## Environmental Category & Description

<table>
<thead>
<tr>
<th>Details for:</th>
<th>ST16C2550IQ48-F</th>
</tr>
</thead>
<tbody>
<tr>
<td>RoHS</td>
<td>Exempt</td>
</tr>
<tr>
<td>RoHS</td>
<td>If “Y”, then product is RoHS compliant meeting the requirements of Directive (EU) 2015/863 with no exemptions taken. See Appendix B.</td>
</tr>
<tr>
<td>Halogen Free</td>
<td>If “Y”, then product is halogen and lead (Pb) free. Green products meet RoHS requirements plus additional hazardous material restrictions. See Appendix C.</td>
</tr>
<tr>
<td>REACH</td>
<td>If “Y”, then product does not use any Substances of Very High Concern (SVHC) under REACH requirements. See Appendix D for a list of these substances. If &quot;N&quot;, please see Appendix E for SVHC that is contained in this product</td>
</tr>
<tr>
<td>TSCA</td>
<td>If “Y”, then product is compliant and does not use any of the Toxic Substance Control Act (TSCA) restricted substances. See Appendix F for a list of these substances.</td>
</tr>
</tbody>
</table>

MaxLinear, Inc.
Quality and Reliability
Jan 21, 2024
Appendix A | RoHS with Exemption

<table>
<thead>
<tr>
<th>Exemption</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7a</td>
<td>Lead in high melting temperature type solder</td>
</tr>
<tr>
<td>7c</td>
<td>Electrical and electronic components containing lead in a glass or ceramic, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound.</td>
</tr>
<tr>
<td>15</td>
<td>Lead in solder to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages</td>
</tr>
</tbody>
</table>

Appendix B | RoHS Directive (EU) 2015/863

<table>
<thead>
<tr>
<th>Restricted Substance</th>
<th>Allowable Limit (at homogenous material level)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium (Cd)</td>
<td>100 ppm (0.01 weight %)</td>
</tr>
<tr>
<td>Mercury (Hg)</td>
<td>1000 ppm (0.10 weight %)</td>
</tr>
<tr>
<td>Lead (Pb)</td>
<td>1000 ppm (0.10 weight %)</td>
</tr>
<tr>
<td>Hexavalent Chromium (Cr6+)</td>
<td>1000 ppm (0.10 weight %)</td>
</tr>
<tr>
<td>Polybrominated biphenyl (PBB)</td>
<td>1000 ppm (0.10 weight %)</td>
</tr>
<tr>
<td>Polybrominated diphenyl ethers (PBDE)</td>
<td>1000 ppm (0.10 weight %)</td>
</tr>
<tr>
<td>Bis(2-Ethylhexyl) phthalate (DEHP)</td>
<td>1000 ppm (0.10 weight %)</td>
</tr>
<tr>
<td>Benzyl butyl phthalate (BBP)</td>
<td>1000 ppm (0.10 weight %)</td>
</tr>
<tr>
<td>Dibutyl phthalate (DBP)</td>
<td>1000 ppm (0.10 weight %)</td>
</tr>
<tr>
<td>Diisobutyl phthalate (DIBP)</td>
<td>1000 ppm (0.10 weight %)</td>
</tr>
</tbody>
</table>

Appendix C | Halogen Free

<table>
<thead>
<tr>
<th>Restricted Substance</th>
<th>Allowable Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bromine (Br)</td>
<td>900 ppm</td>
</tr>
<tr>
<td>Chlorine (Cl)</td>
<td>900 ppm</td>
</tr>
<tr>
<td>Antimony (Sb₂O₃)</td>
<td>900 ppm</td>
</tr>
</tbody>
</table>

Appendix D | REACH 235 - Regulation (EC) No 1907/2006 (Threshold Limit 1000ppm (0.1% w/w))

<table>
<thead>
<tr>
<th>Date of Inclusion: June 14, 2023</th>
<th>EC Number</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>235 dicyclo(5.2.1.0²⁷)dec-3-en-8-yl(4-isopropyl or isobutyl or 2-ethylhexyl)O-isopropyl</td>
<td>278-355-8</td>
<td>79890-60-8</td>
</tr>
<tr>
<td>234 bis(4-chlorophenyl)methane</td>
<td>101-247-9</td>
<td>80-07-8</td>
</tr>
</tbody>
</table>

Date of Inclusion: January 17, 2023

<table>
<thead>
<tr>
<th>EC Number</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>228 reaction mass of 2,3,3,5,5,6,6-octafluoro-4(1,1,2,3,3,3-heptfluoropropan-2-yl)morpholine and 2,2',3,3,5,5,6,6-octafluoro-4(heptafluoropropyl)morpholine</td>
<td>473-390-7</td>
</tr>
<tr>
<td>232 Perfluorohexanic acid and its salts Ammonium perfluoroheptanoate Potassium perfluoroheptanoate Perfluorohexanic acid Sodium perfluoroheptanoate</td>
<td>228-098-2</td>
</tr>
<tr>
<td></td>
<td>206-798-9</td>
</tr>
<tr>
<td></td>
<td>243-518-4</td>
</tr>
<tr>
<td></td>
<td>20109-59-5</td>
</tr>
</tbody>
</table>

Date of Inclusion: June 10, 2022

<table>
<thead>
<tr>
<th>EC Number</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>213 Melamine</td>
<td>201-615-4</td>
</tr>
<tr>
<td>220 Butyl 4-hydroxybenzoate</td>
<td>224-208-8</td>
</tr>
<tr>
<td>229 bis(2-ethylhexyl)tetrabromophthalate covering any of the individual isomers and/or combinations thereof</td>
<td>247-426-5</td>
</tr>
<tr>
<td>228 Barium diboron tetracoxide</td>
<td>237-222-4</td>
</tr>
<tr>
<td>227 4,4'-Isopropylaniline</td>
<td>201-250-5</td>
</tr>
<tr>
<td>226 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol</td>
<td>201-236-9</td>
</tr>
<tr>
<td>225 1,1'-[ethane-1,2-diylbisoxy]bis[2,4,6-tribromobenzene]</td>
<td>253-692-3</td>
</tr>
</tbody>
</table>

Date of Inclusion: January 17, 2023

<table>
<thead>
<tr>
<th>EC Number</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>224 N,N,N-triethyl-N-(3,3-dimethyl-4-hydroxyphenyl)acrylamide</td>
<td>213-103-2</td>
</tr>
</tbody>
</table>

Date of Inclusion: July 08, 2021

<table>
<thead>
<tr>
<th>EC Number</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>219 Phenol, alkylation products (mainly in para position) with C12-18 branched alkyl chains from oligomerisation, covering any individual isomers and/or combinations thereof (PDDP)</td>
<td>-</td>
</tr>
<tr>
<td>218 Orthophosphoric acid, sodium salt</td>
<td>237-560-2</td>
</tr>
<tr>
<td>217 Medium-chain chlorinated paraffins (MCCP) Medium-chain chlorinated paraffins (MCCP) (UVC substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17)</td>
<td>-</td>
</tr>
<tr>
<td>216 Glutaral</td>
<td>202-856-5</td>
</tr>
<tr>
<td>215 4,4'-(1-methylpropylidene)bisphenol</td>
<td>201-025-1</td>
</tr>
<tr>
<td>214 2-(tert-butylbenzoyl)propionic acid and its individual stereoisomers</td>
<td>-</td>
</tr>
</tbody>
</table>
Diocetyl diurate, stearane, dioctyl, bis(2-acyloxy) derivs., and any other stearane, dioctyl, bis(2-acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety

Bi(2,2-dimethoxyethyl) ether

Dibutylin bis(2,4-dioctyl-6's-trin)

Butyl 4-hydroxybenzoate

2-methylimidazole

1-vinylimidazole

Date of Inclusion: June 16, 2020

EC Number: CAS Number:

Date of Inclusion: July 16, 2019

EC Number: CAS Number:

Date of Inclusion: December 21, 2013

EC Number: CAS Number:

Date of Inclusion: June 24, 2020

EC Number: CAS Number:

Date of Inclusion: January 25, 2020

EC Number: CAS Number:

Date of Inclusion: January 15, 2018

EC Number: CAS Number:

Date of Inclusion: January 15, 2017

EC Number: CAS Number:

Date of Inclusion: August 10, 2016

EC Number: CAS Number:

Date of Inclusion: June 27, 2018

EC Number: CAS Number:

Date of Inclusion: January 15, 2019

EC Number: CAS Number:

Date of Inclusion: November 17, 2017

EC Number: CAS Number:

Date of Inclusion: December 19, 2016

EC Number: CAS Number:

Date of Inclusion: July 17, 2015

EC Number: CAS Number:

Date of Inclusion: April 22, 2016

EC Number: CAS Number:

Date of Inclusion: October 7, 2015

EC Number: CAS Number:

Date of Inclusion: June 21, 2018

EC Number: CAS Number:

Date of Inclusion: April 11, 2016

EC Number: CAS Number:

Date of Inclusion: December 17, 2016

EC Number: CAS Number:

Date of Inclusion: May 13, 2016

EC Number: CAS Number:

Date of Inclusion: December 14, 2017

EC Number: CAS Number:

Date of Inclusion: October 7, 2016

EC Number: CAS Number:

Date of Inclusion: November 19, 2016

EC Number: CAS Number:

Date of Inclusion: December 17, 2018

EC Number: CAS Number:

Date of Inclusion: June 15, 2015

EC Number: CAS Number:

Date of Inclusion: December 17, 2016

EC Number: CAS Number:

Date of Inclusion: July 17, 2015

EC Number: CAS Number:

Date of Inclusion: October 7, 2015

EC Number: CAS Number:
161 2-(2H-benzotriazol-2-yl)-4,6-ditert-pentylphenol (UV-328) 247-384-8 25973-55-1
160 2-Benzenediacarboxylic acid, dihydroxy ester, branched and linear 250-903-5 6831-50-4
159 2-ethylhexyl 10-ethyl-4,4-dicloetyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE) 239-622-4 15571-58-1
158 Cadmium fluoride 232-220-2 7790-78-6
157 reaction mass of 2-ethylhexyl 10-ethyl-4,4-dicloetyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-[2-[2-ethylhexyl]oxy]-2-oxoethyl)[4-oxetyl]-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE) - -
156 Cadmium sulphate 233-33-6 10124-36-4 31119-53-6

Date of Inclusion: Jun 16, 2014

EC Number CAS Number
155 1,2-Benzenedicarboxylic acid, disheyl ester, branched and linear 271-093-5 6831-50-4
154 Sodium perborate, perboric acid, sodium salt 234-390-0 11138-47-9 13972-19-5
153 Sodium peroxomethoborate 231-556-4 7612-04-4
152 Cadmium chloride 231-296-7 10108-64-2

Date of Inclusion: Dec 16, 2013

EC Number CAS Number
151 Cadmium sulphide 215-147-8 1306-23-6
150 Dibutyltin dichloride (DBTC) 201-559-5 84-75-3
149 Dihexyl phthalate 202-506-9 96-45-7
148 Imidodipropyl-2-thiono (2-imidazoline-2-thiol) 146-677-8 15155-23-1
147 Tetracyclophosphate 209-358-4 573-58-6
146 Dibutyltin 4,4-diacetoxy-4-methyl-4-(4-methoxy-2-aminophenyl) (C.I. Direct Red 28) 206-104-4 301-04-2

Date of Inclusion: Jun 20, 2013

EC Number CAS Number
144 Cadmium 213-152-8 7440-43-9
143 Ammonium pentadecaflurooctanoate (APFO) 223-320-4 3825-26-1
142 Pentadecafluorotetradecanoic acid (PFT) 206-397-9 335-47-1
141 Dibenzyphthalate (DBP) 205-017-9 111-18-0
140 4-Nonylphenol, branched and linear, ethoxylated 215-146-2 1306-19-0
139 Cadmium oxide 213-152-8 7440-43-9

Date of Inclusion: Dec 19, 2012

EC Number CAS Number
138 Trilode oxide 235-252-2 12141-20-7
137 Trilead bis(carbonate)dihydride 215-290-6 1319-46-6
136 Tricosafluorododecanoic acid 206-203-2 307-55-1
135 Tetralead trioxide sulphate 235-380-9 12202-17-4
134 Tetraethyl lead 201-075-4 78-00-2
133 Sulfuric acid, lead salt, dibasic 234-667-1 6222-08-8
132 Silicic acid, lead salt 234-363-3 11120-22-2
131 Silicic acid (H2Si2O5), barium salt (1:1), lead-doped 273-271-5 6878-75-8
130 Pyrocrochle, antimony lead yellow 232-382-1 8012-00-8
129 Pentalead tetaoxide sulphate 235-067-3 12065-90-6
128 Pentacosfluorotetradecanoic acid 276-745-2 72629-94-8
127 Orange lead (lead tetraoxide) 215-235-6 1314-41-6
126 o-Toluidine 202-429-0 95-54-3
125 o-Aminoazotoluene 202-591-2 97-56-3
124 N-Pentylisocyanophthalate 27729-67-9
123 N-Methylnitrobenzamide 201-182-6 79-16-3
122 N,N-Dimethylaniline 200-679-5 68-12-2
121 Methylxiran (Propylene oxide) 200-879-2 73-56-9
120 Methyloxayetic acid 210-845-6 625-45-4
119 Lead titanium oxinitrate 235-727-4 12266-81-2
118 Lead titanium trioxide 235-038-9 12060-00-3
117 Lead oxide sulfite 234-853-7 12036-76-9
116 Lead monoxide (lead oxide) 215-267-0 1131-78-8
115 Lead dinitrate 231-245-9 10039-74-8
114 Lead cyanide 244-073-9 20817-46-9
113 Lead bis(tetrafluoroborate) 237-486-0 13814-96-5
112 Hexahydriclyethylphthalic anhydride 247-012-0 19438-60-9 57110-29-9
111 Heptacosfluorotetradecanoic acid 206-304-3 378-06-7
110 Henicosfluorodecanoic acid 218-165-4 20584-94-8
109 Furan 203-727-3 110-00-9
108 Acids, C6-15, lead salts 192-966-7 91031-62-8
107 Dioksbis(tetraaryl)trilead 235-702-8 12578-12-0
106 Dinoses (B-sec-butyl-2,4-dinitrophenol) 201-861-7 88-45-7
105 Dimethyl sulphate 210-058-1 77-78-1
104 Dimersphthalic acid 210-084-4 605-59-5
103 Diethyl sulphate 200-589-6 64-67-5
102 Dibutyltin dichloride (DBTC) 211-670-0 683-18-1
101 Dioctadecyl phthalate(2C40)(ester) (Decadecamethylene carbonate) 204-650-8 123-77-3
99 Bis(2-pentabromophenyl)ether (Decabromobiphenyl ether; DecaBDE) 214-609-4 1163-19-5
98 Biphényl-4-ylamine 202-177-1 92-67-1
97 Acrylic acid, lead salt, basic 257-175-3 51404-69-4
96 Phthalatzo(10)benzylceton 273-685-9 69011-68-9
95 n-ethoxym-t-octyl-codole (p-cresidine) 204-419-1 120-71-8
94 N-Nonylphenol, branched and linear
Disodium tetraborate, anhydrous

Trichloroethylene

Cobalt(II) dinitrate

oligomers: Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid.

Acids generated from chromium trioxide and their oligomers. Names of the acids and their

Cobalt(II) sulphate

Cobalt(II) diacetate

2-Ethoxyethyl acetate

1,2,3-Trichloropropane

1-Methyl-2-pyrrolidone

Strontium chromate

1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters

Cobalt dichloride

2,2'-dichloro-4,4'-methylenedianiline

Bis(2-methoxyethyl) ether

Bis(2-methoxyethyl) phthalate

Trilead diarsenate

Lead styphnate

Arsenic acid

2-Methoxyaniline; o-Anisidine

Dichromium tris(chromate)

1,2-dichloroethane

N,N-dimethylacetamide

4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated

4-Aminoazobenzene

4-methyl-m-phenylenediamine (toluene-2,4-diamine)

4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol

4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol

4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol

1-bromopropane (n-propyl bromide)

4,4'-methylenedi-o-toluidine
### Appendix E | REACH Substance intentionally added (See page 1, Environmental Category & Description, if applicable to this product.)

<table>
<thead>
<tr>
<th>Restricted Substance</th>
<th>Where used</th>
<th>CAS Number</th>
<th>Threshold Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4'-Isopropylidenediphenol (Bisphenol A)</td>
<td>Substrate laminate</td>
<td>80-05-7</td>
<td>&gt;0.1% w/w</td>
</tr>
</tbody>
</table>

### Appendix F | TSCA

<table>
<thead>
<tr>
<th>Restricted Substance</th>
<th>CAS Number</th>
<th>Threshold Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4,6-Tris(tert-butyl)phenol (2,4,6-TTBP)</td>
<td>732-26-3</td>
<td>&gt;0.3% w/w</td>
</tr>
<tr>
<td>Hexachlorobutadiene (HCBD)</td>
<td>87-68-3</td>
<td>&gt;0% w/w</td>
</tr>
<tr>
<td>Pentachlorothiophenol (PCTP)</td>
<td>133-49-3</td>
<td>&gt;1% w/w</td>
</tr>
<tr>
<td>Decabromodiphenyl ether (DecaBDE)</td>
<td>1163-19-5</td>
<td>&gt;0% w/w</td>
</tr>
<tr>
<td>Phenol, isopropylated phosphate (3:1) (PIP 3:1)</td>
<td>68937-41-7</td>
<td>&gt;0% w/w</td>
</tr>
</tbody>
</table>