

Report No.: 48254680b10 001

Page 1 of 13

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): MDBT53, MDBT53-P, MDBT53-U

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.

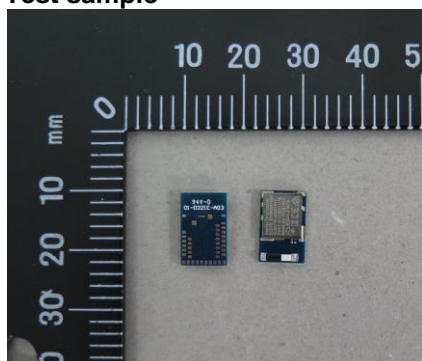
Test Report No.: 48254680b10 001

Page 2 of 13

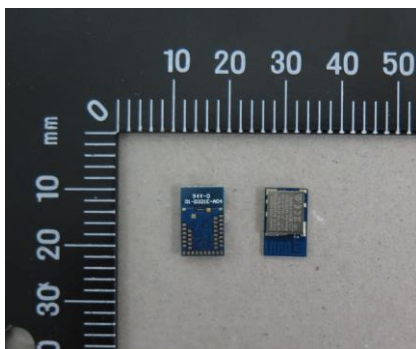
Material List:

Lab no.: TCL241119-10

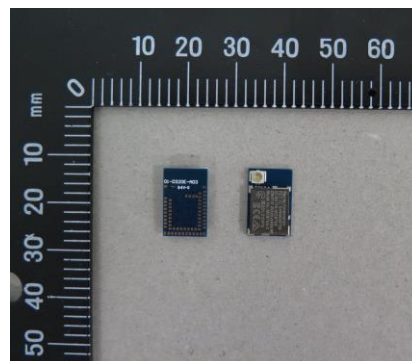
Mat. no.	Part No.	Material	Color	Location
1	A	Ceramic	Black/White	Photo1 (Refer to report no. 48254680b3 001, mat.1)
2	A	Metal	Metallic	Photo1 (Refer to report no. 48254680b1 001, mat.8)
3	A	Electronic components	Black	Photo1 (Refer to report no. 48254680b1 001, mat.6)
4	A	PCB board	Blue	Photo1 (Refer to report no. 48254680b1 001, mat.7)
5	C	Metal	Golden	Photo2 (Refer to report no. 48254680b7 001, mat.5)

Test sample

A. MDBT53



B. MDBT53-P



C. MDBT53-U

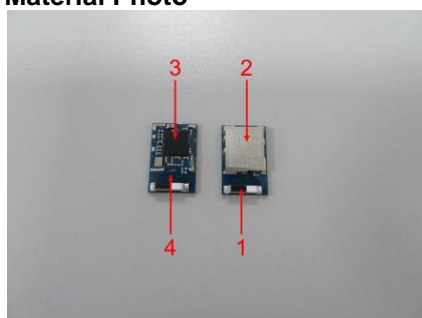
Material Photo

Photo1

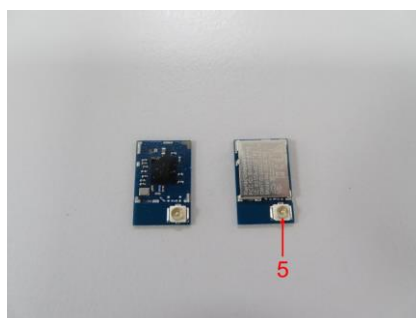


Photo2

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	2-methyl-1-(4-methylthiophenyl)-2 morpholinopropan-1-one (Irgacure 907): 0.03%
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:0.3020% ; 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 *.
5	B:0.0576% ; 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.

Test Report No.: 48254680b10 001

Page 4 of 13

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%

Test Report No.: 48254680b10 001

Page 5 of 13

	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%

Test Report No.: 48254680b10 001

Page 6 of 13

	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%

Test Report No.: 48254680b10 001

Page 7 of 13

	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%

Test Report No.: 48254680b10 001

Page 8 of 13

	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%

Test Report No.: 48254680b10 001

Page 9 of 13

	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%

Test Report No.: 48254680b10 001

Page 10 of 13

	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%

Test Report No.: 48254680b10 001

Page 11 of 13

	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%

Test Report No.: 48254680b10 001

Page 12 of 13

	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%

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 ---