



|                          |   |              |                    |
|--------------------------|---|--------------|--------------------|
| Date                     | 18-Jan-16                                   | Product name | Integrated Circuit |
| Package Code             | LQ  |              |                    |
| Package Name             | Micro Leadframe Package Quad                | Halogen Free | Y                  |
| Product Total Mass (g)   | 0.06902                                     | Plating      | Pure Matte Sn      |
| <b>Product Number(s)</b> | MLX71120<br>MLX71121<br>MLX71122<br>TH71221 |              |                    |

RoHS (Restriction Of use of Hazardous Substances) is a directive issued January 27, 2003 by the European Commission (EC). The RoHS directive requires that six hazardous substances are removed from all electrical and electronic equipment.

The JIG-101A standard issued in September 2007 is giving a framework to report specific information about the material composition of products to legal and market requirements. The level A list is composed of materials and substances that, when used in products and subparts, are subject to currently enacted legislation which prohibits their use, restricts or requires reporting. Level B list is composed of materials and substances that the industry has determined relevant for disclosure because they are significant of environmental, health or safety interest, would trigger hazardous waste management or could have negative impact on end-of-life management

**Banned Substances**

| Material / Substance Category Name                       | RoHS / JIG  | Material / Substance Category intentionally added or present (Y/N) above threshold level | If Yes, Material substance Mass (g) | If Yes, Detailed material Substance Information |
|--|-------------|--|-------------------------------------|---|
| Cadmium  | RoHS        | N  |                                     |   |
| Hexavalent Chromium                                      | RoHS        | N  |                                     |   |
| Lead   | RoHS        | N  |                                     |   |
| Mercury  | RoHS        | N  |                                     |   |
| Polybrominated Biphenyls (PBB)                           | RoHS        | N  |                                     |   |
| Polybrominated Diphenyl Ethers (PBDE)                    | RoHS        | N  |                                     |   |
| Asbestos   | JIG level A | N  |                                     |   |
| Certain Azo colorants and azodyes                        | JIG level A | N  |                                     |   |
| Cadmium / Cadmium compounds                              | JIG level A | N  |                                     |   |
| Hexavalent Chromium / Hexavalent Chromium Compounds      | JIG level A | N  |                                     |   |
| Lead / Lead Compounds                                    | JIG level A | N  |                                     |   |
| Mercury / Mercury Compounds                              | JIG level A | N  |                                     |   |
| Ozone depleting Substances                               | JIG level A | N  |                                     |   |
| Polybrominated Biphenyls (PBB)                           | JIG level A | N  |                                     |   |
| Polybrominated Diphenyl Ethers (PBDE)                    | JIG level A | N  |                                     |   |
| Polychlorinated Biphenyls (PCBs) and Terphenyls (PCTs)   | JIG level A | N  |                                     |   |
| Polychlorinated Naphtalenes (more than 3 chlorine atoms) | JIG level A | N  |                                     |   |
| Radioactive Substances                                   | JIG level A | N  |                                     |   |
| Certain Shortchain Chlorinated Paraffins (C10-C13)       | JIG level A | N  |                                     |   |
| Certain Tributyl Tin (TBT) abd Triphenyl Tin (TPT)       | JIG level A | N  |                                     |   |
| Tributyl Tin Oxyde (TBTO)                                | JIG level A | N  |                                     |   |
| Antimony / Antimony Compounds                            | JIG level B | N  |                                     |   |
| Arsenic / Arsenic Compounds                              | JIG level B | N  |                                     |   |
| Beryllium / Beryllium Compounds                          | JIG level B | N  |                                     |   |
| Bismuth / Bismuth Compounds                              | JIG level B | N  |                                     |   |
| Brominated Flame retardants (other than PBBs and PBDEs)  | JIG level B | N  |                                     |   |
| Certain Phthalates                                       | JIG level B | N  |                                     |   |
| Nickel   | JIG level B | N  |                                     |   |
| Polyvinyl Chlorine (PVC)                                 | JIG level B | N  |                                     |   |
| Selenium / Selenium Compounds                            | JIG level B | N  |                                     |   |



REACH - Substance of Very High Concern declaration

| Substance Identification  |               |                                  | REACH (SVHC) | Material / Substance Category intentionally added or present (Y/N) above threshold level | If Yes, Material substance Mass (g) | If Yes, Detailed material Substance Information |
|---|---------------|----------------------------------|--------------|--|-------------------------------------|---|
| Substance Name  | Einecs #      | CAS #                            |              |  |                                     |   |
| 4,4'- Diaminodiphenylmethane (MDA)  | 202-974-4     | 101-77-9                         | SVHC         | N  |                                     |   |
| 5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)                        | 201-329-4     | 81-15-2                          | SVHC         | N  |                                     |   |
| Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)               | 287-476-5     | 85535-84-8                       | SVHC         | N  |                                     |   |
| Anthracene  | 204-371-1     | 120-12-7                         | SVHC         | N  |                                     |   |
| Benzyl butyl phthalate (BBP)  | 201-622-7     | 85-68-7                          | SVHC         | N  |                                     |   |
| Bis(tributyltin)oxide (TBTO)  | 200-268-0     | 56-35-9                          | SVHC         | N  |                                     |   |
| Cobalt dichloride   | 231-589-4     | 7646-79-9                        | SVHC         | N  |                                     |   |
| Diarsenic pentaoxide  | 215-116-9     | 1303-28-2                        | SVHC         | N  |                                     |   |
| Diarsenic trioxide  | 215-481-4     | 1327-53-3                        | SVHC         | N  |                                     |   |
| Dibutyl phthalate (DBP)   | 201-557-4     | 84-74-2                          | SVHC         | N  |                                     |   |
| Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: | 247-148-4     | 25637-99-4                       | SVHC         | N  |                                     |   |
|   | 221-695-9     | 3194-55-6                        | SVHC         | N  |                                     |   |
| Alpha-hexabromocyclododecane  | (134237-50-6) |                                  | SVHC         | N  |                                     |   |
| Beta-hexabromocyclododecane   | (134237-51-7) |                                  | SVHC         | N  |                                     |   |
| Gamma-hexabromocyclododecane  | 134237-52-8)  |                                  | SVHC         | N  |                                     |   |
| Lead hydrogen arsenate  | 232-064-2     | 7784-40-9                        | SVHC         | N  |                                     |   |
| Sodium dichromate   | 234-190-3     | 10588-01-9                       | SVHC         | N  |                                     |   |
|   |               | 7789-12-0                        | SVHC         | N  |                                     |   |
| Triethyl arsenate   | 427-700-2     | 15606-95-8                       | SVHC         | N  |                                     |   |
| 2,4-Dinitrotoluene  | 204-450-0     | 121-14-2                         | SVHC         | N  |                                     |   |
| Aluminosilicate Refractory Ceramic Fibres                                 | -             |                                  | SVHC         | N  |                                     |   |
| Anthracene oil  | 292-602-7     | 90640-80-5                       | SVHC         | N  |                                     |   |
| Anthracene oil, anthracene-low  | 292-604-8     | 90640-82-7                       | SVHC         | N  |                                     |   |
| Anthracene oil, anthracene paste  | 292-603-2     | 90640-81-6                       | SVHC         | N  |                                     |   |
| Anthracene oil, anthracene paste, anthracene fraction                     | 295-275-9     | 91995-15-2                       | SVHC         | N  |                                     |   |
| Anthracene oil, anthracene paste, distn. lights                           | 295-278-5     | 91995-17-4                       | SVHC         | N  |                                     |   |
| Diisobutyl phthalate  | 201-553-2     | 84-69-5                          | SVHC         | N  |                                     |   |
| Lead chromate   | 231-846-0     | 7758-97-6                        | SVHC         | N  |                                     |   |
| Lead chromate molybdate sulphate red (C.I. Pigment Red 104)               | 235-759-9     | 12656-85-8                       | SVHC         | N  |                                     |   |
| Lead sulfochromate yellow (C.I. Pigment Yellow 34)                        | 215-693-7     | 1344-37-2                        | SVHC         | N  |                                     |   |
| Pitch, coal tar, high temp.   | 266-028-2     | 65996-93-2                       | SVHC         | N  |                                     |   |
| Tris(2-chloroethyl)phosphate  | 204-118-5     | 115-96-8                         | SVHC         | N  |                                     |   |
| Zirconia Aluminosilicate Refractory Ceramic Fibres                        | -             | -                                | SVHC         | N  |                                     |   |
| Acrylamide  | 201-173-7     | 79-06-1                          | SVHC         | N  |                                     |   |
| Trichloroethylene   | 201-167-4     | 79-01-6                          | SVHC         | N  |                                     |   |
| Boric acid  | 233-139-2     | 10043-35-3                       | SVHC         | N  |                                     |   |
|   | 234-343-4     | 11113-50-1                       | SVHC         | N  |                                     |   |
| Disodium tetraborate, anhydrous   | 215-540-4     | 1303-96-4, 1330-43-4, 12179-04-3 | SVHC         | N  |                                     |   |
| Tetraboron disodium heptaoxide, hydrate                                   | 235-541-3     | 12267-73-1                       | SVHC         | N  |                                     |   |

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|--|------------------------|-------------------------|--------------|--|-------------------------------------|---|
| Substance Name   | Einecs #               | CAS #                   |              |  |                                     |   |
| Potassium dichromate   | 231-906-6              | 7778-50-9               | SVHC         | N  |                                     |   |
| Ammonium dichromate  | 232-143-1              | 7789-09-5               | SVHC         | N  |                                     |   |
| Potassium chromate   | 232-140-5              | 7789-00-6               | SVHC         | N  |                                     |   |
| Sodium chromate  | 231-889-5              | 7775-11-3               | SVHC         | N  |                                     |   |
| Cobalt(II) sulphate  | 233-334-2              | 10124-43-3              | SVHC         | N  |                                     |   |
| Cobalt(II) dinitrate   | 233-402-1              | 10141-05-6              | SVHC         | N  |                                     |   |
| Cobalt(II) carbonate   | 208-169-4              | 513-79-1                | SVHC         | N  |                                     |   |
| Cobalt(II) diacetate   | 200-755-8              | 71-48-7                 | SVHC         | N  |                                     |   |
| 2-Methoxyethanol   | 203-713-7              | 109-86-4                | SVHC         | N  |                                     |   |
| 2-Ethoxyethanol  | 203-804-1              | 110-80-5                | SVHC         | N  |                                     |   |
| Chromium trioxide  | 215-607-8              | 1333-82-0               | SVHC         | N  |                                     |   |
| Chromic acid, Oligomers of chromic acid and dichromic acid, Dichromic acid   | 231-801-5<br>236-881-5 | 7738-94-5<br>13530-68-2 | SVHC         | N  |                                     |   |
| 2-Ethoxyethyl acetate  | 203-839-2              | 111-15-9                | SVHC         | N  |                                     |   |
| Strontium chromate   | 232-142-6              | 7789-06-2               | SVHC         | N  |                                     |   |
| 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters  | 271-084-6              | 68515-42-4              | SVHC         | N  |                                     |   |
| Hydrazine  | 206-114-9              | 302-01-2,<br>7803-57-8  | SVHC         | N  |                                     |   |
| 1-Methyl-2-pyrrolidone   | 212-828-1              | 872-50-4                | SVHC         | N  |                                     |   |
| 1,2,3-Trichloropropane   | 202-486-1              | 96-18-4                 | SVHC         | N  |                                     |   |
| 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich   | 276-158-1              | 71888-89-6              | SVHC         | N  |                                     |   |
| Zirconia Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm). c) alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content less or equal to 18% by weight |                        |                         | SVHC         | N  |                                     |   |
| Calcium arsenate   | 231-904-5              | 7778-44-1               | SVHC         | N  |                                     |   |
| Bis(2-methoxyethyl) ether  | 203-924-4              | 111-96-6                | SVHC         | N  |                                     |   |

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|--|-----------|------------|--------------|--|-------------------------------------|---|
| Substance Name   | Einecs #  | CAS #      |              |  |                                     |   |
| Aluminosilicate Refractory Ceramic Fibres<br>are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfil the three following conditions: a) oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm) c) alkaline oxide and alkali earth oxide (Na <sub>2</sub> O+K <sub>2</sub> O+CaO+MgO+BaO) content less or equal to 18% by weight |           |            | SVHC         | N  |                                     |   |
| Potassium hydroxyoctaoxodizincatedichromate  | 234-329-8 | 11103-86-9 | SVHC         | N  |                                     |   |
| Lead dipicrate   | 229-335-2 | 6477-64-1  | SVHC         | N  |                                     |   |
| N,N-dimethylacetamide  | 204-826-4 | 127-19-5   | SVHC         | N  |                                     |   |
| Arsenic acid   | 231-901-9 | 7778-39-4  | SVHC         | N  |                                     |   |
| 2-Methoxyaniline; o-Anisidine  | 201-963-1 | 90-04-0    | SVHC         | N  |                                     |   |
| Trilead diarsenate   | 222-979-5 | 3687-31-8  | SVHC         | N  |                                     |   |
| 1,2-dichloroethane   | 203-458-1 | 107-06-2   | SVHC         | N  |                                     |   |
| Pentazinc chromate octahydroxide   | 256-418-0 | 49663-84-5 | SVHC         | N  |                                     |   |
| Formaldehyde, oligomeric reaction products with aniline  | 500-036-1 | 25214-70-4 | SVHC         | N  |                                     |   |
| Bis(2-methoxyethyl) phthalate  | 204-212-6 | 117-82-8   | SVHC         | N  |                                     |   |
| 4-(1,1,3,3-tetramethylbutyl)phenol   | 205-426-2 | 140-66-9   | SVHC         | N  |                                     |   |
| Lead diazide, Lead azide   | 236-542-1 | 13424-46-9 | SVHC         | N  |                                     |   |
| Phenolphthalein  | 201-004-7 | 77-09-8    | SVHC         | N  |                                     |   |
| Dichromium tris(chromate)  | 246-356-2 | 24613-89-6 | SVHC         | N  |                                     |   |
| Lead styphnate   | 239-290-0 | 15245-44-0 | SVHC         | N  |                                     |   |
| 2,2'-dichloro-4,4'-methylenedianiline  | 202-918-9 | 101-14-4   | SVHC         | N  |                                     |   |
| α,α-Bis[4-(dimethylamino)phenyl]-4-(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) [with ≥ 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  | SVHC         | N  |                                     |   |
| N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)   | 202-959-2 | 101-61-1   | SVHC         | N  |                                     |   |
| 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 | SVHC         | N  |                                     |   |
| Diboron trioxide   | 215-125-8 | 1303-86-2  | SVHC         | N  |                                     |   |
| 1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)  | 203-977-3 | 112-49-2   | SVHC         | N  |                                     |   |
| 4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]  | 209-218-2 | 561-41-1   | SVHC         | N  |                                     |   |
| Lead(II) bis(methanesulfonate)   | 401-750-5 | 17570-76-2 | SVHC         | N  |                                     |   |
| Formamide  | 200-842-0 | 75-12-7    | SVHC         | N  |                                     |   |

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| Substance Name  | Einecs #  | CAS #   |              |  |                                     |   |
| [4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]   | 208-953-6   | 548-62-9  | SVHC         | N  |                                     |   |
| 1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)   | 203-794-9   | 110-71-4  | SVHC         | N  |                                     |   |
| [4-[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Blue 26) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]   | 219-943-6   | 2580-56-5   | SVHC         | N  |                                     |   |
| 1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)  | 219-514-3   | 2451-62-9   | SVHC         | N  |                                     |   |
| 4,4'-bis(dimethylamino)benzophenone (Michler's ketone)  | 202-027-5   | 90-94-8   | SVHC         | N  |                                     |   |
| Pyrochlore, antimony lead yellow  | 232-382-1   | 8012-00-8   | SVHC         | N  |                                     |   |
| 6-methoxy-m-toluidine (p-cresidine)   | 204-419-1   | 120-71-8  | SVHC         | N  |                                     |   |
| Henicosafuoroundecanoic acid  | 218-165-4   | 2058-94-8   | SVHC         | N  |                                     |   |
| 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]             | 247-094-1,<br>243-072-0,<br>256-356-4,<br>260-566-1 | 25550-51-0,<br>19438-60-9, 48122-14-1, 57110-29-9 | SVHC         | N  |                                     |   |
| 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]   | 201-604-9,<br>236-086-3,<br>238-009-9               | 85-42-7,<br>13149-00-3,<br>14166-21-3             | SVHC         | N  |                                     |   |
| Dibutyltin dichloride (DBTC)  | 211-670-0   | 683-18-1  | SVHC         | N  |                                     |   |
| Lead bis(tetrafluoroborate)   | 237-486-0   | 13814-96-5  | SVHC         | N  |                                     |   |
| Lead dinitrate  | 233-245-9   | 10099-74-8  | SVHC         | N  |                                     |   |
| Silicic acid, lead salt   | 234-363-3   | 11120-22-2  | SVHC         | N  |                                     |   |
| 4-Aminoazobenzene   | 200-453-6   | 60-09-3   | SVHC         | N  |                                     |   |
| Lead titanium zirconium oxide   | 235-727-4   | 12626-81-2  | SVHC         | N  |                                     |   |
| Lead monoxide (lead oxide)  | 215-267-0   | 1317-36-8   | SVHC         | N  |                                     |   |
| o-Toluidine   | 202-429-0   | 95-53-4   | SVHC         | N  |                                     |   |
| 3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine  | 421-150-7   | 143860-04-2                                       | SVHC         | N  |                                     |   |
| Silicic acid (H <sub>2</sub> SiO <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] | 272-271-5   | 68784-75-8  | SVHC         | N  |                                     |   |
| Trilead bis(carbonate)dihydroxide   | 215-290-6   | 1319-46-6   | SVHC         | N  |                                     |   |

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| Substance Name   | Einecs #  | CAS #       |              |  |                                     |   |
| Furan  | 203-727-3 | 110-00-9    | SVHC         | N  |                                     |   |
| N,N-dimethylformamide  | 200-679-5 | 68-12-2     | SVHC         | N  |                                     |   |
| 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]  | -         | -           | SVHC         | N  |                                     |   |
| 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] | -         | -           | SVHC         | N  |                                     |   |
| 4,4'-methylenedi-o-toluidine   | 212-658-8 | 838-88-0    | SVHC         | N  |                                     |   |
| Diethyl sulphate   | 200-589-6 | 64-67-5     | SVHC         | N  |                                     |   |
| Dimethyl sulphate  | 201-058-1 | 77-78-1     | SVHC         | N  |                                     |   |
| Lead oxide sulfate   | 234-853-7 | 12036-76-9  | SVHC         | N  |                                     |   |
| Lead titanium trioxide   | 235-038-9 | 12060-00-3  | SVHC         | N  |                                     |   |
| Acetic acid, lead salt, basic  | 257-175-3 | 51404-69-4  | SVHC         | N  |                                     |   |
| [Phthalato(2-)]dioxotrilead  | 273-688-5 | 69011-06-9  | SVHC         | N  |                                     |   |
| Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)   | 214-604-9 | 1163-19-5   | SVHC         | N  |                                     |   |
| N-methylacetamide  | 201-182-6 | 79-16-3     | SVHC         | N  |                                     |   |
| Dinoseb (6-sec-butyl-2,4-dinitrophenol)  | 201-861-7 | 88-85-7     | SVHC         | N  |                                     |   |
| 1,2-Diethoxyethane   | 211-076-1 | 629-14-1    | SVHC         | N  |                                     |   |
| Tetralead trioxide sulphate  | 235-380-9 | 12202-17-4  | SVHC         | N  |                                     |   |
| N-pentyl-isopentylphthalate  | -         | 776297-69-9 | SVHC         | N  |                                     |   |
| Dioxobis(stearato)trilead  | 235-702-8 | 12578-12-0  | SVHC         | N  |                                     |   |
| Tetraethyllead   | 201-075-4 | 78-00-2     | SVHC         | N  |                                     |   |
| Pentalead tetraoxide sulphate  | 235-067-7 | 12065-90-6  | SVHC         | N  |                                     |   |
| Pentacosaflluorotridecanoic acid   | 276-745-2 | 72629-94-8  | SVHC         | N  |                                     |   |
| Tricosaflluorododecanoic acid  | 206-203-2 | 307-55-1    | SVHC         | N  |                                     |   |
| Heptacosaflluorotetradecanoic acid   | 206-803-4 | 376-06-7    | SVHC         | N  |                                     |   |
| 1-bromopropane (n-propyl bromide)  | 203-445-0 | 106-94-5    | SVHC         | N  |                                     |   |
| Methoxyacetic acid   | 210-894-6 | 625-45-6    | SVHC         | N  |                                     |   |
| 4-methyl-m-phenylenediamine (toluene-2,4-diamine)  | 202-453-1 | 95-80-7     | SVHC         | N  |                                     |   |
| Methyloxirane (Propylene oxide)  | 200-879-2 | 75-56-9     | SVHC         | N  |                                     |   |
| Trilead dioxide phosphonate  | 235-252-2 | 12141-20-7  | SVHC         | N  |                                     |   |
| o-aminoazotoluene  | 202-591-2 | 97-56-3     | SVHC         | N  |                                     |   |
| 1,2-Benzenedicarboxylic acid, dipentylester, branched and linear   | 284-032-2 | 84777-06-0  | SVHC         | N  |                                     |   |
| 4,4'-oxydianiline and its salts  | 202-977-0 | 101-80-4    | SVHC         | N  |                                     |   |
| Orange lead (lead tetroxide)   | 215-235-6 | 1314-41-6   | SVHC         | N  |                                     |   |
| Biphenyl-4-ylamine   | 202-177-1 | 92-67-1     | SVHC         | N  |                                     |   |
| Diisopentylphthalate   | 210-088-4 | 605-50-5    | SVHC         | N  |                                     |   |
| Fatty acids, C16-18, lead salts  | 292-966-7 | 91031-62-8  | SVHC         | N  |                                     |   |
| Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))  | 204-650-8 | 123-77-3    | SVHC         | N  |                                     |   |
| Sulfurous acid, lead salt, dibasic   | 263-467-1 | 62229-08-7  | SVHC         | N  |                                     |   |

| Substance Identification  |                      |                        | REACH (SVHC) | Material / Substance Category intentionally added or present (Y/N) above threshold level | If Yes, Material substance Mass (g) | If Yes, Detailed material Substance Information |
|---|----------------------|------------------------|--------------|--|-------------------------------------|---|
| Substance Name  | Einecs #             | CAS #                  |              |  |                                     |   |
| Lead cyanamidate  | 244-073-9            | 20837-86-9             | SVHC         | N  |                                     |   |
| Cadmium   | 231-152-8            | 7440-43-9              | SVHC         | N  |                                     |   |
| Ammonium pentadecafluorooctanoate (APFO)  | 223-320-4            | 3825-26-1              | SVHC         | N  |                                     |   |
| Pentadecafluorooctanoic acid (PFOA)   | 206-397-9            | 335-67-1               | SVHC         | N  |                                     |   |
| Dipentyl phthalate (DPP)  | 205-017-9            | 131-18-0               | SVHC         | N  |                                     |   |
| 4-Nonylphenol, branched and linear, ethoxylated [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof] |                      |                        | SVHC         | N  |                                     |   |
| Cadmium oxide   | 215-146-2            | 1306-19-0              | SVHC         | N  |                                     |   |
| Cadmium sulphide  | 215-147-8            | 1306-23-6              | SVHC         | N  |                                     |   |
| 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              | SVHC         | N  |                                     |   |
| Dihexyl phthalate   | 201-559-5            | 84-75-3                | SVHC         | N  |                                     |   |
| Imidazolidine-2-thione; (2-imidazoline-2-thiol)   | 202-506-9            | 96-45-7                | SVHC         | N  |                                     |   |
| Trixylyl phosphate  | 246-677-8            | 25155-23-1             | SVHC         | N  |                                     |   |
| Disodium 3,3'-[[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)   | 209-358-4            | 573-58-0               | SVHC         | N  |                                     |   |
| Lead di(acetate)  | 206-104-4            | 301-04-2               | SVHC         | N  |                                     |   |
| 1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear  | 271-093-5            | 68515-50-4             | SVHC         | N  |                                     |   |
| Sodium perborate; perboric acid, sodium salt  | 239-172-9, 234-390-0 | -                      | SVHC         | N  |                                     |   |
| Sodium peroxometaborate   | 231-556-4            | 7632-04-4              | SVHC         | N  |                                     |   |
| Cadmium chloride  | 233-296-7            | 10108-64-2             | SVHC         | N  |                                     |   |
| Cadmium sulphate  | 233-331-6            | 10124-36-4, 31119-53-6 | SVHC         | N  |                                     |   |
| Cadmium fluoride  | 232-222-0            | 7790-79-6              | SVHC         | N  |                                     |   |
| 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)  | 247-384-8            | 25973-55-1             | SVHC         | N  |                                     |   |
| 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)  | 239-622-4            | 15571-58-1             | SVHC         | N  |                                     |   |
| 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)  | -                    | -                      | SVHC         | N  |                                     |   |
| 2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)  | 223-346-6            | 3846-71-7              | SVHC         | N  |                                     |   |
| Bis(2-ethylhexyl) phthalate (DEHP)  | 204-211-0            | 117-81-7               | SVHC         | N  |                                     |   |

| Substance Identification  |                        |                                     | REACH (SVHC) | Material / Substance Category intentionally added or present (Y/N) above threshold level | If Yes, Material substance Mass (g) | If Yes, Detailed material Substance Information |
|---|------------------------|-------------------------------------|--------------|--|-------------------------------------|---|
| Substance Name  | Einecs #               | CAS #                               |              |  |                                     |   |
| 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)   | 271-094-0<br>272-013-1 | 68515-51-5<br>68648-93-1            | SVHC         | N  |                                     |   |
| 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] | -                      | -                                   | SVHC         | N  |                                     |   |
| 1,3-propanesultone  | 214-317-9              | 1120-71-4                           | SVHC         | N  |                                     |   |
| 2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)  | 223-383-8              | 3864-99-1                           | SVHC         | N  |                                     |   |
| 2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)  | 253-037-1              | 36437-37-3                          | SVHC         | N  |                                     |   |
| Nitrobenzene  | 202-716-0              | 98-95-3                             | SVHC         | N  |                                     |   |
| Perfluorononan-1-oic-acid and its sodium and ammonium salts   | 206-801-3              | 375-95-1<br>21049-39-8<br>4149-60-4 | SVHC         | N  |                                     |   |





**Material Declaration**

| Part Name           | Material Name           | Component Weight (g) | Material Component (Element)  | CAS #       | Element ratio (%) | Material Weight (g) | Ratio total Wt (ppm) |
|---------------------|-------------------------|----------------------|-------------------------------|-------------|-------------------|---------------------|----------------------|
| Leadframe           | Ag plated Cu C194       | 0.03312              | Cu (remaining)                | 7440-50-8   | 96.59             | 0.03199             | 463498               |
|                     |                         |                      | Fe (2.1~ 2.6%)                | 7439-89-6   | 2.256             | 0.00075             | 10826                |
|                     |                         |                      | Pb (0.01 max)                 | 7439-92-1   | 0.003             | 0.000001            | 14                   |
|                     |                         |                      | P (0.015 ~ 0.15%)             | 7723-14-0   | 0.024             | 0.00001             | 115                  |
|                     |                         |                      | Zn (0.05 ~ 0.20%)             | 7440-66-6   | 0.127             | 0.00004             | 609                  |
|                     |                         |                      | Ag (0.5 ~ 1.5%)               | 7440-22-4   | 1                 | 0.00033             | 4799                 |
| Die                 | Silicon IC              | 0.00201              | Silicon (Si)                  | 7440-21-3   | 99.99             | 0.0020              | 29119                |
|                     |                         |                      | others                        | -           | 0.01              | 0.0000              | 3                    |
| Die attach material | Conductive epoxy QMI519 | 0.00082              | Silver (60~100%)              | 7440-22-4   | 71                | 0.00058             | 8435                 |
|                     |                         |                      | Carbocyclic Acrylate (10~30%) | Proprietary | 20                | 0.00016             | 2376                 |
|                     |                         |                      | Bismaleimide resin (1~5%)     | Proprietary | 3                 | 0.00002             | 356                  |
|                     |                         |                      | Acrylate (1~5%)               | Proprietary | 3                 | 0.00002             | 356                  |
|                     |                         |                      | Additive (1~5%)               | Proprietary | 3                 | 0.00002             | 356                  |
| Wire                | Gold                    | 0.00072              | Gold (Au)                     | 7440-57-5   | 99.99             | 0.00072             | 10431                |
|                     |                         |                      | others                        | -           | 0.01              | 0.0000001           | 1                    |
| Lead Finish         | Alloy                   | 0.00036              | Tin (Sn)                      | 7440-31-5   | 99.99             | 0.00036             | 5215                 |
|                     |                         |                      | others                        | -           | 0.01              | 0.00000004          | 1                    |
| Encapsulation       | Epoxy Resin EMEG770HC   | 0.03199              | Silica fused (85~95%)         | 60676-86-0  | 93.7              | 0.02997             | 434289               |
|                     |                         |                      | Epoxy Resin (1~5%)            | Proprietary | 3                 | 0.00096             | 13905                |
|                     |                         |                      | Phenol Resin (1~5%)           | Proprietary | 3                 | 0.00096             | 13905                |
|                     |                         |                      | Carbon black (0.1~0.5%)       | 1333-86-4   | 0.3               | 0.00010             | 1390                 |

**Total Package weight (g)** 0.06902

**Comments**

- Composition derived from MSDS and material CoC from vendors
- Component weight based on assembly of generic parts
- Reliability qualification reports are available upon request through the appropriate sales or marketing contact
- Third party testing for RoHS substances are available upon request to [environment@melexis.com](mailto:environment@melexis.com)

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