

Certificate of Non-Use of Hazardous Substances

MaxLinear, Inc. certifies that as of the date of this Certificate of Non-Use of Hazardous Substances, the MaxLinear product listed below is certified as follows:

Environmental Category & Description		Details for: SP708SEN-L/TR
RoHS Exempt	If "7a", "7c", or "15", then product contains lead but is compliant meeting the requirements of Directive (EU) 2011/65 pursuant to either exemption 7a, 7c, or 15. See Appendix A.	N
RoHS	If "Y", then product is RoHS compliant meeting the requirements of Directive (EU) 2015/863 with no exemptions taken. See Appendix B.	Y
Halogen Free	If "Y", then product is halogen and lead (Pb) free. Green products meet RoHS requirements plus additional hazardous material restrictions. See Appendix C.	Y
REACH	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 "N", please see Appendix E for SVHC that is contained in this product	Y
TSCA	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.	Y

MaxLinear, Inc.
Quality and Reliability
May 18, 2024

Appendix A | RoHS with Exemption

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

Appendix B | RoHS Directive (EU) 2015/863

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

Appendix C | Halogen Free

Restricted Substance	Allowable Limit
Bromine (Br)	900 ppm
Chlorine (Cl)	900 ppm
Antimony (Sb (Sb ₂ O ₃))	900 ppm

Appendix D | REACH 240 - Regulation (EC) No 1907/2006 (Threshold Limit 1000ppm (0.1% w/w))

	Date of Inclusion: January 23, 2024	EC Number	CAS Number
240	Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol	700-960-7	-
239	Bumetizole (UV-326)	223-445-4	3896-11-5
238	2-(dimethylamino)-2-[(4-methylphenyl)methyl]-1-[4-(morpholin-4-yl)phenyl]butan-1-one	438-340-0	119344-86-4
237	2-[2H-benzotriazol-2-yl]-4-[1,1,3,3-tetramethylbutyl]phenol	221-573-5	3147-75-9
236	2,4,6-tri-tert-butylphenol	211-989-5	732-26-3
	Date of Inclusion: June 14, 2023	EC Number	CAS Number
235	diphenyl[2,4,6-trimethylbenzoyl]phosphine oxide	278-355-8	75980-60-8
234	bis(4-chlorophenyl) sulphone	201-247-9	80-07-9
	Date of Inclusion: January 17, 2023	EC Number</	

217	Medium-chain chlorinated paraffins (MCCP) Medium-chain chlorinated paraffins (MCCP) (UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17)	-	-
216	Glutaral	203-856-5	111-30-8
215	4,4'-(1-methylpropylidene)bisphenol	201-025-1	77-40-7
214	2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers	-	-
213	2,2-bis(bromomethyl)propane 1,3-diol (BMP); 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA); 2,3-dibromo-1-propanol (2,3-DBPA)	221-967-7, 253-057-0, 202-480-9	3296-90-0, 36483-57-5, 1522-92-5, 96-13-9
212	1,4-dioxane	204-661-8	123-91-1
Date of Inclusion: January 19, 2021		EC Number	CAS Number
211	Diocetyl tin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety	-	-
210	Bis(2-(2-methoxyethoxy)ethyl)ether	205-594-7	143-24-8
Date of Inclusion: June 25, 2020		EC Number	CAS Number
209	Dibutylbis(pentane-2,4-dionato-O,O')tin	245-152-0	22673-19-4
208	Butyl 4-hydroxybenzoate	202-318-7	94-26-8
207	2-methylimidazole	211-765-7	693-98-1
206	1-vinylimidazole	214-012-0	1072-63-5
Date of Inclusion: January 16, 2020		EC Number	CAS Number
205	Perfluorobutane sulfonic acid (PFBS) and its salts	-	-
204	Diisohexyl phthalate	276-090-2	71850-09-4
203	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	400-600-6	71868-10-5
202	2-benzyl-2-dimethylamino-4'-morpholinobutylphenone	404-360-3	119313-12-1
Date of Inclusion: July 16, 2019		EC Number	CAS Number
201	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides	-	-
200	2-methoxyethyl acetate	203-772-9	110-49-6
199	4-tert-butylphenol	202-679-0	98-54-4
198	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥0.1% w/w of 4-nonylphenol, branched and linear (4-N		

163	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)	272-013-1 271-094-0	68648-93-1 68515-51-5
162	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]	-	-
Date of Inclusion: Dec 17, 2014		EC Number	CAS Number
161	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	247-384-8	25973-55-1
160	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	223-346-6	3846-71-7
159	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	239-622-4	15571-58-1
158	Cadmium fluoride	232-222-0	7790-79-6
157	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)	-	-
156	Cadmium sulphate	233-331-6	10124-36-4 31119-53-6
Date of Inclusion: Jun 16, 2014		EC Number	CAS Number
155	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	271-093-5	68515-50-4
154	Sodium perborate, perboric acid, sodium salt	234-390-0 239-172-9	11138-47-9 15120-21-5
153	Sodium peroxometaborate	231-556-4	7632-04-4
152	Cadmium chloride	233-296-7	10108-64-2
Date of Inclusion: Dec 16, 2013		EC Number	CAS Number
151	Cadmium sulphide	215-147-8	1306-23-6
150	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)	217-710-3	1937-37-7
149	Dihexyl phthalate	201-559-5	84-75-3
148	Imidazolidine-2-thione; (2-imidazoline-2-thiol)	202-506-9	96-45-7
147	Trixylyl phosphate	246-677-8	25155-23-1

99	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	214-604-9	1163-19-5
98	Biphenyl-4-ylamine	202-177-1	92-67-1
97	Acetic acid, lead salt, basic	257-175-3	51404-69-4
96	[Phthalato(2-)]dioxotrilead	273-688-5	69011-06-9
95	6-methoxy-m-toluidine (p-cresidine)	204-419-1	120-71-8
94	4-Nonylphenol, branched and linear	-	-
93	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	202-453-1	95-80-7
92	4-Aminoazobenzene	200-453-6	60-09-3
91	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated	-	-
90	4,4'-oxydianiline and its salts	202-977-0	101-80-4
89	4,4'-methylenedi-o-toluidine	212-658-8	838-88-0
88	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	421-150-7	143860-04-2
87	1-bromopropane (n-propyl bromide)	203-445-0	106-94-5
86	1,2-Diethoxyethane	211-076-1	629-14-1
85	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	284-032-2	84777-06-0
Date of Inclusion: Jun 18, 2012		EC Number	CAS Number
84	α, α -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)]	229-851-8	6786-83-0
83	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	202-959-2	101-61-1
82	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β -TGIC)	423-400-0	59653-74-6
81	Diboron trioxide	215-125-8	1303-86-2
80	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	203-977-3	112-49-2
79	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [with $\geq 0.1\%$ of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	209-218-2	561-41-1
78	Lead(II) bis(methanesulfonate)	401-750-5	17570-76-2
77	Formamide	200-842-0	75-12-7

31	Boric acid	233-139-2 234-343-4	11113-50-1 10043-35-3
30	Sodium chromate	231-889-5	7775-11-3
29	Disodium tetraborate, anhydrous	215-540-4	12179-04-3 1303-96-4 1330-43-4
28	Potassium chromate	232-140-5	7789-00-6
Date of Inclusion: Mar 30, 2010		EC Number	CAS Number
27	Acrylamide	201-173-7	79-06-1
Date of Inclusion: Jan 13, 2010		EC Number	CAS Number
26	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	215-693-7	1344-37-2
25	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	235-759-9	12656-85-8
24	Anthracene oil	292-602-7	90640-80-5
23	2,4-Dinitrotoluene	204-450-0	121-14-2
22	Anthracene oil, anthracene paste, anthracene fraction	295-275-9	91995-15-2
21	Anthracene oil, anthracene-low	292-604-8	90640-82-7
20	Tris(2-chloroethyl)phosphate	204-118-5	115-96-8
19	Diisobutyl phthalate	201-553-2	84-69-5
18	Lead chromate	231-846-0	7758-97-6
17	Anthracene oil, anthracene paste	292-603-2	90640-81-6
16	Pitch, coal tar, high temp.	266-028-2	65996-93-2
15	Anthracene oil, anthracene paste, distn. lights	295-278-5	91995-17-4
Date of Inclusion: Oct 28, 2008		EC Number	CAS Number
14	Lead hydrogen arsenate	232-064-2	7784-40-9
13	Benzyl butyl phthalate (BBP)	201-622-7	85-68-7
12	Bis(2-ethylhexyl)phthalate (DEHP)	204-211-0	117-81-7
11	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	201-329-4	81-15-2
10	Diarsenic trioxide	215-481-4	1327-53-3
9	Bis(tributyltin)oxide (TBTO)	200-268-0	56-35-9
8	Triethyl arsenate	427-700-2	15606-95-8
7	Diarsenic pentaoxide	215-116-9	1303-28-2
6	Sodium dichromate	234-190-3	10588-01-9 7789-12-0
5	Dibutyl phthalate (DBP)	201-557-4	84-74-2