

## Test Report

No. 5303972-23

Date: 20/MAR/2020

Page 1 of 13

mtm plastics GmbH  
Ms. Daniela Werner  
Bahnhofstr. 106  
99759 Niedergerbra  
GERMANY

### The following sample(s) was/were submitted and identified by/on behalf of the client as:

SGS Job file : 5303972  
Order date : 02/MAR/2020  
**Order number** : -  
Sampling : by Client or by a third party acting at the Client's direction  
Condition of the samples : appropriate for testing  
Sample receiving Date : 06/MAR/2020  
Testing period : 06/MAR/2020 – 20/MAR/2020

Sample No	Sample designation	Sample material
200253446	Purpolen PE-70	plastic granules

### Applied analytical technique

Test Requested : As specified by client, the sample(s) was/were tested with reference to Regulation (EC) No 1907/2006 concerning the REACH for:  
205 Substances of Very High Concern (SVHC) candidate list according to the press release (ECHA) on January 16, 2020

Test Result(s) : Please refer to following pages.

Summary : According to the ruling of the Court of Justice of the European Union on the definition of an article under REACH, and the specified scope as well as analytical technique, the test results of the selected component article are  $\leq 0.1\%$  (w/w) in the submitted sample(s).

### SGS INSTITUT FRESENIUS GmbH

i.V.

Wera Leonhard / tp  
Projektleiterin / Project Manager  
Consumer and Retail  
Tel. +49 (0)6128 / 744 - 186

i.A.

Annkatrin Kuhl  
Projektleiterin / Project Manager  
Consumer and Retail  
Tel. +49 (0)6128 / 744 - 280

R:\M\mtm plastics GmbH\_10070390\2020\5303972\5303972-23\_SVHC.doc

## Test Report

No. 5303972-23

Date: 20/MAR/2020

Page 2 of 13

mtm plastics GmbH  
Bahnhofstr. 106  
99759 Niedergebra  
GERMANY

**Test Method :** SGS In-House method-RSTS-EE-SVHC-007. Analysis was performed by ICP-OES, UV-VIS, GC/MS, LC/MS, GC/FPD, LC/MS/DAD, UPLC-MSMS. (Cooperation with SGS Taiwan)

### Test Result(s)

No.	Substance Name	RL (%)	Concentration (%)
1.	4,4' - Diaminodiphenylmethane (MDA) (CAS No.: 101-77-9)	0,05	n.d.
2.	5-tert-butyl-2,4,6-trinitro- m-xylene (Musk Xylene) (CAS No.: 81-15-2)	0,05	n.d.
3.	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) (CAS No.: 85535-84-8)	0,05	n.d.
4.	Anthracene (CAS No.: 120-12-7)	0,05	n.d.
5.	BBP (Butyl Benzyl phthalate) (CAS No.: 85-68-7)	0,05	n.d.
6.	Bis(tributyltin)oxide (TBTO)*** (CAS No.: 56-35-9)	-	n.d.
7.	Diarsenic pentaoxide*** (CAS No.: 1303-28-2)	-	n.d.
8.	Diarsenic trioxide*** (CAS No.: 1327-53-3)	-	n.d.
9.	DBP (Dibutyl phthalate) (CAS No.: 84-74-2)	0,05	n.d.
10.	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified ( $\alpha$ - HBCDD, $\beta$ - HBCDD, $\gamma$ - HBCDD) (CAS No.: 25637-99-4 and 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	0,05	n.d.
11.	Lead hydrogen arsenate*** (CAS No.: 7784-40-9) (※1)	-	n.d.
12.	Sodium dichromate*** (CAS No.: 7789-12-0; 10588-01-9(*)	-	n.d.
13.	Triethyl arsenate*** (CAS No.: 15606-95-8)	-	n.d.
14.	DEHP (Bis (2-ethyl(hexyl) phthalate)) (CAS No.: 117-81-7)	0,05	n.d.
15.	2,4-Dinitrotoluene (CAS No.: 121-14-2)	0,05	n.d.
16.	Anthracene oil (CAS No.: 90640-80-5) (**)	0,05	n.d.
17.	Anthracene oil, anthracene paste (CAS No.: 90640-81-6) (**)	0,05	n.d.
18.	Anthracene oil, anthracene paste, anthracene fraction (CAS No.: 91995-15-2) (**)	0,05	n.d.
19.	Anthracene oil, anthracene paste, distr. Lights (CAS No.: 91995-17-4) (**)	0,05	n.d.
20.	Anthracene oil, anthracene-low (CAS No.: 90640-82-7) (**)	0,05	n.d.
21.	DIBP (Di-isobutyl phthalate) (CAS No.: 84-69-5)	0,05	n.d.
22.	Lead chromate*** (CAS No.: 7758-97-6) (※5)	-	n.d.
23.	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)*** (CAS No.: 12656-85-8) (※5)	-	n.d.
24.	Lead sulfochromate yellow (C.I. Pigment Yellow 34)*** (CAS No.: 1344-37-2) (※5)	-	n.d.
25.	Pitch, coal tar, high-temp. (CAS No.: 65996-93-2) (**)	0,05	n.d.

**Test Report**

No. 5303972-23

Date: 20/MAR/2020

Page 3 of 13

 mtm plastics GmbH  
 Bahnhofstr. 106  
 99759 Niedergerbra  
 GERMANY

No.	Substance Name	RL (%)	Concentration (%)
26.	Tris(2-chloroethyl) phosphate (TCEP) (CAS No.: 115-96-8)	0,05	n.d.
27.	Acrylamide (CAS No.: 79-06-1)	0,05	n.d.
28.	Ammonium dichromate*** (CAS No.: 7789-09-5)	-	n.d.
29.	Boric acid*** (CAS No.: 10043-35-3; 11113-50-1)	-	n.d.
30.	Disodium tetraborate, anhydrous*** (CAS No.: 1303-96-4, 1330-43-4, 12179-04-3)	-	n.d.
31.	Potassium chromate*** (CAS No.: 7789-00-6)	-	n.d.
32.	Potassium dichromate*** (CAS No.: 7778-50-9)	-	n.d.
33.	Sodium chromate*** (CAS No.: 7775-11-3)	-	n.d.
34.	Tetraboron disodium heptaoxide, hydrate (CAS No.: 12267-73-1) (* 2)	-	n.d.
35.	Trichloroethylene (CAS No.: 79-01-6)	0,05	n.d.
36.	2-Ethoxyethanol (CAS No.: 110-80-5)	0,05	n.d.
37.	2-Methoxyethanol (CAS No.: 109-86-4)	0,05	n.d.
38.	Acids generated from chromium trioxide and their oligomers: Chromic acid*** (CAS No.: 7738-94-5)	-	n.d.
	Acids generated from chromium trioxide and their oligomers: Dichromic acid*** (CAS No.: 13530-68-2)	-	n.d.
	Acids generated from chromium trioxide and their oligomers: Oligomers of chromic acid and dichromic acid (* 1)	-	n.d.
39.	Chromium trioxide*** (CAS No.: 1333-82-0)	-	n.d.
40.	Cobalt(II) carbonate*** (CAS No.: 513-79-1)	-	n.d.
41.	Cobalt(II) diacetate*** (CAS No.: 71-48-7)	-	n.d.
42.	Cobalt(II) dinitrate*** (CAS No.: 10141-05-6)	-	n.d.
43.	Cobalt(II) sulphate*** (CAS No.: 10124-43-3)	-	n.d.
44.	1,2,3-trichloropropane (CAS No.: 96-18-4)	0,05	n.d.
45.	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP) (CAS No.: 71888-89-6)	0,05	n.d.
46.	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP) (CAS No.: 68515-42-4)	0,05	n.d.
47.	1-methyl-2-pyrrolidone (CAS No.: 872-50-4)	0,05	n.d.
48.	2-ethoxyethyl acetate (CAS No.: 111-15-9)	0,05	n.d.
49.	Hydrazine (CAS No.: 7803-57-8; 302-01-2)	0,05	n.d.
50.	Strontium chromate*** (CAS No.: 7789-06-2)	-	n.d.
51.	Cobalt dichloride (CAS No.: 7646-79-9)	0,005	n.d.
52.	1,2-Dichloroethane (CAS No.: 107-06-2)	0,05	n.d.
53.	2,2'-dichloro- 4,4'-methylenedianiline (MOCA) (CAS No.: 101-14-4)	0,05	n.d.

## Test Report

No. 5303972-23

Date: 20/MAR/2020

Page 4 of 13

mtm plastics GmbH  
 Bahnhofstr. 106  
 99759 Niedergerbra  
 GERMANY

No.	Substance Name	RL (%)	Concentration (%)
54.	2-Methoxyaniline; o-Anisidine (CAS No.: 90-04-0)	0,05	n.d.
55.	4-(1,1,3,3-tetramethylbutyl) phenol, (4-tert-Octylphenol) (CAS No.: 140-66-9)	0,05	n.d.
56.	Aluminosilicate, Refractory Ceramic Fibres <b>【oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges】</b>	0,05	n.d.
57.	Arsenic acid*** (CAS No.: 7778-39-4)	-	n.d.
58.	Bis(2-methoxyethyl) ether (CAS No.: 111-96-6)	0,05	n.d.
59.	Bis(2-methoxyethyl) phthalate (CAS No.: 117-82-8)	0,05	n.d.
60.	Calcium arsenate*** (CAS No.: 7778-44-1)	-	n.d.
61.	Dichromium tris (chromate)*** (CAS No.: 24613-89-6)	-	n.d.
62.	Formaldehyde, oligomeric reaction products with aniline (technical MDA) (CAS No.: 25214-70-4)	0,05	n.d.
63.	Lead diazide, Lead azide*** (CAS No.: 13424-46-9)	-	0.0119
64.	Lead dipicrate*** (CAS No.: 6477-64-1)	-	0.0271
65.	Lead styphnate*** (CAS No.: 15245-44-0)	-	0.0184
66.	N,N-dimethylacetamide (DMAC) (CAS No.: 127-19-5)	0,05	n.d.
67.	Pentazinc chromate octahydroxide*** (CAS No.: 49663-84-5)	-	n.d.
68.	Phenolphthalein (CAS No.: 77-09-8)	0,05	n.d.
69.	Potassium hydroxyoctaoxodizincatedi- chromate*** (CAS No.: 11103-86-9)	-	n.d.
70.	Trilead diarsenate*** (CAS No.: 3687-31-8) (※1)	-	n.d.
71.	Zirconia Aluminosilicate, Refractory Ceramic Fibres <b>【oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges】</b>	0,05	n.d.
72.	[4-[[4-anilino-1-naphthyl] [4-(dimethylamino) phenyl] methylene] cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) (CAS No.: 2580-56-5) [with ≥ 0.1% of Michler's ketone or Michler's base]	0,05	n.d.
73.	[4-[4,4'-bis(dimethylamino) benzhydrylidene] cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Violet 3) (CAS No.: 548-62-9) [with ≥ 0.1% of Michler's ketone or Michler's base]	0,05	n.d.
74.	1,2-bis (2-methoxyethoxy) ethane (TEGDME; triglyme) (CAS No.: 112-49-2)	0,05	n.d.
75.	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME) (CAS No.: 110-71-4)	0,05	n.d.
76.	TGIC (1,3,5-tris(oxiranylmethyl)- 1,3,5-triazine-2,4,6 (1H,3H,5H)-trione) (CAS No.: 2451-62-9)	0,05	n.d.
77.	β-TGIC (1,3,5-tris [(2S and 2R)-2,3-epoxypropyl]- 1,3,5-triazine-2,4,6-(1H,3H,5H)-trione) (CAS No.: 59653-74-6) (※3)	0,05	n.d.
78.	4,4'-bis (dimethylamino)-4''-(methylamino) trityl alcohol (CAS No.: 561-41-1) [with ≥ 0.1% of Michler's ketone or Michler's base]	0,05	n.d.

**Test Report**

No. 5303972-23

Date: 20/MAR/2020

Page 5 of 13

mtm plastics GmbH  
 Bahnhofstr. 106  
 99759 Niedergerbra  
 GERMANY

No.	Substance Name	RL (%)	Concentration (%)
79.	4,4'-bis (dimethylamino) benzophenone (Michler's ketone) (CAS No.: 90-94-8)	0,05	n.d.
80.	Diboron trioxide*** (CAS No.: 1303-86-2)	-	n.d.
81.	Formamide (CAS No.: 75-12-7)	0,05	n.d.
82.	Lead(II) bis(methanesulfonate)*** (CAS No.: 17570-76-2)	-	0.0162
83.	N,N,N',N'-tetramethyl- 4,4'-methylenedianiline (Michler's base) (CAS No.: 101-61-1)	0,05	n.d.
84.	$\alpha,\alpha$ -Bis[4-(dimethylamino) phenyl]-4 (phenylamino) naphthalene-1-methanol (C.I. Solvent Blue 4) (CAS No.: 6786-83-0) [with $\geq$ 0.1% of Michler's ketone or Michler's base]	0,05	n.d.
85.	[Phthalato(2-)] dioxotrilead*** (CAS No.: 69011-06-9)	-	0.0111
86.	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear (CAS No.: 84777-06-0)	0,05	n.d.
87.	1,2-Diethoxyethane (CAS No.: 629-14-1)	0,05	n.d.
88.	1-bromopropane (CAS No.: 106-94-5)	0,05	n.d.
89.	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine (CAS No.: 143860-04-2)	0,05	n.d.
90.	4-(1,1,3,3-tetramethylbutyl) phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	0,05	n.d.
91.	4,4'-methylenedi-o-toluidine (CAS No.: 838-88-0)	0,05	n.d.
92.	4,4'-oxydianiline and its salts (CAS No.: 101-80-4)	0,05	n.d.
93.	4-Aminoazobenzene (CAS No.: 60-09-3)	0,05	n.d.
94.	4-methyl-m-phenylenediamine (2,4-toluenediamine) (CAS No.: 95-80-7)	0,05	n.d.
95.	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]	0,05	n.d.
96.	6-methoxy-m-toluidine (p-cresidine) (CAS No.: 120-71-8)	0,05	n.d.
97.	Acetic acid, lead salt, basic*** (CAS No.: 51404-69-4)	-	0.0116
98.	Biphenyl-4-ylamine (CAS No.: 92-67-1)	0,05	n.d.
99.	Bis(pentabromophenyl) ether (DecaBDE) (CAS No.: 1163-19-5)	0,05	n.d.
100.	Cyclohexane-1,2-dicarboxylic anhydride (HHPA), cis-cyclohexane-1,2-dicarboxylic anhydride, trans-cyclohexane-1,2- dicarboxylic anhydride (Hexahydrophthalic anhydride - HHPA) (CAS No.: 85-42-7, 13149-00-3, 14166-21-3)	0,05	n.d.
101.	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) (CAS No.: 123-77-3)	0,05	n.d.
102.	Dibutyltin dichloride (DBTC)*** (CAS No.: 683-18-1)	-	n.d.
103.	Diethyl sulphate (CAS No.: 64-67-5)	0,05	n.d.
104.	Diisopentylphthalate (CAS No.: 605-50-5)	0,05	n.d.

**Test Report**

No. 5303972-23

Date: 20/MAR/2020

Page 6 of 13

 mtm plastics GmbH  
 Bahnhofstr. 106  
 99759 Niedergebra  
 GERMANY

No.	Substance Name	RL (%)	Concentration (%)
105.	Dimethyl sulphate (CAS No.: 77-78-1)	0,05	n.d.
106.	Dinoseb (CAS No.: 88-85-7)	0,05	n.d.
107.	Dioxobis(stearato) trilead*** (CAS No.: 12578-12-0)	-	0.0166
108.	Fatty acids, C16-18, lead salts*** (CAS No.: 91031-62-8)	-	0.0316
109.	Furan (CAS No.: 110-00-9)	0,05	n.d.
110.	Henicosafuoroundecanoic acid (CAS No.: 2058-94-8)	0,05	n.d.
111.	Heptacosafuorotetradecanoic acid (CAS No.: 376-06-7)	0,05	n.d.
112.	Hexahydromethylphthalic anhydride (CAS No.: 25550-51-0) Hexahydro-4-methylphthalic anhydride (CAS No.: 19438-60-9) Hexahydro-1-methylphthalic anhydride (CAS No.: 48122-14-1) Hexahydro-3-methylphthalic anhydride (CAS No.: 57110-29-9)	0,05	n.d.
113.	Lead bis(tetrafluoroborate)*** (CAS No.: 13814-96-5)	-	0.0155
114.	Lead cyanamidate*** (CAS No.: 20837-86-9)	-	0.0101
115.	Lead dinitrate*** (CAS No.: 10099-74-8)	-	0.0135
116.	Lead oxide (lead monoxide)*** (CAS No.: 1317-36-8)	-	0.0091
117.	Lead oxide sulfate*** (CAS No.: 12036-76-9)	-	0.0107
118.	Lead titanium trioxide*** (CAS No.: 12060-00-3)	-	0.0124
119.	Lead Titanium Zirconium Oxide*** (CAS No.: 12626-81-2)	-	0.0161
120.	Methoxy acetic acid (CAS No.: 625-45-6)	0,05	n.d.
121.	Propylene oxide; 1,2-epoxypropane; methyloxirane (CAS No.: 75-56-9)	0,05	n.d.
122.	N,N-dimethylformamide; dimethyl formamide (CAS No.: 68-12-2)	0,05	n.d.
123.	N-methylacetamide (CAS No.: 79-16-3)	0,05	n.d.
124.	N-pentyl-isopentylphthalate (CAS No.: 776297-69-9)	0,05	n.d.
125.	o-aminoazotoluene (CAS No.: 97-56-3)	0,05	n.d.
126.	Lead tetroxide (orange lead)*** (CAS No.: 1314-41-6)	-	0.0093
127.	o-Toluidine; 2-Aminotoluene (CAS No.: 95-53-4)	0,05	n.d.
128.	Pentacosafuorotridecanoic acid (CAS No.: 72629-94-8)	0,05	n.d.
129.	Pentalead tetraoxide sulphate*** (CAS No.: 12065-90-6)	-	0.0098
130.	Pyrochlore, antimony lead yellow*** (CAS No.: 8012-00-8)	-	0.0157
131.	Silicic acid, barium salt, lead-doped (※4) (CAS No.: 68784-75-8)	0,05	n.d.
132.	Silicic acid, lead salt*** (CAS No.: 11120-22-2)	-	0.0116
133.	Sulfurous acid, lead salt, dibasic*** (CAS No.: 62229-08-7)	-	0.0108
134.	Tetraethyllead*** (CAS No.: 78-00-2)	-	0.0132
135.	Tetralead trioxide sulphate*** (CAS No.: 12202-17-4)	-	0.0099

**Test Report**

No. 5303972-23

Date: 20/MAR/2020

Page 7 of 13

mtm plastics GmbH  
 Bahnhofstr. 106  
 99759 Niedergebrä  
 GERMANY

No.	Substance Name	RL (%)	Concentration (%)
136.	Tricosafuorododecanoic acid (CAS No.: 307-55-1)	0,05	n.d.
137.	Trilead bis(carbonate) dihydroxide (basic lead carbonate)*** (CAS No.: 1319-46-6)	-	0.0105
138.	Trilead dioxide phosphonate*** (CAS No.: 12141-20-7)	-	0.0100
139.	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]	0,05	n.d.
140.	Ammoniumpentadecafluorooctanoate (APFO)*** (CAS No.: 3825-26-1)	-	n.d.
141.	Cadmium (Cd) (CAS No.: 7440-43-9)	0,005	0.0079
142.	Cadmium oxide*** (CAS No.: 1306-19-0)	-	0.0090
143.	Dipentyl phthalate (CAS No.: 131-18-0)	0,05	n.d.
144.	Pentadecafluorooctanoic acid (PFOA) (CAS No.: 335-67-1)	0,05	n.d.
145.	Cadmium sulphide*** (CAS No.: 1306-23-6)	-	0.0101
146.	Dihexyl phthalate (CAS No.: 84-75-3)	0,05	n.d.
147.	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28) (CAS No.: 573-58-0)	0,05	n.d.
148.	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) (CAS No.: 1937-37-7)	0,05	n.d.
149.	Imidazolidine-2-thione; 2-imidazoline-2-thiol (CAS No.: 96-45-7)	0,05	n.d.
150.	Lead di(acetate)*** (CAS No.: 301-04-2)	-	0.0133
151.	Trixylyl phosphate (CAS No.: 25155-23-1)	0,05	n.d.
152.	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear (CAS No.: 68515-50-4)	0,05	n.d.
153.	Cadmium chloride*** (CAS No.: 10108-64-2)	-	0.0128
154.	Sodium perborate; perboric acid, sodium salt***	-	n.d.
155.	Sodium peroxometaborate*** (CAS No.: 7632-04-4)	-	n.d.
156.	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328) (CAS No.: 25973-55-1)	0,05	n.d.
157.	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320) (CAS No.: 3846-71-7)	0,05	n.d.
158.	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)*** (CAS No.: 15571-58-1)	-	n.d.
159.	Cadmium fluoride*** (CAS No.: 7790-79-6)	-	0.0105
160.	Cadmium sulphate*** (CAS No.: 10124-36-4; 31119-53-6)	-	0.0146
161.	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-	-	n.d.

**Test Report**

No. 5303972-23

Date: 20/MAR/2020

Page 8 of 13

mtm plastics GmbH  
 Bahnhofstr. 106  
 99759 Niedergerbra  
 GERMANY

No.	Substance Name	RL (%)	Concentration (%)
	oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)***		
162.	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with $\geq 0.3\%$ of dihexyl phthalate (CAS No.: 68515-51-5; 68648-93-1)	0,05	n.d.
163.	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 isomers of [1] and [2] or any combination thereof]	0,05	n.d.
164.	1,3-propanesultone (CAS No.: 1120-71-4)	0,05	n.d.
165.	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327) (CAS No.: 3864-99-1)	0,05	n.d.
166.	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350) (CAS No.: 36437-37-3)	0,05	n.d.
167.	Nitrobenzene (CAS No.: 98-95-3)	0,05	n.d.
168.	Perfluorononan-1-oic acid (2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-heptadecafluorononanoic acid and its sodium and ammonium salts (CAS No.: 375-95-1; 21049-39-8; 4149-60-4)	0,05	n.d.
169.	Benzo[def]chrysene (Benzo[a]pyrene) (CAS No.: 50-32-8)	0,05	n.d.
170.	4,4'-isopropylidenediphenol (Bisphenol A) (CAS No.: 80-05-7)	0,05	n.d.
171.	4-Heptylphenol, branched and linear (4-HPbl) [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]	0,05	n.d.
172.	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts (CAS No.: 3108-42-7, 335-76-2, 3830-45-3)	0,05	n.d.
173.	p-(1,1-dimethylpropyl) phenol (PTAP) (CAS No.: 80-46-6)	0,05	n.d.
174.	Perfluorohexane-1-sulphonic acid and its salts (PFHxS) (CAS No.: 355-46-4)	0,05	n.d.
175.	1,6,7,8,9,14,15,16,17, 17,18,18- Dodecachloropentacyclo [12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"™) [covering any of its individual anti- and syn-isomers or any combination thereof]	0,05	n.d.
176.	Benz[a]anthracene (CAS No.: 56-55-3)	0,05	n.d.
177.	Cadmium nitrate*** (CAS No.: 10325-94-7)	-	0.0165
178.	Cadmium carbonate*** (CAS No.: 513-78-0)	-	0.0120
179.	Cadmium hydroxide*** (CAS No.: 21041-95-2)	-	0.0102
180.	Chrysene (CAS No.: 218-01-9)	0,05	n.d.
181.	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with $\geq 0.1\%$ w/w 4-heptylphenol,	-	n.d.



**Test Report**

No. 5303972-23

Date: 20/MAR/2020

Page 9 of 13

mtm plastics GmbH  
 Bahnhofstr. 106  
 99759 Niedergebra  
 GERMANY

No.	Substance Name	RL (%)	Concentration (%)
	branched and linear] (※7)		
182.	Dicyclohexyl phthalate (DCHP) (CAS No.: 84-61-7)	0,05	n.d.
183.	Benzene-1,2,4- tricarboxylic acid 1,2- anhydride (trimellitic anhydride) (CAS No.: 552-30-7)	0,05	n.d.
184.	Benzo[ghi]perylene (CAS No.: 191-24-2)	0,05	n.d.
185.	Octamethylcyclotetrasiloxane (D4) (CAS No.: 556-67-2)	0,05	n.d.
186.	Decamethylcyclopentasiloxane (D5) (CAS No.: 541-02-6)	0,05	n.d.
187.	Dodecamethylcyclohexasiloxane (D6) (CAS No.: 540-97-6)	0,05	n.d.
188.	Disodium octaborate*** (CAS No.: 12008-41-2)	-	n.d.
189.	Ethylenediamine (CAS No.: 107-15-3)	0,05	n.d.
190.	Lead (Pb) (CAS No.: 7439-92-1) (●)	0,005	0.0085
191.	Terphenyl hydrogenated (CAS No.: 61788-32-7)	0,05	n.d.
192.	2,2-bis(4'-hydroxyphenyl)-4-methylpentane (CAS No.: 6807-17-6)	0,05	n.d.
193.	Benzo[k]fluoranthene (CAS No.: 207-08-9)	0,05	n.d.
194.	Fluoranthene (CAS No.: 206-44-0)	0,05	n.d.
195.	Phenanthrene (CAS No.: 85-01-8)	0,05	n.d.
196.	Pyrene (CAS No.: 129-00-0)	0,05	n.d.
197.	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one (3-benzylidene camphor) (CAS No.: 15087-24-8)	0,05	n.d.
198.	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)	0,05	n.d.
199.	2-methoxyethyl acetate (CAS No.: 110-49-6)	0,05	n.d.
200.	4-tert-butylphenol (CAS No.: 98-54-4)	0,05	n.d.
201.	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP)	0,05	n.d.
202.	Diisohexyl phthalate (CAS No.: 71850-09-4)	0,05	n.d.
203.	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone (CAS No.: 119313-12-1)	0,05	n.d.
204.	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one (CAS No.: 71868-10-5)	0,05	n.d.
205.	Perfluorobutane sulfonic acid (PFBS) and its salts	0,05	n.d.

mtm plastics GmbH  
 Bahnhofstr. 106  
 99759 Niedergebra  
 GERMANY

**Remark :**

1. Candidate List of SVHC (2020/01/16)  
<http://echa.europa.eu/web/guest/candidate-list-table>
2. In accordance with Regulation (EC) No 1907/2006, any producer or importer of articles shall notify ECHA, in accordance with paragraph 2 of Article 7, if a substance meets the criteria in Article 57 and is identified in accordance with Article 59(1) of the Regulation, if (a) the substance is present in those articles in quantities totaling over one tonne per producer or importer per year; and (b) the substance is present in those articles above a concentration of 0.1% weight by weight (w/w).
3. Article 33 of Regulation (EC) No 1907/2006 requires supplier of an article containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a concentration above 0.1% weight by weight (w/w) shall provide the recipient of the article with sufficient information, available to the supplier, to allow safe use of the article including, as a minimum, the name of that substance.
4. If a SVHC is found over 0.1% (w/w) and/or the specific concentration limit which is set in Regulation (EC) No 1272/2008 and its amendments, client is suggested to prepare a Safety Data Sheet (SDS) against the SVHC to comply with the supply chain communication obligation under Regulation (EC) No 1907/2006, in which:
  - (I) a substance that is classified as hazardous under the CLP Regulation (EC) No 1272/2008.
  - (II) mixture that is classified as hazardous under the CLP Regulation (EC) No 1272/2008, when it contains a substance with concentration equal to, or greater than the classification limit as set in Regulation (EC) No. 1272/2008; or
  - (III) a mixture is not classified as hazardous under the CLP Regulation (EC) No 1272/2008, but contains either:
    - (a) a substance posing human health or environmental hazards in an individual concentration of  $\geq 1\%$  by weight for mixtures that are solid or liquids (i.e., non-gaseous mixtures) or  $\geq 0.2\%$  by volume for gaseous mixtures; or
    - (b) a substance that is PBT, or vPvB in an individual concentration of  $\geq 0.1\%$  by weight for mixtures that are solid or liquids (i.e., non-gaseous mixtures); or
    - (c) a substance on the SVHC candidate list (for reasons other than those listed above), in an individual concentration of  $\geq 0.1\%$  by weight for non-gaseous mixtures; or
    - (d) a substance for which there are Europe-wide workplace exposure limits
5. If a SVHC is found over the reporting limit, client is suggested to identify the component which contains the SVHC and the exact concentration of the SVHC by requesting further quantitative analysis from the laboratory.

**Note :**

1. mg/kg = ppm; 0.1wt% = 1000ppm
2. RL = Reporting Limit
3. n.d.= not detected = below Reporting Limit
4. F Parameter Conversion Table : [http://twap.sgs.com/sgrsrsts/chn/download-REACH\\_tw.asp](http://twap.sgs.com/sgrsrsts/chn/download-REACH_tw.asp)
5. Classification : [http://twap.sgs.com/sgrsrsts/chn/download-REACH\\_tw.asp](http://twap.sgs.com/sgrsrsts/chn/download-REACH_tw.asp)
6. (\*): conc. of Sodium dichromate dihydrate (CAS No.: 7789-12-0) = conc. of sodium dichromate x 1.1375
7. (\*\*): The concentrations of above-mentioned mixtures are evaluated per the gained composition rate between the selected marks and the mixtures.
8. " - " = Not Regulated
9. (\* 1): Oligomers of chromic acid and dichromic acid : since the oligomers are made of the unknown amount of chromic acid or dichromic acid that results in no fixed molecular weight, therefore the monomer of chromic acid or dichromic acid is relevant and considered.

**Test Report**

No. 5303972-23

Date: 20/MAR/2020

Page 11 of 13

mtm plastics GmbH  
 Bahnhofstr. 106  
 99759 Niedergerbra  
 GERMANY

- 10. (\*2): Tetraboron disodium heptaoxide, hydrate: Only anhydrous form of disodium tetraborate is relevant and considered according to ECHA explanation (Ref no.: INC 000000032519).
- 11. \*\*\*: The substance was calculated by the test results of MonoctylTin, Dioctyl Tin, Tributyl Tin, Dibutyl Tin, PFOA or element (Ex. Arsenic, Lead, Cr(VI), Boron, Cobalt, Barium, Cadmium respectively).

**The test result is given as:**

Substance Name	RL (%)	Concentration (%)
Tributyl Tin (TBT)	0,05	n.d.
Arsenic (As) (*2)	0,005	n.d.
Lead (Pb)	0,005	0.0085
Hexavalent Chromium Cr(VI)	0,005	n.d.
Boron (B) (*2)	0,005	n.d.
Cobalt (Co)	0,005	n.d.
Dibutyl Tin (DBT)	0,05	n.d.
Barium (Ba)	0,005	0.0159
Dioctyl Tin (DOT)	0,0231	n.d.
MonoctylTin (MOT)	0.0140	n.d.
Cadmium (Cd)	0,005	0.0079

- 12. (\*1): Regarding the compound containing arsenic and lead, lead and arsenic are tested and respectively used for the calculation of the independent concentration of the compound containing arsenic and lead. The minimum value of the two independently calculated concentrations is used as the final concentration for the report.
- 13. (\*2): The extracted soluble Boron / Arsenic are detected by ICP-OES.
- 14. (\*3): TGIC is a mixture and also contains β-TGIC. According to the ECHA's technical dossier the ratio of β-TGIC to TGIC is around 1 to 10. Therefore β-TGIC is issued based on the above-mentioned ratio.
- 15. (\*4): Only if both qualitative results of lead and silicon are positive, the test result of the compound will be calculated based on the concentration of barium.
- 16. (\*5): Regarding the compound containing Cr(VI) and lead, lead and Cr(VI) are tested and respectively used for the calculation of the independent concentration of the compound containing Cr(VI) and lead. The minimum value of the two independently calculated concentrations is used as the final concentration for the report.
- 17. (\*7): RP-HP can't be identified directly and test result can't be calculated based on specific element(s) or compound. RP-HP is identified as SVHC because of 4-HPbI, therefore 4-HPbI is analysed instead of RP-HP.
- 18. (●) : Since lead has a wide application, it is unlikely to determine if the detected lead comes from the lead ion, lead element or/ and lead compounds. Therefore the detected total lead is used on behalf of lead.

## Test Report

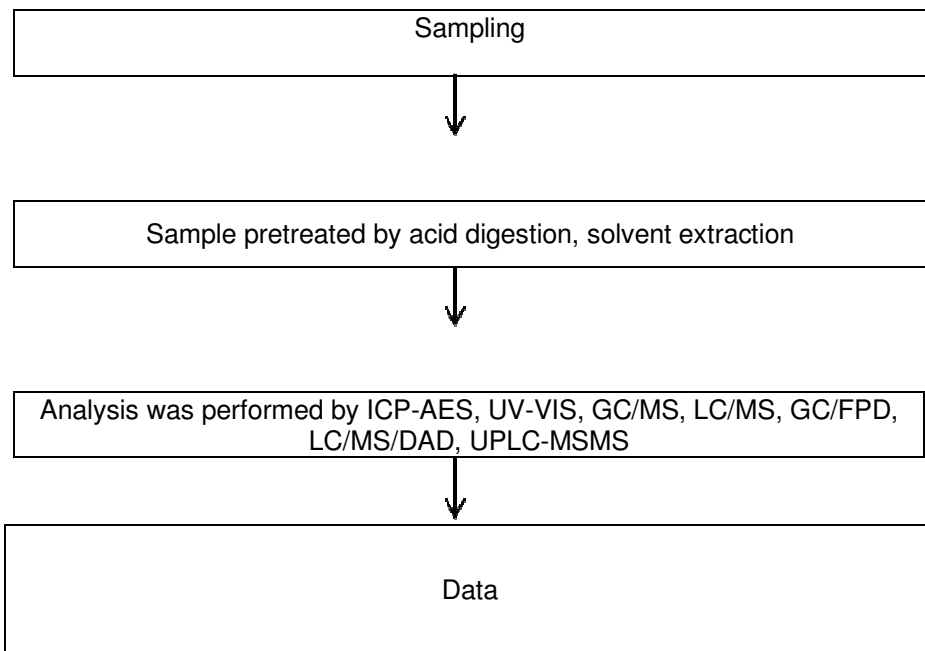
No. 5303972-23

Date: 20/MAR/2020

Page 12 of 13

mtm plastics GmbH  
Bahnhofstr. 106  
99759 Niedergebra  
GERMANY

### Analytical flow chart of SVHC



## Test Report

No. 5303972-23

Date: 20/MAR/2020

Page 13 of 13

mtm plastics GmbH  
Bahnhofstr. 106  
99759 Niedergebra  
GERMANY

### Sample photo:



### \*\*\*End of Report\*\*

The test results refer exclusively to the examined test items and the date of the test under the test specifications. Written acknowledgement for publication and duplication of our analytical reports for promotional purpose, as well as fractional use for other purposes are mandatory. Numbers following „<“ represent limits of quantification. Determination of parameters marked with \* was performed with a cooperation partner.

This document is issued by the Company subject to its General Conditions of Service ([www.sgsgroup.de/agb](http://www.sgsgroup.de/agb)). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues established therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instructions, if any. The Company's sole responsibility is to its client and this document does not exonerate parties to a transaction from exercising all their rights and under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Note: The sample(s) to which the findings recorded herein (the "findings ") relate was (were) probably drawn and / or provided by the client or by a third party acting at the client's direction. In this case the findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.

We would like to point out that measurement uncertainties are not taken into account for conclusions. On request, we can provide measurement uncertainties and take them into account for conclusions upon consultation.