

Report No.: 48254680b9 001

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Client: Raytac Corporation
8F., No.788-1, Zhongzheng Road, Zhonghe District, New Taipei City 235601,
Taiwan, R.O.C.

Test item(s): Bluetooth Low Energy Module

Identification/Model No(s): MDBT40, MDBT40-P

Sample obtaining method: Sending by customer

Condition at delivery: Test item complete and undamaged.

Sample receiving date: 2024-11-19

Testing period: 2024-11-19 – 2024-12-12

Place of testing: TÜV Rheinland Hong Kong Ltd.

Test specification:

Customer Requirement:

Risk Assessment of Articles: Screening of 242 substances of very high concern (SVHC) subject to the candidate list by European Chemical Agency (ECHA) according to Regulation (EC) No. 1907/2006 of REACH and its amendments

Screening of proposals for identification as substances of very high concern (SVHC) published by the European Chemical Agency (ECHA)

Test result:

SVHC concentration(s)
≤ 0.1%
see remark *N/A

SVHC concentration(s)
≤ 0.1%

Other information: All the above models are the same materials according to client's declaration dated on 2024-07-10.

For and on behalf of
TÜV Rheinland Taiwan Ltd.

Arthur Cheng

2024-12-12
Date

Arthur Cheng/Project Manager
Name/Position



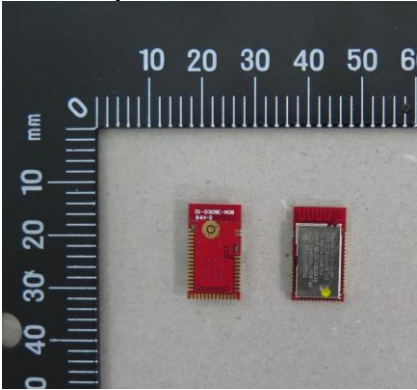
Sample information is provided by customer. Test result is drawn according to the kind and extent of tests performed.
This test report relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.
"Decision Rule" document announced in our website (<https://www.tuv.com/landingpage/en/qm-gcn/>) describes the statement of conformity and its rule of enforcement for test results are applicable throughout this test report.

Material List:

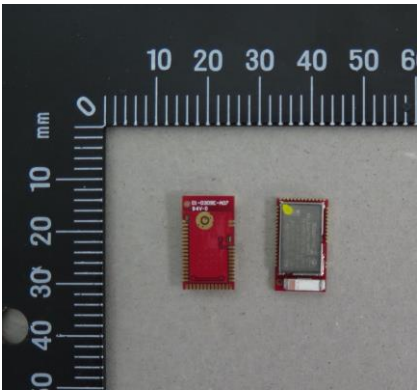
Lab no.: TCL241119-09

| Mat. no. | Part No. | Material | Color | Location |
|----------|----------|-----------------------|------------|--|
| 1 | B | Ceramic | White/Pink | Photo1 |
| 2 | B | Metal | Metallic | Photo1 (Refer to report no. 48254680b1 001, mat.8) |
| 3 | B | Electronic components | Black | Photo1 (Refer to report no. 48254680b1 001, mat.6) |
| 4 | B | PCB board | Red | Photo1 (Refer to report no. 48254680b4 001, mat.4) |

Test sample



A. MDBT40



B. MDBT40-P

Material Photo

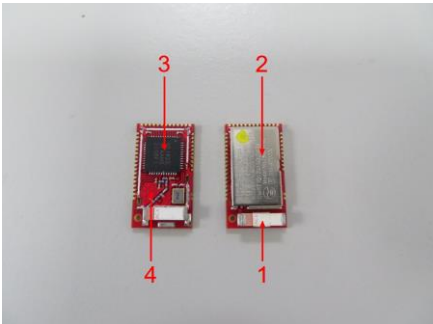


Photo1

Screening of Substances of Very High Concern (SVHC) subject to the Candidate List by European Chemical Agency (ECHA) according to Regulation (EC) No. 1907/2006 of REACH and its amendments.

Obligation of Importer is necessary if the detected SVHC concentration in article level is >0.1%:

To communicate information down the supply chain according to article. 33 of REACH. **OR**

1. Notification to ECHA, if the quantities of SVHC in the produced/imported articles are above 1 ton in total per year per company.
2. Provide sufficient information to ensure safe use of the article and, as a minimum, include the name of the substance, to their customers and on request to consumers within 45 days of the receipt of this request.

Screening of proposals for identification as substances of very high concern (SVHC) published by the European Chemical Agency (ECHA)

Test Method: 1) SVOC: organic solvent extraction, determination by GC-MS/ECD
 2) VOC: organic solvent extraction, determination by GC-MS
 3) VVOC: headspace-GC/MS analysis
 4) non-VOC: organic solvent extraction, determination by LC-MS/MS.
 5) inorganics: acid digestion, determination by ICP-OES

Test results

| Material No. | Result (%) |
|--------------|---|
| 1 | < RL |
| 2 | B:0.0475% ; the theoretical content of Boric acid= N/A *; Disodium tetraborate, anhydrous= N/A *; Diboron trioxide= N/A *; Tetraboron disodium heptaoxide, hydrate= N/A *; Sodium perborate, perboric acid, sodium salt= N/A *; Sodium peroxometaborate= N/A *; Disodium Octaborate= N/A *; Orthoboric acid, sodium salt = N/A *; Barium diboron tetraoxide= N/A *. |
| 3 | < RL |
| 4 | B:0.4115% ; the theoretical content of Boric acid= N/A *; Disodium tetraborate, anhydrous= N/A *; Diboron trioxide= N/A *; Tetraboron disodium heptaoxide, hydrate= N/A *; Sodium perborate, perboric acid, sodium salt= N/A *; Sodium peroxometaborate= N/A *; Disodium Octaborate= N/A *; Orthoboric acid, sodium salt = N/A *; Barium diboron tetraoxide= N/A *. |

Abbreviation: < = Less than
 RL = Reporting Limit
 % = Percentage

* N/A: Not Applicable to direct analysis.

The item can't directly be identified. Therefore the specific element(s) of SVHC was analyzed according to the recommendation from the ECHA. The submitted sample was found contain detectable amount of specific element(s) of SVHC. Upon further test verification or information from the client, the source of the detectable specific element(s) can't be identified from SVHC. Therefore the test result is remarked as N/A.

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Remark:

(*1) The reporting limit for each individual SVHC in Candidate List by ECHA:

| | Substances | CAS No. | Reporting Limit |
|----|---|--|-----------------|
| 1 | 4,4'- Diaminodiphenylmethane | 101-77-9 | 0.01% |
| 2 | Benzyl butyl phthalate (BBP) | 85-68-7 | 0.01% |
| 3 | Bis (2-ethylhexyl)phthalate (DEHP) | 117-81-7 | 0.01% |
| 4 | Dibutyl phthalate (DBP) | 84-74-2 | 0.01% |
| 5 | Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane | 25637-99-4 / 3194-55-6 / 134237-50-6 / 134237-51-7 / 134237-52-8 | 0.01% |
| 6 | 5-tert-butyl-2,4,6-trinitro-m-xylene (Musk xylene) | 81-15-2 | 0.01% |
| 7 | 2,4-Dinitrotoluene (2,4-DNT) | 121-14-2 | 0.01% |
| 8 | Diisobutyl phthalate (DIBP) | 84-69-5 | 0.01% |
| 9 | Tris(2-chloroethyl)phosphate (TCEP) | 115-96-8 | 0.01% |
| 10 | Diarsenic pentaoxide (*2) | 1303-28-2 | 0.01% |
| 11 | Diarsenic trioxide (*2) | 1327-53-3 | 0.01% |
| 12 | Lead chromate (*2) (*3) | 7758-97-6 | 0.01% |
| 13 | Lead chromate molybdate sulphate red (C.I. Pigment Red 104) (*2) (*3) | 12656-85-8 | 0.01% |
| 14 | Lead sulfochromate yellow (C.I. Pigment Yellow 34) (*2) | 1344-37-2 | 0.01% |
| 15 | Trichloroethylene | 79-01-6 | 0.01% |
| 16 | Chromium trioxide (*2) | 1333-82-0 | 0.01% |
| 17 | Acids generated from chromium trioxide and their oligomers. Names of the acids and their oligomers: Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid. (*2) | 7738-94-5 / 13530-68-2 | 0.01% |
| 18 | Sodium dichromate (*2) (*3) | 7789-12-0 / 10588-01-9 | 0.01% |
| 19 | Potassium dichromate (*2) (*3) | 7778-50-9 | 0.01% |
| 20 | Ammonium dichromate (*2) (*3) | 7789-09-5 | 0.01% |
| 21 | Potassium chromate (*2) (*3) | 7789-00-6 | 0.01% |
| 22 | Sodium chromate (*2) (*3) | 7775-11-3 | 0.01% |
| 23 | Formaldehyde, oligomeric reaction products with aniline (technical MDA) (*10) | 25214-70-4 | 0.01% |
| 24 | 1,2-Dichloroethane (1,2-DCE) | 107-06-2 | 0.01% |
| 25 | Bis(2-methoxyethyl) ether (DEGDB) | 111-96-6 | 0.01% |
| 26 | Arsenic acid (*2) | 7778-39-4 | 0.01% |
| 27 | 2,2'-dichloro-4,4'-methylenedianiline (MOCA) | 101-14-4 | 0.01% |
| 28 | Dichromium tris(chromate) (*2) (*3) | 24613-89-6 | 0.01% |
| 29 | Strontium chromate (*2) (*3) | 7789-06-2 | 0.01% |
| 30 | Potassium hydroxyoctaoxodizincatedichromate (*2) (*3) | 11103-86-9 | 0.01% |
| 31 | Pentazinc chromate octahydroxide (*2) (*3) | 49663-84-5 | 0.01% |

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| | Substances | CAS No. | Reporting Limit |
|----|---|-------------------------|------------------------|
| 32 | 1-bromopropane (n-propyl bromide) | 106-94-5 | 0.01% |
| 33 | Diisopentylphthalate | 605-50-5 | 0.01% |
| 34 | 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP) | 71888-89-6 | 0.01% |
| 35 | 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP) | 68515-42-4 | 0.01% |
| 36 | 1,2-Benzenedicarboxylic acid, dipentylester, branched and linear | 84777-06-0 | 0.01% |
| 37 | Bis(2-methoxyethyl) phthalate | 117-82-8 | 0.01% |
| 38 | Dipentyl phthalate (DPP) | 131-18-0 | 0.01% |
| 39 | N-pentyl-isopentylphthalate | 776297-69-9 | 0.01% |
| 40 | Anthracene oil ^(*)6) | 90640-80-5 | 0.01% ^(*)7) |
| 41 | Pitch, coal tar, high temperature ^(*)6) | 65996-93-2 | 0.01% ^(*)7) |
| 42 | 4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated (OPEO) [covering well-defined substances and UVCB substances, polymers and homologues] | - | 0.01% |
| 43 | 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] | - | 0.01% |
| 44 | 1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear | 68515-50-4 | 0.01% |
| 45 | Dihexyl phthalate | 84-75-3 | 0.01% |
| 46 | 1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5) | 68515-51-5 / 68648-93-1 | 0.01% |
| 47 | Trixylyl phosphate | 25155-23-1 | 0.01% |
| 48 | Sodium perborate, perboric acid, sodium salt ^(*)2) ^(*)5) | - | 0.01% |
| 49 | Sodium peroxometaborate ^(*)2) ^(*)5) | 7632-04-4 | 0.01% |
| 50 | 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] | - | 0.01% |
| 51 | 2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328) | 25973-55-1 | 0.01% |
| 52 | 2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327) | 3864-99-1 | 0.01% |
| 53 | 2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350) | 36437-37-3 | 0.01% |
| 54 | 2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320) | 3846-71-7 | 0.01% |
| 55 | Anthracene | 120-12-7 | 0.01% |
| 56 | Bis(tributyltin) oxide (TBTO) ^(*)4) | 56-35-9 | 0.01% |

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| | Substances | CAS No. | Reporting Limit |
|----|--|---------------------------------------|------------------------|
| 57 | Triethyl arsenate ^(*)2) | 15606-95-8 | 0.01% |
| 58 | Lead hydrogen arsenate ^(*)2) | 7784-40-9 | 0.01% |
| 59 | Cobalt dichloride ^(*)2) | 7646-79-9 | 0.01% |
| 60 | Acrylamide | 79-06-1 | 0.01% |
| 61 | Anthracene oil, anthracene paste, distn. lights ^(*)6) | 91995-17-4 | 0.01% ^(*)7) |
| 62 | Anthracene oil, anthracene paste, anthracene fraction ^(*)6) | 91995-15-2 | |
| 63 | Anthracene oil, anthracene-low ^(*)6) | 90640-82-7 | |
| 64 | Anthracene oil, anthracene paste ^(*)6) | 90640-81-6 | |
| 65 | Boric acid ^(*)2) ^(*)5) | 10043-35-3 / 11113-50-1 | 0.01% |
| 66 | Disodium tetraborate, anhydrous ^(*)2) ^(*)5) | 1303-96-4 / 1330-43-4 / 12179-04-3 | 0.01% |
| 67 | Tetraboron disodium heptaoxide, hydrate ^(*)2) ^(*)5) | 12267-73-1 | 0.01% |
| 68 | 2-Methoxyethanol | 109-86-4 | 0.01% |
| 69 | 2-Ethoxyethanol | 110-80-5 | 0.01% |
| 70 | Cobalt(II) sulphate ^(*)2) | 10124-43-3 | 0.01% |
| 71 | Cobalt(II) dinitrate ^(*)2) | 10141-05-6 | 0.01% |
| 72 | Cobalt(II) carbonate ^(*)2) | 513-79-1 | 0.01% |
| 73 | Cobalt(II) diacetate ^(*)2) | 71-48-7 | 0.01% |
| 74 | Alkanes C10-C13, chloro (Short Chain Chlorinated Paraffins) (SCCP) | 85535-84-8 | 0.01% |
| 75 | 2-Ethoxyethyl acetate | 111-15-9 | 0.01% |
| 76 | Hydrazine | 302-01-2 / 7803-57-8 | 0.01% |
| 77 | 1-Methyl-2-pyrrolidone (NMP) | 872-50-4 | 0.01% |
| 78 | 1,2,3-Trichloropropane | 96-18-4 | 0.01% |
| 79 | Aluminosilicate Refractory Ceramic Fibres (RCF) ^(*)8) | - | 0.01% |
| 80 | Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF) ^(*)8) | - | 0.01% |
| 81 | 2-Methoxyaniline,o-Anisidine | 90-04-0 | 0.01% |
| 82 | 4-(1,1,3,3-tetramethylbutyl)phenol | 140-66-9 | 0.01% |
| 83 | Calcium arsenate ^(*)2) | 7778-44-1 | 0.01% |
| 84 | Trilead diarsenate ^(*)2) | 3687-31-8 | 0.01% |
| 85 | N,N-dimethylacetamide (DMAC) | 127-19-5 | 0.01% |
| 86 | Phenolphthalein | 77-09-8 | 0.01% |
| 87 | Lead dipicrate ^(*)2) | 6477-64-1 | 0.01% |
| 88 | Lead diazide, Lead azide ^(*)2) | 13424-46-9 | 0.01% |
| 89 | Lead styphnate ^(*)2) | 15245-44-0 | 0.01% |
| 90 | 1,2-bis(2-methoxyethoxy)ethane (TEGDME, triglyme) | 112-49-2 | 0.01% |
| 91 | 1,2-dimethoxyethane, ethylene glycol dimethyl ether (EGDME) | 110-71-4 | 0.01% |
| 92 | Diboron trioxide ^(*)2) ^(*)5) | 1303-86-2 | 0.01% |

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| | Substances | CAS No. | Reporting Limit |
|-----|--|--|-----------------|
| 93 | Formamide (FOR) | 75-12-7 | 0.01% |
| 94 | Lead(II) bis(methanesulfonate) (*2) | 17570-76-2 | 0.01% |
| 95 | 1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC) | 2451-62-9 | 0.01% |
| 96 | 1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC) | 59653-74-6 | |
| 97 | 4,4'-bis(dimethylamino)benzophenone (Michler's ketone), MK | 90-94-8 | 0.01% |
| 98 | N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base), RMK | 101-61-1 | 0.01% |
| 99 | [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)] (*2) | 2580-56-5 | 0.01% |
| 100 | [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)] (*9) | 548-62-9 | |
| 101 | 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)] (*9) | 561-41-1 | |
| 102 | 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)] (*9) | 6786-83-0 | |
| 103 | Bis(pentabromophenyl) ether (decabromodiphenyl ether) (DecaBDE) | 1163-19-5 | 0.01% |
| 104 | Pentacosafuorotridecanoic acid | 72629-94-8 | 0.01% |
| 105 | Tricosafuorododecanoic acid | 307-55-1 | 0.01% |
| 106 | Henicosafuoroundecanoic acid | 2058-94-8 | 0.01% |
| 107 | Heptacosafuorotetradecanoic acid | 376-06-7 | 0.01% |
| 108 | Diazeno-1,2-dicarboxamide (C,C'-azodi(formamide)) (ADCA) (*11) | 123-77-3 | 0.05% |
| 109 | Cyclohexane-1,2-dicarboxylic anhydride [1], cis-cyclohexane-1,2-dicarboxylic anhydride [2], trans-cyclohexane-1,2-dicarboxylic anhydride [3] [The individual cis- [2] and trans- [3] isomer substances and all possible combinations of the cis- and trans-isomers [1] are covered by this entry] | 85-42-7 / 13149-00-3 / 14166-21-3 | 0.01% |
| 110 | Hexahydromethylphthalic anhydride (MHHPA) [1], Hexahydro-4-methylphthalic anhydride [2], Hexahydro-1-methylphthalic anhydride [3], Hexahydro-3-methylphthalic anhydride [4] [The individual isomers [2], [3] and [4] (including their cis- and trans- stereo isomeric forms) and all possible combinations of the isomers [1] are covered by this entry] | 25550-51-0 / 19438-60-9 / 48122-14-1 / 57110-29-9 | 0.01% |
| 111 | N,N-dimethylformamide (DMF) | 68-12-2 | 0.01% |

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| | Substances | CAS No. | Reporting Limit |
|-----|--|-------------|-----------------|
| 112 | 1,2-Diethoxyethane | 629-14-1 | 0.01% |
| 113 | Diethyl sulphate | 64-67-5 | 0.01% |
| 114 | Methoxyacetic acid (MAA) | 625-45-6 | 0.01% |
| 115 | Dimethyl sulphate | 77-78-1 | 0.01% |
| 116 | N-methylacetamide | 79-16-3 | 0.01% |
| 117 | Furan | 110-00-9 | 0.01% |
| 118 | Methyloxirane (Propylene oxide) | 75-56-9 | 0.01% |
| 119 | 3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine | 143860-04-2 | 0.01% |
| 120 | Dibutyltin dichloride (DBTC) ^(*)15) | 683-18-1 | 0.01% |
| 121 | Dinoseb (6-sec-butyl-2,4-dinitrophenol) | 88-85-7 | 0.01% |
| 122 | 4,4'-methylenedi-o-toluidine | 838-88-0 | 0.01% |
| 123 | 4,4'-oxydianiline and its salts | 101-80-4 | 0.01% |
| 124 | 4-Aminoazobenzene | 60-09-3 | 0.01% |
| 125 | 4-methyl-m-phenylenediamine (toluene-2,4-diamine) | 95-80-7 | 0.01% |
| 126 | 6-methoxy-m-toluidine (p-cresidine) | 120-71-8 | 0.01% |
| 127 | Biphenyl-4-ylamine | 92-67-1 | 0.01% |
| 128 | o-aminoazotoluene | 97-56-3 | 0.01% |
| 129 | o-Toluidine | 95-53-4 | 0.01% |
| 130 | Acetic acid, lead salt, basic ^(*)2) | 51404-69-4 | 0.01% |
| 131 | Trilead bis(carbonate) dihydroxide ^(*)2) | 1319-46-6 | 0.01% |
| 132 | Lead oxide sulfate ^(*)2) | 12036-76-9 | 0.01% |
| 133 | [Phthalato(2-)]dioxotrillead ^(*)2) | 69011-06-9 | 0.01% |
| 134 | Dioxobis(stearato)trilead ^(*)2) | 12578-12-0 | 0.01% |
| 135 | Fatty acids, C16-18, lead salts ^(*)2) | 91031-62-8 | 0.01% |
| 136 | Lead bis(tetrafluoroborate) ^(*)2) | 13814-96-5 | 0.01% |
| 137 | Lead cyanamidate ^(*)2) | 20837-86-9 | 0.01% |
| 138 | Lead dinitrate ^(*)2) | 10099-74-8 | 0.01% |
| 139 | Lead monoxide (lead oxide) ^(*)2) | 1317-36-8 | 0.01% |
| 140 | Orange lead (lead tetroxide) ^(*)2) | 1314-41-6 | 0.01% |
| 141 | Lead titanium trioxide ^(*)2) | 12060-00-3 | 0.01% |
| 142 | Lead titanium zirconium oxide ^(*)2) | 12626-81-2 | 0.01% |
| 143 | Pyrochlore, antimony lead yellow ^(*)2) | 8012-00-8 | 0.01% |
| 144 | Pentalead tetraoxide sulphate ^(*)2) | 12065-90-6 | 0.01% |
| 145 | Silicic acid (H ₂ Si ₂ O ₅), 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] ^(*)2) | 68784-75-8 | 0.01% |
| 146 | Silicic acid, lead salt ^(*)2) | 11120-22-2 | 0.01% |
| 147 | Sulfurous acid, lead salt, dibasic ^(*)2) | 62229-08-7 | 0.01% |

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| | Substances | CAS No. | Reporting Limit |
|-----|--|-----------------------------------|-----------------|
| 148 | Tetraethyllead ^{(*)2} | 78-00-2 | 0.01% |
| 149 | Tetralead trioxide sulphate ^{(*)2} | 12202-17-4 | 0.01% |
| 150 | Trilead dioxide phosphonate ^{(*)2} | 12141-20-7 | 0.01% |
| 151 | Ammonium pentadecafluorooctanoate (APFO) ^{(*)12} | 3825-26-1 | 0.01% |
| 152 | Pentadecafluorooctanoic acid (PFOA) | 335-67-1 | 0.01% |
| 153 | Cadmium ^{(*)2} | 7440-43-9 | 0.01% |
| 154 | Cadmium oxide ^{(*)2} | 1306-19-0 | 0.01% |
| 155 | 4-Nonylphenol, branched and linear, ethoxylated (NPEO) [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] | - | 0.01% |
| 156 | Imidazolidine-2-thione; (2-imidazoline-2-thiol) | 96-45-7 | 0.01% |
| 157 | Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28) | 573-58-0 | 0.01% |
| 158 | Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo]][1,1'-biphenyl]-4-yl]azo]-5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38) | 1937-37-7 | 0.01% |
| 159 | Lead di(acetate) ^{(*)2} | 301-04-2 | 0.01% |
| 160 | Cadmium sulphide ^{(*)2} | 1306-23-6 | 0.01% |
| 161 | Cadmium chloride ^{(*)2} | 10108-64-2 | 0.01% |
| 162 | Cadmium fluoride ^{(*)2} | 7790-79-6 | 0.01% |
| 163 | Cadmium sulphate ^{(*)2} | 10124-36-4 / 31119-53-6 | 0.01% |
| 164 | 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE) ^{(*)13} | 15571-58-1 | 0.01% |
| 165 | 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) ^{(*)14} | - | 0.01% |
| 166 | 1,3-propanesultone (1,3-PS) | 1120-71-4 | 0.01% |
| 167 | Nitrobenzene | 98-95-3 | 0.01% |
| 168 | Perfluorononan-1-oic-acid and its sodium and ammonium salts | 375-95-1 / 21049-39-8 / 4149-60-4 | 0.01% |
| 169 | Benzo[def]chrysene (Benzo[a]pyrene) | 50-32-8 | 0.01% |
| 170 | 4,4'-isopropylidenediphenol (bisphenol A) (BPA) | 80-05-7 | 0.01% |
| 171 | Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts | 335-76-2 / 3830-45-3 / 3108-42-7 | 0.01% |

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| | Substances | CAS No. | Reporting Limit |
|-----|---|------------|-----------------|
| 172 | 4-heptylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof] | - | 0.01% |
| 173 | <i>p</i> -(1,1-dimethylpropyl)phenol | 80-46-6 | 0.01% |
| 174 | Perfluorohexane-1-sulfonic acid and its salts (PFHxS) | - | 0.01% |
| 175 | Chrysene | 218-01-9 | 0.01% |
| 176 | Benzo[a]anthracene | 56-55-3 | 0.01% |
| 177 | Cadmium nitrate ^{(*)2} | 10325-94-7 | 0.01% |
| 178 | Cadmium hydroxide ^{(*)2} | 21041-95-2 | 0.01% |
| 179 | Cadmium carbonate ^{(*)2} | 513-78-0 | 0.01% |
| 180 | 1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo[12.2.1.1 ^{6,9} .0 ^{2,13} .0 ^{5,10}]octadeca-7,15-diene ("Dechlorane Plus"™) [covering any of its individual anti- and syn-isomers or any combination thereof] | - | 0.01% |
| 181 | Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with ≥0.1% w/w 4-heptylphenol, branched and linear] | - | 0.01% |
| 182 | Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride, TMA) | 552-30-7 | 0.01% |
| 183 | Dicyclohexyl phthalate (DCHP) | 84-61-7 | 0.01% |
| 184 | Terphenyl, hydrogenated | 61788-32-7 | 0.01% |
| 185 | Octamethylcyclotetrasiloxane (D4) | 556-67-2 | 0.01% |
| 186 | Decamethylcyclopentasiloxane (D5) | 541-02-6 | 0.01% |
| 187 | Dodecamethylcyclohexasiloxane (D6) | 540-97-6 | 0.01% |
| 188 | Ethylenediamine (EDA) | 107-15-3 | 0.01% |
| 189 | Lead | 7439-92-1 | 0.01% |
| 190 | Disodium octaborate ^{(*)2} ^{(*)5} | 12008-41-2 | 0.01% |
| 191 | Benzo[ghi]perylene | 191-24-2 | 0.01% |
| 192 | 2,2-bis(4'-hydroxyphenyl)-4-methylpentane | 6807-17-6 | 0.01% |
| 193 | Benzo[k]fluoranthene | 207-08-9 | 0.01% |
| 194 | Fluoranthene | 206-44-0 | 0.01% |
| 195 | Phenanthrene | 85-01-8 | 0.01% |
| 196 | Pyrene | 129-00-0 | 0.01% |
| 197 | 1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan- 2-one | 15087-24-8 | 0.01% |
| 198 | 2-methoxyethyl acetate | 110-49-6 | 0.01% |
| 199 | Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP) | - | 0.01% |

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| | Substances | CAS No. | Reporting Limit |
|-----|--|---|-----------------|
| 200 | 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof) | - | 0.01% |
| 201 | 4-tert-butylphenol (PTBP) | 98-54-4 | 0.01% |
| 202 | Diisohexyl phthalate (DiHexP) | 71850-09-4 | 0.01% |
| 203 | 2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone | 119313-12-1 | 0.01% |
| 204 | 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one | 71868-10-5 | 0.01% |
| 205 | Perfluorobutane sulfonic acid (PFBS) and its salts | - | 0.01% |
| 206 | 1-vinylimidazole | 1072-63-5 | 0.01% |
| 207 | 2-methylimidazole | 693-98-1 | 0.01% |
| 208 | Butyl 4-hydroxybenzoate | 94-26-8 | 0.01% |
| 209 | Dibutylbis(pentane-2,4-dionato-O,O')tin ^(*)15) | 22673-19-4 | 0.01% |
| 210 | Bis(2-(2-methoxyethoxy)ethyl)ether | 143-24-8 | 0.01% |
| 211 | Dioctyltin 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 ^(*)13) | - | 0.01% |
| 212 | 2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers | - | 0.01% |
| 213 | Orthoboric acid, sodium salt ^(*)2) ^(*)5) | 13840-56-7 | 0.01% |
| 214 | 2,2-bis(bromomethyl)propane1,3-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) | 3296-90-0 / 36483-57-5 / 1522-92-5 / 96-13-9 | 0.01% |
| 215 | Glutaral | 111-30-8 | 0.01% |
| 216 | 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] | - | 0.01% |
| 217 | Phenol, alkylation products (mainly in para position) with C12-rich branched or linear alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP) | - | 0.01% |
| 218 | 1,4-dioxane | 123-91-1 | 0.01% |
| 219 | 4,4'-(1-methylpropylidene)bisphenol | 77-40-7 | 0.01% |
| 220 | tris(2-methoxyethoxy)vinylsilane | 1067-53-4 | 0.01% |
| 221 | S-(tricyclo(5.2.1.0'2,6)deca-3-en-8(or 9)-yl O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate | 255881-94-8 | 0.01% |
| 222 | 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (DBMC) | 119-47-1 | 0.01% |

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| | Substances | CAS No. | Reporting Limit |
|-----|--|---|-----------------|
| 223 | (±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC) (3E)-1,7,7-trimethyl-3-(4-methylbenzylidene)bicyclo[2.2.1]heptan-2-one (1R,3E,4S)-1,7,7-trimethyl-3-(4-methylbenzylidene)bicyclo[2.2.1]heptan-2-one (1S,3Z,4R)-1,7,7-trimethyl-3-(4-methylbenzylidene)bicyclo[2.2.1]heptan-2-one (±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one (1R,4S)-1,7,7-trimethyl-3-(4-methylbenzylidene)bicyclo[2.2.1]heptan-2-one (1S,3E,4R)-1,7,7-trimethyl-3-(4-methylbenzylidene)bicyclo[2.2.1]heptan-2-one (1R,3Z,4S)-1,7,7-trimethyl-3-(4-methylbenzylidene)bicyclo[2.2.1]heptan-2-one | - 1782069-81-1 95342-41-9 852541-25-4 36861-47-9 741687-98-9 852541-30-1 852541-21-0 | 0.01% |
| 224 | N-(hydroxymethyl)acrylamide | 924-42-5 | 0.01% |
| 225 | 1,1'-[ethane-1,2-diylbis(oxy)]bis[2,4,6-tribromobenzene] | 37853-59-1 | 0.01% |
| 226 | 2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol (TBBPA) | 79-94-7 | 0.01% |
| 227 | 4,4'-sulphonyldiphenol | 80-09-1 | 0.01% |
| 228 | Barium diboron tetraoxide (*2) (*5) | 13701-59-2 | 0.01% |
| 229 | Bis(2-ethylhexyl) tetrabromophthalate covering any of the individual isomers and/or combinations thereof | - | 0.01% |
| 230 | Isobutyl 4-hydroxybenzoate | 4247-02-3 | 0.01% |
| 231 | Melamine | 108-78-1 | 0.01% |
| 232 | Perfluoroheptanoic acid and its salts | - | 0.01% |
| 233 | reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine and 2,2,3,3,5,5,6,6-octafluoro-4-(heptafluoropropyl)morpholine | - | 0.01% |
| 234 | bis(4-chlorophenyl) sulphone | 80-07-9 | 0.01% |
| 235 | Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide (TPO) | 75980-60-8 | 0.01% |
| 236 | Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol Phenol, methylstyrenated EC / List no: 270-966-8 CAS no: 68512-30-1 | - | 0.01% |
| 237 | Bumetrizole | 3896-11-5 | 0.01% |
| 238 | 2-(dimethylamino)-2-[(4-methylphenyl)methyl]-1-[4-(morpholin-4-yl)phenyl]butan-1-one | 119344-86-4 | 0.01% |
| 239 | 2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329) | 3147-75-9 | 0.01% |
| 240 | 2,4,6-tri-tert-butylphenol | 732-26-3 | 0.01% |
| 241 | Bis(α,α-dimethylbenzyl) peroxide | 80-43-3 | 0.01% |
| 242 | Triphenyl phosphate(TPP) | 115-86-6 | 0.01% |

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Screening of proposals for identification as substances of very high concern (SVHC) published by the European Chemical Agency (ECHA)

| | Substances | CAS No. | Reporting Limit |
|---|---|--------------|-----------------|
| 1 | Octamethyltrisiloxane | 107-51-7 | 0.01% |
| 2 | Perfluamine | 338-83-0 | 0.01% |
| 3 | tris(4-nonylphenyl, branched) phosphite | - | 0.01% |
| 4 | O,O,O-triphenyl phosphorothioate | 597-82-0 | 0.01% |
| 5 | 6-[(C10-C13)-alkyl-(branched, unsaturated)-2,5-dioxopyrrolidin-1-yl]hexanoic acid (*20) | 2156592-54-8 | 0.01% |
| 6 | reaction mass of: triphenylthiophosphate and tertiary butylated phenyl derivatives | 192268-65-8 | 0.01% |

- (*2) The substances are tested and calculated in terms of its respective elements and to the worst-case scenario. The report states the theoretical value of SVHC substances without consideration of the actual occurrence in the article.
- (*3) The substances are tested and calculated in terms of Cr (VI).
- (*4) The substance is tested and calculated in terms of Tributyl tin.
- (*5) The substances are tested and calculated in terms of boron element and the boron element may come from the compounds other than SVHCs.
- (*6) The substances are UVCB (substance of unknown or variable composition, complex reaction products or biological materials), which are identified by its main constituents.
- (*7) Individual concentrations to the constituent of UVCB with an amount of < 0.01% were not considered by the calculation of the sum.
- (*8) The test results are based on microscopic and chemical evaluation.
- (*9) The substances are quantified in terms of Michler's ketone and Michler's base by LC-MS, as Michler's ketone or Michler's base was found exceeds 0.01%.
- (*10) The content oligomer is determined by Py-GC/MS.
- (*11) The content of diazene-1,2-dicarboxamide is analyzed in terms of its breakdown product.
- (*12) The substance is tested in terms of pentadecafluorooctanoate.
- (*13) The substance is tested and calculated in terms of Dioctyl tin.
- (*14) The substance is tested and calculated in terms of Monoctyl tin and Dioctyl tin.
- (*15) The substance is tested and calculated in terms of Dibutyl tin
- (*16) The tested material(s) was screened only for selected SVHCs. Selection of tests refers to the material type and application and the possibility of contamination during production & material specific contamination of the product.
- (*17) The other SVHCs which are not mentioned in test result were either not subject to testing according to remark *16 or than report limit.
- (*18) The theoretical content of SVHC substances is calculated in terms of its respective elements. This material may contain the mentioned SVHCs, it is suggested to check the respective recipe if the theoretical content of the respective substance >0.1% in each article.
- (*19) For this mixed sample, the result was found to be more than the reporting limit. It's recommended that individual sample should be tested separately.
- (*20) Qualification is performed via determination of structural constituents. The result is reported as semi-quantitative equivalent concentration, relative to a reference compound.

--- End of Test-Report ---