOP)
85-68-7	Butyl Benzyl Phthalate (BBP)
117-81-7	Di(2-ethylhexyl) Phthalate (DEHP) and Di-sec-octyl Phthalate (DOP)
84-74-2	Dibutyl Phthalate (DBP Ester)
84-61-7	Dicyclohexyl Phthalate
84-66-2	Diethyl Phthalate
84-75-3	Dihexyl Phthalate
84-69-5	Diisobutyl Phthalate
26761-40-0 or	Diisodecyl Phthalate
68515-49-1	
28553-12-0 or	Diisononyl Phthalate (DINP)
68515-48-0	
131-11-3	Dimethyl Phthalate
131-18-0	Dipentyl Phthalate
131-16-8	Dipropyl Phthalate
117-82-8	Bis(2-methoxyethyl) phthalate (DBP)
25550-51-0	Hexahydromethylphthalic anhydride
19438-60-9	Hexahydro-4-methylphthalic anhydride
48122-14-1	Hexahydro-1-methylphthalic anhydride
57110-29-9	Hexahydro-3-methylphthalic anhydride
84777-06-0	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear
605-50-5	Diisopentylphthalate (DIPP)
69011-06-9	[Phthalato(2-)]dioxotrilead (dibasic lead phthalate)

**TABLE L Organotin Compounds**

(This is the complete listing of compounds in the category considered Banned when the chemical will become part of the TI product)

CAS#	Chemical or Material Name
56-35-9	Bis(tri-n-butyltin) oxide
1067-33-0	Dibutyltin diacetate
77-58-7	Dibutyltin dilaurate
78-04-6	Dibutyltin maleate
870-08-6	Diocetyl tin oxide
3648-18-8	Diocetyl tin dilaurate
4808-30-4	Tributyltin sulfide
7437-35-6	Bis (tributyltin) adipate
2155-70-6	Tributyltin methacrylate
1983-10-4	Tributyltin fluoride
56-36-0	Tributyltin acetate
1461-23-0	Tri-n-butyl tin bromide
962-89-0	Triphenyltin bromide
639-58-7	Triphenyltin chloride
76-87-9	Triphenyltin hydroxide
1803-12-9	Triphenyltin N,N'-dimethyldithiocarbamate
379-52-2	Triphenyltin fluoride
900-95-8	Triphenyltin acetate
47672-31-1 or	Triphenyltin fatty acid salts (C=9-11)
18380-71-7	
18380-72-8	
94850-90-5	
7094-94-2	Triphenyltin chloroacetate
6454-35-9	Bis(tributyltin) fumalate
31732-71-5	Bis(tributyltin) 2,3-dibromosuccinate
3090-36-6	Tributyltin laurate
4782-29-0	Bis(tributyltin) phthalate
67772-01-4	Copolymer of alkyl acrylate, methyl methacrylate and tributyltin methacrylate(alkyl; C=8)
6517-25-5	Tributyltin sulfamate
14275-57-1	Bis(tributyltin) maleate
1461-22-9 or	Tributyltin chloride
7342-38-3	
668-34-8	Triphenyltin-Fentine
1261-21-1	Bis(triphenyltin) oxide
18380-71-7	Triphenyltin Fatty acid salts
47672-31-1	Triphenyltin Fatty acid salts
----	Mixture of tributyltin cyclopentanecarboxylate and its analogs (Tributyltin naphthenate)

----	Mixture of tributyltin 1,2,3,4,4a,4b,5,6,10,10a-decahydro-7-isopropyl-1,4a-dimethyl-1-phenanthlenecarboxylate and its analogs (Tributyltin rosin salt)
56323-17-2	Tin (organotin) and its compounds 6,11-Dioxa-5,12-distanna-hexadecane,8,9-dibromo-5,5,12,12-tetrabutyl-7,10-dioxo
13121-76-1	Bis (tricyclohexyltin) sulfide
16091-18-2	Di(n-oxy)tin maleate
139353-88-1	Difluorotriphenyltin tetrabutylammonium
26239-64-5	Tributyltin 1,2,3,4,4a,4b,5,6,10,10a-decahydro-7-isopropyl 1,4adimethyl-1-phenanthrenecarboxylate
682-00-8	Tributyltin ethoxide
688-73-3	Tributyltin hydride
1067-97-6	Tributyltin hydroxide
7342-47-4	Tributyltin iodide
1067-52-3	Tributyltin methoxide
85409-17-2	Tributyltin naphthenate
3091-32-5	Tricyclohexyltin chloride
13121-70-5	Tricyclohexyltin hydroxide
2767-54-6	Triethyltin bromide
1066-44-0	Trimethyltin bromide
1066-45-1	Trimethyltin chloride
68725-14-4	Tri-n-butyltin trifluoromethanesulfonic acid
3342-67-4	Tripentyltin chloride
892-20-6	Triphenyltin hydride
818-08-6	Dibutyltin oxide
5409-17-2	Tributyltin cyclopentane carbonate mixture
683-18-1	Dibutyltin dichloride (DBT)

Table M – This table has been removed and reserved for future use.

<b>TABLE N Select Pesticides &amp; Herbicides</b>	
(This is the complete listing of compounds in the category considered Banned when the chemical will become part of the TI product)	
<b>CAS#</b>	<b>Chemical or Material Name</b>
2385-85-5	Mirex (Perchloropentacyclodecane)
72-20-8	Endrin
50-29-3	DDT
789-02-6	Dichlorodiphenyltrichloroethane (o,p'-DDT)
76-44-8	Heptachlor
12789-03-6	Chlordane
309-00-2 or 34487-55-3	Aldrin
60-57-1	Dieldrin
8001-35-2	Toxaphene

# Texas Instruments

# Semiconductor Operations

20859-73-8	Aluminum Phosphide
298-00-0	Dimethylparanitrophenylphosphate (Methyl Parathion)
542-88-1	Chloromethyl Ether (Bis(Chloromethyl)Ether)
56-38-2	Diethylparanitrophenolthiophosphate (Parathion)
8022-00-2	Methyl Demeton
9002-93-1	Poly(oxy-1,2-ethanediyl)
9016-45-9	n-Nonylphenol polyglycol ether
107-49-3	Tetraethylpyrophosphate (TEPP)
118-74-1	Hexachlorobenzene
120-12-7	Anthracene
90640-80-5	Anthracene oil
91995-17-4	Anthracene oil, anthracene paste distn. Lights
91995-15-2	Anthracene oil, anthracene paste, anthracene fraction
90640-82-7	Anthracene oil, anthracene-low
90640-81-6	Anthracene oil, anthracene paste
122-34-9	Simazine (CAT), 2-Chloro-4,6-bis(ethylamino)-1,3,5-triazine
126-72-7	Tris (2,3-dibromopropyl) phosphate
13171-21-6	Organic Phosphorous Compounds -Dimethyl diethylamido-1-chlorocrotonyl (2) phosphate (Phosphamidon)
7723-14-0	Red Phosphorous
137-26-8	Thiuram (Tetramethylthiuram Disulfide) (Thiram)
152-16-9	Octamethylpyrophosphoramidate
205-82-3	Benzo(j)Fluoranthene
205-99-2	Benzo(b)Fluoranthene
28249-77-6	Thiobencarb (Carbamic acid, diethylthio-,S-(p-chlorobenzyl) ester)
50-32-8	Benzo(a)Pyrene
545-55-1	Tris(1-aziridinyl)phosphine oxide
56-55-3	1,2-Benzanthracene
62-44-2	4'-Ethoxyacetanilide (Phenacetin) (Acetophenetidine)
115-96-8	Tris(2-chloroethyl)phosphate
101-77-9	4,4'- Diaminodiphenylmethane
26140-60-3	Terphenyl (PCTs)
61788-33-8	Terphenyl, chlorinated (Kanechlor C)
25155-23-1	Trixylyl phosphate
13674-84-5	Tris(2-chloro-1-methylethyl) phosphate (TCPP)
13674-87-8	Tris(1,3-dichloro-2-propyl) phosphate (TDCPP)
25155-23-1	Trixylyl phosphate

**TABLE O Other Miscellaneous Substances**

(This is the complete listing of compounds in the category considered Banned when the chemical will become part of the TI product)

CAS#	Chemical or Material Name
78-93-3	Methyl Ethyl Ketone (MEK) (2-Butanone)
71-43-2	Benzene
108-95-2	Phenol
68-12-2	N, N-dimethylformamide, (DMF) (Dimethylformamide)
302-01-2 or 7803-57-8	Hydrazine
79-06-1	Acrylamide
104-40-5	4-Nonylphenol
104-38-8	Ethanol, 2-(4-nonylphenoxy)-
131-52-2	Pentachlorophenol (PCP) Salts and Compounds or Esters
135-88-6	N-Phenyl-2-Naphthalenamine (N-Phenyl-beta-Naphthylamine )
25154-52-3	N-Nonylphenol (Phenol, nonyl)
552-89-6	o-Nitrobenzaldehyde (2-nitrobenzaldehyde)
732-26-3	2,4,6-Tri-Tert-Butylphenol
84852-15-3	4-Nonylphenol (Phenol, 4-t-nonyl-, branched)
90640-80-5	Anthracene Oil
92-93-3	4-Nitrobiphenyl and its salts
96-09-3	Styrene Oxide (Benzene, (epoxyethyl)-)
98-95-3	Nitrobenzene
106-99-0	Butadiene
130983-70-9	1,3 Butadiene
590-19-2	1,2 Butadiene
107-13-1	Acrylonitrile (monomer)
75-21-8	Ethylene Oxide
75-07-0	Acetaldehyde
50-00-0	Formaldehyde
105-66-8	Propyl butanoate
624-49-7	Dimethyl Fumarate
3846-71-7	2-(3',5'-Di-tert-hydroxyphenyl)benzotriazole or 2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)
25973-55-1	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)
15571-58-1	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)
-----	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)
121-14-2	2,4-Dinitrotoluene
EN 650-017-00-8	Aluminosilicate, Refractory Ceramic Fibers
EN 650-017-00-8	Zirconia Aluminosilicate, Refractory Ceramic Fibers



# Texas Instruments

# Semiconductor Operations

81-15-2	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)
10124-43-3	Cobalt(II) sulphate
10141-05-6	Cobalt(II) dinitrate
513-79-1	Cobalt(II) carbonate
71-84-7	Cobalt(II) diacetate
15606-95-8	Triethyl arsenate
1303-28-2	Diarsenic pentaoxide
12267-73-1	Tetraboron disodium heptaoxide, hydrate
10043-35-3 or	Boric Acid
11113-50-1	
1303-96-4 or	Disodium tetraborate anhydrous
1330-43-4 or	
12179-04-3	
7632-04-4	Sodium peroxometaborate
-----	Sodium perborate; perboric acid, sodium salt
872-50-4	1-Methyl-2-pyrrolidone
1309-64-4	Antimony Oxide (dopants are exempt)
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)
561-41-1	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol
90-94-8	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)
75-12-7	Formamide
101-61-1	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)
2451-62-9	1,3,5-tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)
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)
6786-83-0	α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)
548-62-9	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3)
1303-86-2	Diboron trioxide (Except for use as wafer fab dopants)
1309-64-4	Antimony Trioxide (Exempt for use as dopants in silicon wafers and wire)
7790-91-2	Chlorine Trifluoride
85-42-7 or	Cyclohexane-1,2-dicarboxylic anhydride (Hexahydrophthalic anhydride — HHPA)
13149-00-3 or	
14166-21-3	
625-45-6	Methoxy acetic acid
629-14-1	1,2-Diethoxyethane
75-56-9	Propylene oxide; 1,2-epoxypropane; methyloxirane
64-67-5	Diethyl sulphate
77-78-1	Dimethyl sulphate
143860-04-2	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine
88-85-7	Dinoseb
573-58-0	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)

# Texas Instruments

# Semiconductor Operations

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)
96-45-7	Imidazolidine-2-thione (2-imidazoline-2-thiol)
79-16-3	N-methylacetamide
573-58-0	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)
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)
96-45-7	Imidazolidine-2-thione (2-imidazoline-2-thiol)
68515-50-4	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear
26027-38-3 or	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated —covering well-defined substances and UVCB substances, polymers and homologues
34166-38-6	
20427-84-3	
7311-27-5	
27942-27-4	
104-40-5	
9004-87-9	
140-66-9	
26027-38-3	
70955-69-0	
68987-90-6	
9063-89-2	
67554-50-1	
27193-28-8	
9002-93-1	
39342-50-2	
27013-89-4	
11081-15-5	
9036-19-5	
84852-15-3	
25154-52-3	
14409-72-4	
84852-15-3 or	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
26543-97-5	
104-40-5	
17406-66-9	
30784-30-6	
52427-13-1	
186825-36-5	
142731-63-3	
68648-93-1	1,2-Benzenedicarboxylic acid mixed decyl and hexyl and octyl di esters (Mixed alkyl diester)
68515-51-5	1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters (Mixed alkyl diester)

# Texas Instruments

# Semiconductor Operations

-----	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]
3864-99-1	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)
36437-37-3	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)
1120-71-4	1,3-propanesultone
68921-45-9	Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene (BNST)
80-46-6	p-(1,1-dimethylpropyl)phenol
-----	4-heptylphenol, branched and linear
80-05-7	4,4'-isopropylidenediphenol
7791-03-9	Lithium Perchlorate
7790-98-9	Ammonium perchlorate
13465-95-7	Barium perchlorate
13637-76-8	Lead perchlorate
10034-81-8	Magnesium Perchlorate
13455-31-7	Perchloric acid, cobalt (2+) salt
7616-83-3	Perchloric acid, mercury(2+) salt
13520-61-1	Perchloric acid, nickel(2+) salt, hexahydrate
13637-71-3	Nickel perchlorate
7778-74-7	Potassium Perchlorate
7601-89-0	Sodium Perchlorate
15596-83-5	Thallium(3+) perchlorate
37205-87-1	Isononylphenol ethoxylate
127087-87-0	Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched
156609-10-8	4-tert-Nonylphenol diethoxylate
77-09-8	Phenolphthalein
140-66-9	4-(1,1,3,3-tetramethylbutyl)phenol,(4-tert-Octylphenol)
25214-70-4	Formaldehyde, oligomeric reaction products with aniline (technical MDA)
127-19-5	Dimethylacetamide (DMAC)

**TABLE P Perfluorinated Compounds (PFC)s and Hydrofluorocarbons (HFC's)**

(This is the complete listing of compounds in the category considered Banned when the chemical will become part of the TI product)

CAS#	Chemical or Material Name
7783-54-2	Nitrogen Trifluoride (NF3)
75-73-0	Carbon Tetrafluoride (CF4)
76-16-4	Hexafluoroethane (C2F6)
116-15-4	Hexafluoropropylene (C3F6)
76-19-7	Octafluoropropane (C3F8)
115-25-3	Octofluorocyclobutane (C4F8)
773-14-8	Perfluorotetrahydrofuran (C4F8O)
75-46-7	Trifluoromethane (CHF3)
2551-62-4	Sulfur Hexafluoride (SF6)
354-33-6	1,1,1,2,2-Pentafluoroethane (HFC-125)
431-89-0	1,1,1,2,3,3,3-Heptafluoropropane (HFC-227EA)
811-97-2	1,1,1,2-Tetrafluoroethane (HFC 134A)
690-39-1	1,1,1,3,3,3-Hexafluoropropane (HFC-236FA)
460-73-1	1,1,1,3,3-Pentafluoropropane (HFC-245FA)
407-59-0	1,1,1,4,4,4-Hexafluorobutane
420-46-2	1,1,1-Trifluoroethane (HFC-143A)
679-86-7	1,1,2,2,3-Pentafluoropropane (HFC-245CA)
430-66-0	1,1,2-Trifluoroethane
75-38-7	1,1,-Difluoroethene
75-37-6	1,1-Difluoroethane (HFC-152A)
75-10-5	Difluoromethane (HFC-32)
138495-42-8	Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro- (HFC-4310MEE)
355-25-9	Decafluorobutane or Perfluorobutane
678-26-2	Dodecafluoropentane
335-57-9	Hexadecafluoroheptane, Perfluoroheptane
307-34-6	Octadecafluorooctane, Perfluorooctane
355-42-0	Perfluoro-n-Hexane
359-35-3	1,1,2,2-Tetrafluoroethane (HFC 134)
677-56-5	1,1,1,2,2,3-Hexafluoropropane (HFC-236cb)
431-63-0	1,1,1,2,3,3-Hexafluoropropane (HFC-236EA)
406-58-6	1,1,1,3,3-Pentafluorobutane (HFC-365MFC)
593-53-3	Methyl fluoride (HFC-41)

<b>TABLE Q Polycyclic Aromatic Hydrocarbons</b>	
(This is the complete listing of compounds in the category considered Banned when the chemical will become part of the TI product)	
<b>CAS#</b>	<b>Chemical or Material Name</b>
50-32-8	Benzo(a)pyrene or benzo[def]chrysene
192-97-2	Benzo[ghi]perylene
56-55-3	Benzo(a)anthracene
218-01-9	Chrysene
205-82-3	Benzo(j)fluoranthene
207-08-9	Benzo(k)fluoranthene
53-70-3	Dibenz(a,h)anthracene
205-99-2	Benzo(e)acephenanthrylene
71888-89-6	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich
68515-42-4	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters
208-96-8	Acenaphthylene
83-32-9	Acenaphthene
86-73-7	Fluorene
85-01-8	Phenanthrene
206-44-0	Fluoranthene
129-00-0	Pyrene
193-39-5	Indeno(1,2,3-cd)pyrene
205-99-2	Benzo(b)fluoranthene
191-24-2	Benzo(ghi)perylene

<b>TABLE R Halogenated Dioxins, Furans and Naphthalenes</b>	
(This is the complete listing of compounds in the category considered Banned when the chemical will become part of the TI product)	
<b>CAS#</b>	<b>Chemical or Material Name</b>
1746-01-6	2,3,7,8-Tetra-CDD
3268-87-9	1,2,3,4,6,7,8,9-Octa-CDD (Octachlorodibenzo-p-Dioxin)
39001-02-0	1,2,3,4,6,7,8,9-Octa-CDF (Octachlorodibenzofuran)
35822-46-9	1,2,3,4,6,7,8-Hepta-CDD (Heptachlorodibenzo-p-Dioxin)
67562-39-4	1,2,3,4,6,7,8-Hepta-CDF (1,2,3,4,6,7,8-Heptachlorodibenzofuran)
58200-70-7	1,2,3,4,6,7,9-Heptachloro-dibenzo[be][1,4]Dioxin
58200-66-1	1,2,3,4,6,7-Hexachloro-dibenzo[be][1,4]Dioxin
58200-67-2	1,2,3,4,6,8-Hexachloro-dibenzo[be][1,4]Dioxin
58200-68-3	1,2,3,4,6,9-Hexachloro-dibenzo[be][1,4]Dioxin
67028-19-7	1,2,3,4,6-Pentachloro-dibenzo[be][1,4]Dioxin
55673-89-7	1,2,3,4,7,8,9-Hepta-CDF (1,2,3,4,7,8,9-Heptachlorodibenzofuran)

# Texas Instruments

# Semiconductor Operations

110999-44-5	1,2,3,4,7,8-Hexa-BDD
39227-28-6	1,2,3,4,7,8-Hexa-CDD (1,2,3,4,7,8-Hexachlorodibenzo-p-Dioxin)
70648-26-9	1,2,3,4,7,8-Hexa-CDF (1,2,3,4,7,8-Hexachlorodibenzofuran)
39227-61-7	1,2,3,4,7-Pentachloro-dibenzo[be][1,4]Dioxin
30746-58-8	1,2,3,4-Tetrachloro-dibenzo[be][1,4]Dioxin
110999-45-6	1,2,3,6,7,8-Hexa-BDD
57653-85-7	1,2,3,6,7,8-Hexa-CDD (1,2,3,6,7,8-Hexachlorodibenzo-p-Dioxin)
57117-44-9	1,2,3,6,7,8-Hexachloro-p-dibenzofuran
64461-98-9	1,2,3,6,7,9-Hexachloro-dibenzo[be][1,4]Dioxin
71925-15-0	1,2,3,6,7-Pentachloro-dibenzo[be][1,4]Dioxin
58200-69-4	1,2,3,6,8,9-Hexachloro-dibenzo[be][1,4]Dioxin
71925-16-1	1,2,3,6,8-Pentachloro-dibenzo[be][1,4]Dioxin
82291-34-7	1,2,3,6,9-Pentachloro-dibenzo[be][1,4]Dioxin
71669-25-5	1,2,3,6-Tetrachloro-dibenzo[be][1,4]Dioxin
110999-46-7	1,2,3,7,8,9-Hexa-BDD
19408-74-3	1,2,3,7,8,9-Hexa-CDD
72918-21-9	1,2,3,7,8,9-Hexa-CDF
109333-34-6	1,2,3,7,8-Penta-BDD
109333-34-8	1,2,3,7,8-Penta-BDF
40321-76-4	1,2,3,7,8-Penta-CDD
57117-41-6	1,2,3,7,8-Penta-CDF
71925-17-2	1,2,3,7,9-Pentachloro-dibenzo[be][1,4]Dioxin
67028-18-6	1,2,3,7-Tetrachloro-dibenzo[be][1,4]Dioxin
71925-18-3	1,2,3,8,9-Pentachloro-dibenzo[be][1,4]Dioxin
53555-02-5	1,2,3,8-Tetrachloro-dibenzo[be][1,4]Dioxin
71669-26-6	1,2,3,9-Tetrachloro-dibenzo[be][1,4]Dioxin
53536-17-3	1,2,3-Trichloro-dibenzo[be][1,4]Dioxin
39227-62-8	1,2,4,6,7,9-Hexachloro-dibenzo[be][1,4]Dioxin
82291-35-8	1,2,4,6,7-Pentachloro-dibenzo[be][1,4]Dioxin
58802-09-8	1,2,4,6,8,9-Hexachloro-dibenzo[be][1,4]Dioxin
71998-76-0	1,2,4,6,8-Pentachloro-dibenzo[be][1,4]Dioxin
82291-36-9	1,2,4,6,9-Pentachloro-dibenzo[be][1,4]Dioxin
71669-27-7	1,2,4,6-Tetrachloro-dibenzo[be][1,4]Dioxin
58802-08-7	1,2,4,7,8-Pentachloro-dibenzo[be][1,4]Dioxin
82291-37-0	1,2,4,7,9-Pentachloro-dibenzo[be][1,4]Dioxin
71669-28-8	1,2,4,7-Tetrachloro-dibenzo[be][1,4]Dioxin
82291-38-1	1,2,4,8,9-Pentachloro-dibenzo[be][1,4]Dioxin
71669-29-9	1,2,4,8-Tetrachloro-dibenzo[be][1,4]Dioxin
71665-99-1	1,2,4,9-Tetrachloro-dibenzo[be][1,4]Dioxin
71669-23-3	1,2,4,9-Tetrachloro-dibenzo[be][1,4]Dioxin
39227-58-2	1,2,4-Trichloro-dibenzo[be][1,4]Dioxin
40581-90-6	1,2,6,7-Tetrachloro-dibenzo[be][1,4]Dioxin
67323-56-2	1,2,6,8-Tetrachloro-dibenzo[be][1,4]Dioxin
40581-91-7	1,2,6,9-Tetrachloro-dibenzo[be][1,4]Dioxin

# Texas Instruments

# Semiconductor Operations

82291-29-0	1,2,6-Trichloro-dibenzo[be][1,4]Dioxin
34816-53-0	1,2,7,8-Tetrachloro-dibenzo[be][1,4]Dioxin
82291-30-3	1,2,7-Trichloro-dibenzo[be][1,4]Dioxin
62470-54-6	1,2,8,9-Tetrachloro-dibenzo[be][1,4]Dioxin
82291-31-4	1,2,8-Trichloro-dibenzo[be][1,4]Dioxin
82291-32-5	1,2,9-Trichloro-dibenzo[be][1,4]Dioxin
54536-18-4	1,2-Dichloro-dibenzo[be][1,4]Dioxin
82306-62-5	1,3,0-Trichloro-dibenzo[be][1,4]Dioxin
33423-92-6	1,3,6,8-Tetrachloro-dibenzo[be][1,4]Dioxin
71669-24-4	1,3,6,9-Tetrachloro-dibenzo[be][1,4]Dioxin
82291-33-6	1,3,6-Trichloro-dibenzo[be][1,4]Dioxin
50585-46-1	1,3,7,8-Tetrachloro-dibenzo[be][1,4]Dioxin
62470-53-5	1,3,7,9-Tetrachloro-dibenzo[be][1,4]Dioxin
67028-17-5	1,3,7-Trichloro-dibenzo[be][1,4]Dioxin
82306-61-4	1,3,8-Trichloro-dibenzo[be][1,4]Dioxin
50585-39-2	1,3-Dichloro—dibenzo[be][1,4]Dioxin
40581-93-9	1,4,6,9-Tetrachloro—dibenzo[be][1,4]Dioxin
8230-60-6	1,4,6-Trichloro-dibenzo[be][1,4]Dioxin
40581-94-0	1,4,7,8-Tetrachloro-dibenzo[be][1,4]Dioxin
82306-64-7	1,4,7-Trichloro-dibenzo[be][1,4]Dioxin
54536-19-5	1,4-Dichloro-dibenzo[be][1,4]Dioxin
38178-38-0	1,6-Dichloro-dibenzo[be][1,4]Dioxin
82291-26-7	1,7-Dichloro-dibenzo[be][1,4]Dioxin
82291-27-8	1,8-Dichloro-dibenzo[be][1,4]Dioxin
82291-28-9	1,9-Dichloro-dibenzo[be][1,4]Dioxin
39227-53-7	1-Chloro-dibenzo[be][1,4]Dioxin
60851-34-5	2,3,4,6,7,8-Hexa-CDF
131166-92-2	2,3,4,7,8-Penta-BDF
57117-31-4	2,3,4,7,8-Penta-CDF
82306-65-8	2,3,6-Trichloro-dibenzo[be][1,4]Dioxin
51207-31-9	2,3,7,8-Tetra – CDF
50585-81-6	2,3,7,8-Tetra-BDD
67733-57-7	2,3,7,8-Tetra-BDF
56795-67-6	2,3,7,8-Tetra-CDD
33857-28-2	2,3,7-Tetrachloro-dibenzo[be][1,4]Dioxin
29446-15-9	2,3-Dichloro-dibenzo[be][1,4]Dioxin
33857-26-0	2,7-Dichloro-dibenzo[be][1,4]Dioxin
38964-22-6	2,8-Dichloro-dibenao[be][1,4]Dioxin
39227-54-8	2-Chloro-dibenzo[be][1,4]Dioxin
35656-51-0	Chlorodibenzo[be][1,4]Dioxin
262-12-4	Dibenzo[be][1,4]Dioxin
64501-00-4	Dichlorodibenzo[be][1,4]Dioxin
37871-00-4	Heptachlorodibenzo[be][1,4]Dioxin
34465-46-8	Hexachloro-dibenzo[be][1,4]Dioxin

Code Ident **01295**

Document number **6494169**

Rev **S**

Sheet 23 of 32

# Texas Instruments

# Semiconductor Operations

36088-22-9	Pentachlorodibenzo[be][1,4]Dioxin
69760-96-9	Trichlorodibenzo[be][1,4]Dioxin
110-00-9	Furan
59536-65-1	Polybrominated Biphenyls
92-86-4	Dibromobiphenyl
2052-07-5	2-Bromobiphenyl
2113-57-7	3-Bromobiphenyl
92-66-0	4-Bromobiphenyl
59080-34-1	Tribromobiphenyl
40088-45-7	Tetrabromobiphenyl
56307-79-0	Pentabrphenyl
59080-40-9	Hexabromobiphenyl
36355-01-8	hexabromo-1,1-biphenyl
67774-32-7	Firemaster FF-1
35194-78-6	Heptabromobiphenyl
61288-13-9	Octabromobiphenyl
27753-52-2	Nonabiphenyl
13654-09-6	Decabromobiphenyl
101-55-3	Bromodiphenyl ether
2050-47-7	Dibromodiphenyl ethers
49690-94-0	Tribromodiphenyl ether
40088-47-9	Tetrabromodiphenyl ethers
36483-60-0	Hexabromodiphenyl ether
68928-80-3	Heptabromodiphenylether
63936-56-1	Nonabromodiphenylether
1163-19-5	Decabromodiphenyl ether
32534-81-9	Pentabromodiphenyl ether
32536-52-0	Octabromodiphenyl ether
1336-36-3	Polychlorinated Biphenyls (all isomers and congeners)
76253-60-6	Monomethyl-tetrachloro-diphenyl methane
81161-70-8	Monomethyl-dichloro-diphenyl methane
99688-47-8	Monomethyl-dibromo-diphenyl methane (DBBT)
61788-33-8	Polychlorinated Terphenyls (PCT) (all isomers and congeners)
70776-03-3	Naphthalene, chloro derivatives
90-13-1	1-Chloronaphthalene
91-58-7	2-Chloronaphthalene
1825-30-5	1,5-Dichloronaphthalene
1825-31-6	1,4-Dichloronaphthalene
2050-69-3	1,2-Dichloronaphthalene
2050-72-8	1,6-Dichloronaphthalene
2050-73-9	1,7-Dichloronaphthalene
2050-74-0	1,8-Dichloronaphthalene
2050-75-1	2,3-Dichloronaphthalene
2065-70-5	2,6-Dichloronaphthalene

Code Ident **01295**

Document number **6494169**

Rev **S**

Sheet 24 of 32



# Texas Instruments

# Semiconductor Operations

2198-75-6	1,3-Dichloronaphthalene
2198-77-8	2,7-Dichloronaphthalene
25586-43-0	Chloronaphthalene
28699-88-9	Dichloronaphthalene
1321-64-8	Pentachloronaphthalene
1321-65-9	Trichloronaphthalene
1335-87-1	Hexachloronaphthalene
1335-88-2	Tetrachloronaphthalene
2234-13-1	Perchloronaphthalene
2437-54-9	1,4,6-Trichloronaphthalene
2437-55-0	1,4,5-Trichloronaphthalene
3432-57-3	1,4,5,8-Tetrachloronaphthalene
6529-87-9	1,2,4,8-Tetrachloronaphthalene
6733-54-6	1,2,4,5-Tetrachloronaphthalene
17062-87-2	1,2,3,6,7,8-Hexachloronaphthalene
20020-02-4	1,2,3,4-Tetrachloronaphthalene
31604-28-1	1,3,5,8-Tetrachloronaphthalene
32241-08-0	Heptachloronaphthalene
34588-40-4	2,3,6,7-Tetrachloronaphthalene
50402-51-2	1,2,4-Trichloronaphthalene
50402-52-3	1,2,3-Trichloronaphthalene
51570-43-5	1,3,5-Trichloronaphthalene
51570-44-6	1,2,6-Trichloronaphthalene
51570-45-7	1,2,4,6-Tetrachloronaphthalene
53555-63-8	1,2,3,5-Tetrachloronaphthalene
53555-64-9	1,3,5,7-Tetrachloronaphthalene
53555-65-0	1,2,3,5,7-Pentachloronaphthalene
55720-33-7	1,2,5-Trichloronaphthalene
55720-34-8	1,2,7-Trichloronaphthalene
55720-35-9	1,2,8-Trichloronaphthalene
55720-36-0	1,3,6-Trichloronaphthalene
55720-37-1	1,3,7-Trichloronaphthalene
55720-38-2	1,3,8-Trichloronaphthalene
55720-39-3	1,6,7-Trichloronaphthalene
55720-40-6	2,3,6-Trichloronaphthalene
55720-41-7	1,2,3,7-Tetrachloronaphthalene
55720-42-8	1,3,6,7-Tetrachloronaphthalene
55720-43-9	1,4,6,7-Tetrachloronaphthalene
58863-14-2	1,2,3,4,5,6,7-Heptachloronaphthalene
58863-15-3	1,2,3,4,5,6,8-Heptachloronaphthalene
58877-88-6	1,2,3,4,5,6-Hexachloronaphthalene
67922-21-8	1,2,4,7-Tetrachloronaphthalene
67922-22-9	1,2,5,6-Tetrachloronaphthalene
67922-23-0	1,2,5,7-Tetrachloronaphthalene

Code Ident **01295**

Document number **6494169**

Rev **S**

Sheet 25 of 32

67922-24-1	1,2,6,8-Tetrachloronaphthalene
67922-25-2	1,2,3,4,5-Pentachloronaphthalene
67922-26-3	1,2,3,4,6-Pentachloronaphthalene
67922-27-4	1,2,3,4,5,7-Hexachloronaphthalene
90948-28-0	1,2,4,5,6,8-Hexachloronaphthalene
103426-92-2	1,2,4,5,7,8-Hexachloronaphthalene
103426-93-3	1,2,3,4,5,8-Hexachloronaphthalene
103426-94-4	1,2,3,5,7,8-Hexachloronaphthalene
103426-95-5	1,2,3,5,6,8-Hexachloronaphthalene
103426-96-6	1,2,3,4,6,7-Hexachloronaphthalene
103426-97-7	1,2,3,5,6,7-Hexachloronaphthalene
149864-78-8	1,2,3,6-Tetrachloronaphthalene
149864-79-9	1,2,6,7-Tetrachloronaphthalene
149864-80-2	1,2,5,8-Tetrachloronaphthalene
149864-81-3	1,2,3,8-Tetrachloronaphthalene
149864-82-4	1,2,7,8-Tetrachloronaphthalene
150205-21-3	1,2,3,7,8-Pentachloronaphthalene
150224-15-0	1,3,6,8-Tetrachloronaphthalene
150224-16-1	1,2,3,6,7-Pentachloronaphthalene
150224-17-2	1,2,4,6,7-Pentachloronaphthalene
150224-18-3	1,2,3,5,6-Pentachloronaphthalene
150224-19-4	1,2,4,5,7-Pentachloronaphthalene
150224-20-7	1,2,4,5,6-Pentachloronaphthalene
150224-21-8	1,2,4,7,8-Pentachloronaphthalene
150224-22-9	1,2,4,6,8-Pentachloronaphthalene
150224-23-0	1,2,3,6,8-Pentachloronaphthalene
150224-24-1	1,2,3,5,8-Pentachloronaphthalene
150224-25-2	1,2,4,5,8-Pentachloronaphthalene

**TABLE S Class I and II Ozone Depleting Substances**

(This is the complete listing of compounds in the category. These will only be used in closed loop refrigeration systems and phased out in accordance with the Montreal Protocol.)

CAS#	Chemical or Material Name
75-69-4	CFC-11 (CCl <sub>3</sub> F) Trichlorofluoromethane
75-71-8	CFC-12 (CCl <sub>2</sub> F <sub>2</sub> ) Dichlorodifluoromethane
76-13-1 or 354-58-5	CFC-113 (C <sub>2</sub> F <sub>3</sub> Cl <sub>3</sub> ) 1,1,2-Trichlorotrifluoroethane
76-14-2	CFC-114 (C <sub>2</sub> F <sub>4</sub> Cl <sub>2</sub> ) Dichlorotetrafluoroethane
76-15-3	CFC-115 (C <sub>2</sub> F <sub>5</sub> Cl) Monochloropentafluoroethane
353-59-3	Halon 1211 (CF <sub>2</sub> ClBr) Bromochlorodifluoromethane
75-63-8	Halon 1301 (CF <sub>3</sub> Br) Bromotrifluoromethane
124-73-2	Halon 2402 (C <sub>2</sub> F <sub>4</sub> Br <sub>2</sub> ) Dibromotetrafluoroethane

# Texas Instruments

# Semiconductor Operations

75-72-9	CFC-13 (CF <sub>3</sub> Cl) Chlorotrifluoromethane
354-56-3	CFC-111 (C <sub>2</sub> FCl <sub>5</sub> ) Pentachlorofluoroethane
76-12-0 or	CFC-112 (C <sub>2</sub> F <sub>2</sub> Cl <sub>4</sub> ) Tetrachlorodifluoroethane
76-11-9	
422-78-6 or	CFC-211 (C <sub>3</sub> FCl <sub>7</sub> ) Heptachlorofluoropropane
135401-87-5	
422-81-1	
3182-26-1	CFC-212 (C <sub>3</sub> F <sub>2</sub> Cl <sub>6</sub> ) Hexachlorodifluoropropane
2354-06-5 or	CFC-213 (C <sub>3</sub> F <sub>3</sub> Cl <sub>5</sub> ) Pentachlorotrifluoropropane
134237-31-3	
29255-31-0 or	CFC-214 (C <sub>3</sub> F <sub>4</sub> Cl <sub>4</sub> ) Tetrachlorotetrafluoropropane
2268-46-4	
4259-43-2 or	CFC-215 (C <sub>3</sub> F <sub>5</sub> Cl <sub>3</sub> ) Trichloropentafluoropropane
76-17-5	
1599-41-3	
661-97-2	CFC-216 (C <sub>3</sub> F <sub>6</sub> Cl <sub>2</sub> ) Dichlorohexafluoropropane
422-86-6	CFC-217 (C <sub>3</sub> F <sub>7</sub> Cl) Chloroheptafluoropropane
56-23-5	CCl <sub>4</sub> Carbon tetrachloride
71-55-6	Methyl Chloroform (C <sub>2</sub> H <sub>3</sub> Cl <sub>3</sub> ) 1,1,1-trichloroethane
74-83-9	Bromomethane
74-96-4	Bromoethane
75-43-4	HCFC-21 (CHFCl <sub>2</sub> ) Dichlorofluoromethane
75-45-6	HCFC-22 (CHF <sub>2</sub> Cl) Monochlorodifluoromethane
593-70-4	HCFC-31 (CH <sub>2</sub> FCl) Monochlorofluoromethane
354-14-3 or	HCFC-121 (C <sub>2</sub> HFCl <sub>4</sub> ) Tetrachlorofluoroethane
354-11-0	
134237-32-4	
354-21-2 or	HCFC-122 (C <sub>2</sub> HF <sub>2</sub> Cl <sub>3</sub> ) Trichlorodifluoroethane
41834-16-6	
354-15-4	
354-12-1	
306-83-2 or	HCFC-123 (C <sub>2</sub> HF <sub>3</sub> Cl <sub>2</sub> ) Dichlorotrifluoroethane
34077-87-7	
354-23-4	
90454-18-5	
812-04-4	
2837-89-0 or	HCFC-124 (C <sub>2</sub> HF <sub>4</sub> Cl) Monochlorotetrafluoroethane
63938-10-3	
354-25-6	
359-28-4 or	HCFC-131 (C <sub>2</sub> H <sub>2</sub> FCl <sub>3</sub> ) Trichlorofluoroethane
27154-33-2	
134237-34-6	
811-95-0	
2366-36-1	

# Texas Instruments

# Semiconductor Operations

1649-08-7 or	HCFC-132b (C <sub>2</sub> H <sub>2</sub> F <sub>2</sub> Cl <sub>2</sub> ) Dichlorodifluoroethane
25915-78-0	
431-06-1	
471-43-2	
1842-05-3	
75-88-7 or	HCFC-133a (C <sub>2</sub> H <sub>2</sub> F <sub>3</sub> Cl) Monochlorotrifluoroethane
1330-45-6	
431-07-2	
421-04-5	
1717-00-6 or	HCFC-141b (C <sub>2</sub> H <sub>3</sub> FCl <sub>2</sub> ) Dichlorofluoroethane
25167-88-8	
430-57-9	
430-53-5	
75-68-3 or	HCFC-142b (C <sub>2</sub> H <sub>3</sub> F <sub>2</sub> Cl) Monochlorodifluoroethane
25497-29-4	
338-65-8	
338-64-7	
110587-14-9 or	Chlorofluoroethane
762-50-5	
1615-75-4	
422-26-4 or	HCFC-221 (C <sub>3</sub> HFCl <sub>6</sub> ) Hexachlorofluoropropane
134237-35-7	
29470-94-8	
422-49-1 or	HCFC-222 (C <sub>3</sub> HF <sub>2</sub> Cl <sub>5</sub> ) Pentachlorodifluoropropane
134237-36-8	
29470-94-8	
422-52-6 or	HCFC-223 (C <sub>3</sub> HF <sub>3</sub> Cl <sub>4</sub> ) Tetrachlorotrifluoropropane
134237-37-9	
422-50-4	
422-54-8 or	HCFC-224 (C <sub>3</sub> HF <sub>4</sub> Cl <sub>3</sub> ) Trichlorotetrafluoropropane
134237-38-0	
422-53-7	
422-51-5	
422-56-0 or	HCFC-225ca (C <sub>3</sub> HF <sub>5</sub> Cl <sub>2</sub> ) Dichloropentafluoropropane
127564-92-5	
128903-21-9	
422-48-0	
422-44-6	
13474-88-9	
136013-79-1	
111512-56-2	
507-55-1	HCFC-225cb (C <sub>3</sub> HF <sub>5</sub> Cl <sub>2</sub> ) Dichloropentafluoropropane
431-87-8 or	HCFC-226 (C <sub>3</sub> HF <sub>6</sub> Cl) Monochlorohexafluoropropane
134308-72-8	

# Texas Instruments

# Semiconductor Operations

421-94-3 or 134190-48-0	HCFC-231 (C3H2FCI5) Pentachlorofluoropropane
460-89-9 or 134237-39-1	HCFC-232 (C3H2F2CI4) Tetrachlorodifluoropropane
7125-84-0 or 134237-40-4	HCFC-233 (C3H2F3CI3) Trichlorotrifluoropropane
425-94-5 or 127564-83-4	HCFC-234 (C3H2F4CI2) Dichlorotetrafluoropropane
460-92-4 or 134237-41-5	HCFC-235 (C3H2F5CI) Monochloropentafluoropropane
666-27-3 or 134190-49-1	HCFC-241 (C3H3FCI4) Tetrachlorofluoropropane
460-63-9 or 134237-42-6	HCFC-242 (C3H3F2CI3) Trichlorodifluoropropane
460-69-5 or 134237-43-7	HCFC-243 (C3H3F3CI2) Dichlorotrifluoropropane
7125-99-7 338-75-0	
134190-50-4 or 679-85-6	HCFC-244 (C3H3F4CI) Monochlorotetrafluoropropane
421-75-0	
421-41-0 or 134190-51-5	HCFC-251 (C3H4FCI3) Monochlorotetrafluoropropane
818-99-5	
819-00-1 or 134190-52-6	HCFC-252 (C3H4F2CI2) Dichlorodifluoropropane
460-35-5 or 134237-44-8	HCFC-253 (C3H4F3CI) Monochlorotrifluoropropane
420-97-3 or 134237-45-9	HCFC-261 (C3H5FCI2) Dichlorofluoropropane
7799-56-6	
421-02-03 or 134190-53-7	HCFC-262 (C3H5F2CI) Monochlorodifluoropropane
420-99-5	
102738-79-4	
430-55-7 or 134190-54-8	HCFC-271 (C3H6FCI) Monochlorofluoropropane
420-44-0	
2314-97-8	Trifluoroiodomethane
1868-53-7	Dibromofluoromethane
1511-62-2	Bromodifluoromethane
373-52-4	Bromofluoromethane
306-80-9	Tetrabromofluoroethane
354-04-1	Dibromotrifluoroethane

Code Ident **01295**

Document number **6494169**

Rev **S**

Sheet 29 of 32

# Texas Instruments

# Semiconductor Operations

124-72-1	Bromotetrafluoroethane
75-82-1	Dibromodifluoroethane
421-06-7	Bromotrifluoroethane
358-97-4	Dibromofluoroethane
420-47-3	Bromodifluoroethane
762-49-2	Bromofluoroethane
431-78-7	Dibromopentafluoropropane
2252-78-0	Bromohexafluoropropane
460-88-8	Bromopentafluoropropane
70192-80-2	Tribromodifluoropropane
431-21-0	Dibromotrifluoropropane
679-84-5	Bromotetrafluoropropane
75372-14-4	Tribromofluoropropane
460-25-3	Dibromodifluoropropane
421-46-5	Bromotrifluoropropane
51584-26-0	Dibromofluoropropane
1871-72-3	Bromofluoropropane

Revision	Description
A Released: February 28, 2001 by Tim Yeakley	Initial version
B Revised: March 21, 2003 by Tim Yeakley	1) Minor revisions to text in order to improve clarity. 2) Transferred document control from ESH Standards website to WPL Website, <a href="http://wpl.ext.ti.com/ccms/docs/TI%20SC%20Banned%20Chemicals%20%20Materials%20List.doc">http://wpl.ext.ti.com/ccms/docs/TI%20SC%20Banned%20Chemicals%20%20Materials%20List.doc</a> .

<p>C Revised: August 16, 2006 by Tim Yeakley</p>	<p>1) Extensive modifications are included in this version. Compounds that are subject to TI's list have been clarified with as much specificity as possible by adding reference tables with CAS number identification of the compounds of concern for: Azo-based materials, Brominated Flame retardants and bromine based materials, Cadmium compounds, Chromium VI compounds, Creosote Compounds, Select Chlorine compounds, Select Ethylene Glycol Ethers, Select Fluorine compounds, Lead and Lead compounds, Mercury and Mercury Compounds, Select Phthalate compounds, Select Trivalent Organotin Compounds, Select Pesticides &amp; Herbicides and Miscellaneous Substances.</p> <p>2) A column was added that provide some key regulatory and industry references for each class of compounds.</p> <p>3) The "Qualifier" column header was changed to "Manufacturers threshold based on customer requirements" to clearly identify these as TI's thresholds.</p> <p>4) Some thresholds were clarified including those for Arsenic, Lead, and Phthalates.</p>
<p>D</p>	<p>August 15, 2007, Tim Yeakley. 1) Benzene was added back to the list after being mistakenly removed in the previous revision.</p>
<p>E</p>	<p>ECO/ECM #2082834/#2083419, M. Murray, 09/18/07, Tim Yeakley 1) SAP/EDGE controlled, 2) References to exclusions for 'intentionally added' substances were removed.</p>
<p>F</p>	<p>ECO #2090540, M. Murray, 06/26/08, Tim Yeakley: Added an exemption to the section for Barium compounds</p>
<p>G</p>	<p>ECO #2104974, M. Murray, 02/03/10, Tim Yeakley, Mark Frimann: Added chemicals identified by the EU REACH program as SVHC's and Dimethyl Fumarate, PVC, HFC's, PFC's, short chain chlorinated paraffin's, PAH's. Removed Barium and Selenium compounds.</p>
<p>H</p>	<p>ECO #2115615, M. Murray, 05/11/11, Tim Yeakley, Mark Frimann: Modified name of the list from "TI's Banned Chemicals and Materials List" to "TI's Restricted Chemicals and Materials List" to support changes made to better align with company-wide product content control changes. Added Chromium compounds to Table D and Cobalt compounds to Table O to support control of EU REACH SVHC's. Added Antimony and exemptions to Table M.</p>
<p>I</p>	<p>ECO #2117241, M. Murray, 07/05/11, Tim Yeakley, Mark Frimann; Modified name on title page from "TI's Banned Chemicals and Materials List" to "TI's Restricted Chemicals and Materials List" to support changes made to better align with company-wide product content control changes. Added Table M (Antimony and Antimony Compounds). Added table R (Halogenated Dioxins and Furans). Added compounds to support control of newly added substances to the EU REACH SVHC's.</p>
<p>J</p>	<p>M. Murray, 1/30/12, Tim Yeakley, Added substances to align TI's RCM list with the December 15, 2011 additions to the EU REACH SVHC list.</p>
<p>K</p>	<p>M. Murray, 6/28/12, Tim Yeakley, Added substances to align with customer requirements to tables B, D, F, L and Q. Added substances to tables G, I and O to align TI's RCM list with the June 18, 2012 update to the REACH SVHC list.</p>
<p>L</p>	<p>M. Murray, 1/18/13, Tim Yeakley, Added substances to tables B, G, H, I, K, L, and R to align TI's RCM list with the December 19, 2012 update to the REACH SVHC list.</p>
<p>M</p>	<p>M. Murray, 7/12/13, Tim Yeakley, Added substances to table H to align TI's RCM list with the June 2013 update to the REACH SVHC list. 144 SVHC's are now included in TI's RCM list.</p>
<p>N</p>	<p>M. Murray, 12/20/13, Tim Yeakley, Added substances to table N and O to align TI's RCM list with the December 16, 2013 update to the REACH SVHC list. 151 SVHC's are now included in TI's RCM list. Additional updates were made to tables B, H, N and O to include requirements from customers.</p>
<p>O</p>	<p>M. Murray, 6/27/14, Tim Yeakley, Added substances to table O to align TI's RCM list with the June 16, 2014 update to the REACH SVHC list. 155 SVHC's are now included in TI's RCM list.</p>

# Texas Instruments

# Semiconductor Operations

P	M. Murray, 1/7/15, Tim Yeakley, Added substance to Tables C and O to align TI's RCM list with the December 17, 2014 update to the REACH SVHC list. 162 SVHC's are now included in TI's RCM list and added a CAS number to table O that was unintentionally deleted.
Q	M. Murray, 6/25/15, Tim Yeakley, Added an exemption to the use of antimony trioxide and new REACH substances in Table O. Per ECHA there are officially 163 REACH SVHC's and they are included in this document.
R	I. Tamez, 1/12/16, Tim Yeakley, Added some clarifying CAS numbers in Table O. Added REACH SVHC substances to tables H and O. 168 SVHC's are now included in TI's RCM list
S	ECO #2168340, 09/06/17, V. Orpilla, Tim Yeakley; 1) Updated the regulatory references on sheet 2 and a clarifying note to Table M (Table M has been removed and reserved for future use). 2) Added REACH SVHC substances to table Q. 174 SVHC's are now included in TI's RCM list. To more completely align with IEC 62474, substances were added to tables B, F, H, O, and R. A new table S was also added for Class I and II ODS's.