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Fürth, March 31/2022

## TEST REPORT No. FUFDCP2022-00752-Final

*This test report replaces invariably interim test report No. FUFDCP2022 – Interim from March 24/2022*

Date sample received: February 01/2021  
Period of testing: February 01/2021 - March 31/2022  
Technical Director: Kerstin Scharrer  
Food contact testing according to client's request  
Testing according to: Reg(EC)1935/2004, Reg(EU)10/2011

### Abbreviations

\* = Test method is not part of the accreditation scope  
\*\* = Outsourcing  
n.a. = not applicable  
n.t. = not tested  
n.d. = not determinable (< LoQ)  
LoQ = limit of quantification  
CS = Combined sample  
P = passed  
F = failed

**Sample description:**      **PP5FDAMF20 (Batch: November 2021), Item No. 23247531**  
   **PP5FDAMF20 (Batch: Augustus 2021), Item No. 23247532**



Sample-No.	Sample Description
1	PP5FDAMF20 (Batch: November 2021)
2	PP5FDAMF20 (Batch: Augustuts 2021)

## 1. Global migration

Method: DIN EN 1186:2002-07 / 2002-12

LoQ: 6.0 mg/L

Uncertainty of measurement:  $\pm 12$  mg/L for acetic acid 3%, Ethanol 10% and 50%;

$\pm 18$  mg/L for Ethanol 95% and i-octane

Requirement max. 60 mg/kg food simulant

Testing procedure: total immersion, 10 g / 100 ml

### a) Testing conditions: Acetic acid 3% (10d / 40°C)

Sample	No. 1	No. 2
Global migration mg/L	23	13

### b) Testing conditions: Ethanol 10% (10d / 40°C)

Sample	No. 1	No. 2
Global migration mg/L	19	23

### c) Testing conditions: Ethanol 50% (10d / 40°C)

Sample	No. 1	No. 2
Global migration mg/L	10	15

### d) Testing conditions: Ethanol 95% (10d / 40°C)

Sample	No. 1	No. 2
Global migration mg/L	13	10

### e) Testing conditions: iso-octane (10d / 40°C)

Sample	No. 1	No. 2
Global migration mg/L	20	17

## 2. Specific migration of phthalates

Test method: DIN EN 13130-1:2004-08 / GC-MS\*

Testing conditions: Ethanol 95% (10d / 60°C), total immersion of 10g / 100ml

SML = specific migration limit

### Phthalates in mg/L simulant

Parameter	Abbrev.	CAS- No.	No. 1	No. 2	LOQ	SML in mg/kg food simulant
Dibutyl-phthalate	DBP	84-74-2	n.d.	n.d.	0.1	0.3
Benzylbutyl-phthalate	BBP	85-68-7	n.d.	n.d.	1.0	30
Bis-(2-ethyl-hexyl)phthalate	DEHP	117-81-7	n.d.	n.d.	1.0	1.5
Di-n-octyl-phthalate	DNOP	117-84-0	n.d.	n.d.	1.0	---
Diisononyl-phthalate	DINP	28553-12-0 68515-48-0	n.d.	n.d.	1.0	9
Diisodecyl-phthalate	DIDP	26761-40-0	n.d.	n.d.	1.0	
Diallylphthalate	DAP	131-17-9	n.d.	n.d.	0.01	<0.01

## 3. Migration of metals

Test method: DIN EN 13130-1:2004-08 / ICP-OES: DIN EN ISO 11885: 2009-09 + ICP-MS: DIN EN ISO 17294-2: 2017-01 + AFS (Hg): DIN EN ISO 17852: 2008-04

Testing conditions: Acetic acid 3% (10d / 60°C), total immersion of 10g / 100ml

SML = specific migration limit

ND = not detectable

### Results in mg/L simulant

Element	No. 1	No. 2	LOQ (mg/L)	SML (mg/kg food simulant)
Aluminum	n.d.	0.11	0.10	1
Arsenic	n.d.	n.d.	0.01	ND (<0.01)
Barium	n.d.	0.010	0.01	1
Cadmium	n.d.	n.d.	0.002	ND (<0.002)
Cobalt	n.d.	n.d.	0.01	0.05
Chromium	n.d.	n.d.	0.01	ND (<0.01)
Copper	n.d.	0.012	0.01	5
Europium	n.d.	n.d.	0.01	0.05
Iron	n.d.	n.d.	0.01	48
Gadolinium	n.d.	n.d.	0.01	0.05
Lanthanum	n.d.	n.d.	0.01	0.05
Lithium	n.d.	n.d.	0.01	0.6
Manganese	n.d.	n.d.	0.01	0.6

Element	No. 1	No. 2	LOQ (mg/L)	SML (mg/kg food simulant)
Nickel	n.d.	n.d.	0.01	0.02
Lead	n.d.	n.d.	0.01	ND (<0.01)
Antimony	n.d.	n.d.	0.025	0.04
Terbium	n.d.	n.d.	0.01	0.05
Zinc	n.d.	0.035	0.025	5
Mercury	n.d.	n.d.	0.01	ND (<0.01)
Sum of Europium, Gadolinium, Lanthanum and Terbium	n.d.	n.d.	0.04	0.05

#Ammonium, Calcium, Magnesium, potassium and sodium can be covered by overall migration testing according to Annex II, Remark (1)

#### 4. Specific Migration of Polycyclic Aromatic Hydrocarbons (PAH) in µg/L

Test method: DIN EN 13130-1:2004-08 / GC-MS\*

Testing conditions: iso-octane (10d / 60°C), total immersion of 10g / 100ml

LoQ: 10 µg/L

Substances	CAS-No	No. 1	No. 2
1 Naphthalene	91-20-3	n.d.	n.d.
2 Acenaphthylene	208-96-8	n.d.	n.d.
3 Acenaphthen	83-32-9	n.d.	n.d.
4 Fluorene	86-73-7	n.d.	n.d.
5 Phenanthrene	85-01-8	n.d.	n.d.
6 Anthracene	120-12-7	n.d.	n.d.
7 Fluoranthene	206-44-0	n.d.	n.d.
8 Pyrene	129-00-0	n.d.	n.d.
9 Benzo(a)anthracene	56-55-3	n.d.	n.d.
10 Chrysene	218-01-9	n.d.	n.d.
11 Benzo(b)fluoranthene +	205-99-2 +	n.d.	n.d.
12 Benzo(j)fluoranthene	205-82-3		
13 Benzo(k)fluoranthene	207-08-9	n.d.	n.d.
14 Benzo(e)pyrene	192-97-2	n.d.	n.d.
15 Benzo(a)pyrene	50-32-8	n.d.	n.d.
16 Indeno(1,2,3-cd)pyrene	193-39-5	n.d.	n.d.
17 Dibenzo(a,h)anthracene	53-70-3	n.d.	n.d.
18 Benzo(ghi)perylene	191-24-2	n.d.	n.d.
<b>sum</b>		n.d.	n.d.

Requirement: not detectable (LOQ = 10µg/kg)

**4. Testing according to packaging ordinance 94/62/EC**  
**Analysis of cadmium, chromium, lead and mercury, test results in mg/kg**

Test method:

Digestion: Microwave HNO<sub>3</sub>/H<sub>2</sub>O<sub>2</sub>

Measurement: ICP-OES: DIN EN ISO 11885 (2009-09) for No. 1  
 ICP-MS: DIN EN ISO 17294-2 (2017-01) for No. 2  
 Hg: AFS: DIN EN 17852 (2008-04)

**Requirement: cumulative ≤ 100 mg/kg**

Substance name	CAS No.	LOQ	No. 1	No. 2
Cd	7440-43-9	1 mg/kg	n.d.	n.d.
Cr	7440-47-3	5 mg/kg	n.d. <sup>(1)</sup>	n.d. <sup>(1)</sup>
Pb	7439-92-1	5 mg/kg	n.d.	n.d.
Hg	7439-97-6	1 mg/kg	n.d.	n.d.

Status	passed	passed

<sup>(1)</sup> Due to the obtained Chromium total content the Chromium VI content can be assumed as < 25 mg/kg.

**Status acc. to packaging directive 94/62/EC: passed**

**Conclusion:**

Based on the applied tests the sample complies with the packaging ordinance.

**Testing of material samples for SVHC- candidate list 8<sup>th</sup> of July 2021**

**5.1 Metals after total digestion in %**

Test method: ICP OES according to DIN EN ISO 11885 (2009-09)  
 Non-Metals: microwave digestion: conc. HNO<sub>3</sub>/ H<sub>2</sub>O<sub>2</sub>

Substance name	LOQ	No. 1	No. 2
Arsenic (As)	0.005 %	n.d.	n.d.
Lead (Pb)	0.01 %	n.d.	n.d.
Barium (Ba)	0.01 %	n.d.	n.d.
Boron (B)	0.003 %	n.d.	n.d.
Cadmium (Cd)	0.01 %	n.d.	n.d.
Calcium (Ca)	0.01 %	0.12	0.14
Chromium (Cr)	0.003 %	n.d.	n.d.
Cobalt (Co)	0.01 %	n.d.	n.d.
Potassium (K)	0.003 %	n.d.	n.d.
Molybdenum (Mo)	0.003 %	n.d.	n.d.
Sodium (Na)	0.004 %	n.d.	n.d.
Strontium (Sr)	0.01 %	n.d.	n.d.
Zinc (Zn)	0.01 %	n.d.	n.d.

Test method: ICP OES according to DIN EN ISO 11885 (2009-09)



Non-Metals: microwave digestion with inverse aqua regia solution

Substance name	LOQ	No. 1	No. 2
Tin (Sn)	0.005 %	n.d.	n.d.

## 5.2 Chromium VI in %

Test method:

Plastics: alkaline Extraction according to IEC 62321:2008\* / Detection with IC-UV/VIS resp. Photometer

Limit of quantification:

Plastics / Textiles / Leather: 0.001%

No. 1	n.d.
No. 2	n.d.

Regarding point 5.1 and 5.2 the following concentrations result for the listed SVHCs

Substance name	CAS-No.	Calculated concentration of No. 1 (assuming the worst-case)	Calculated concentration of No. 2 (assuming the worst-case)
Arsenic acid	7778-39-4	≤0.1%	≤0.1%
Calcium arsenate	7778-44-1	≤0.1%	≤0.1%
Diarsenic pentaoxide	1303-28-2	≤0.1%	≤0.1%
Diarsenic trioxide	1327-53-3	≤0.1%	≤0.1%
Triethyl arsenate	15606-95-8	≤0.1%	≤0.1%
Boric acid	10043-35-3 11113-50-1	≤0.1%	≤0.1%
Disodium tetraborate, anhydrous	1303-96-4 1330-43-4 12179-04-3	≤0.1%	≤0.1%
Diboron trioxide	1303-86-2	≤0.1%	≤0.1%
Disodium octaborate	12008-41-2	≤0.1%	≤0.1%
Sodium perborate; perboric acid, sodium salt	--	≤0.1%	≤0.1%
Sodium peroxometaborate	7632-04-4	≤0.1%	≤0.1%
Tetraboron disodium heptaoxide, hydrate	12267-73-1	≤0.1%	≤0.1%
ortho-Boric acid, sodium salt	-	≤0.1%	≤0.1%
Cadmium	7440-43-9	≤0.1%	≤0.1%
Cadmium carbonate	513-78-0	≤0.1%	≤0.1%
Cadmium chloride	10108-64-2	≤0.1%	≤0.1%
Cadmium fluoride	7790-79-6	≤0.1%	≤0.1%
Cadmium hydroxide	21041-95-2	≤0.1%	≤0.1%
Cadmium nitrate	10022-68-1, 10325-94-7	≤0.1%	≤0.1%
Cadmium oxide	1306-19-0	≤0.1%	≤0.1%
Cadmium sulphate	10124-36-4 31119-53-6	≤0.1%	≤0.1%
Cadmium sulphide	1306-23-6	≤0.1%	≤0.1%
Acids generated from Chromium trioxide:			
Chromic acid	7738-94-5	≤0.1%	≤0.1%
Dichromic acid	13530-68-2	≤0.1%	≤0.1%
Oligomers of chromic -and dichromic acid	--	≤0.1%	≤0.1%
Ammonium dichromate	7789-09-5	≤0.1%	≤0.1%
Chromium trioxide	1333-82-0	≤0.1%	≤0.1%
Dichromium tris(chromate)	24613-89-6	≤0.1%	≤0.1%

Substance name	CAS-No.	Calculated concentration of No. 1 (assuming the worst-case)	Calculated concentration of No. 2 (assuming the worst-case)
Potassium chromate	7789-00-6	≤0.1%	≤0.1%
Potassium dichromate	7778-50-9	≤0.1%	≤0.1%
Potassium hydroxyoctaoxidizincatedichromate	11103-86-9	≤0.1%	≤0.1%
Pentazinc chromate octahydroxide	49663-84-5	≤0.1%	≤0.1%
Sodium chromate	7775-11-3	≤0.1%	≤0.1%
Strontium chromate	7789-06-2	≤0.1%	≤0.1%
Sodium dichromate	7789-12-0 10588-01-9	≤0.1%	≤0.1%
Cobalt(II)carbonate	513-79-1	≤0.1%	≤0.1%
Cobalt(II)acetate	71-48-7	≤0.1%	≤0.1%
Cobalt dichloride	7646-79-9	≤0.1%	≤0.1%
Cobalt(II)nitrate	10141-05-6	≤0.1%	≤0.1%
Cobalt(II)sulphate	10124-43-3	≤0.1%	≤0.1%
Lead	7439-92-1	≤0.1%	≤0.1%
C.I. Pigment Red 104	12656-85-8	≤0.1%	≤0.1%
C.I. Pigment Yellow 34	1344-37-2	≤0.1%	≤0.1%
Dioxobis(7stearate)trilead	12578-12-0	≤0.1%	≤0.1%
Lead azide	13424-46-9	≤0.1%	≤0.1%
Lead(II) bis(methanesulfonate)	17570-76-2	≤0.1%	≤0.1%
Lead bis(tetrafluoroborate)	13814-96-5	≤0.1%	≤0.1%
Lead chromate	7758-97-6	≤0.1%	≤0.1%
Lead cyanamidate	20837-86-9	≤0.1%	≤0.1%
Lead diacetate	301-04-2	≤0.1%	≤0.1%
Lead dinitrate	10099-74-8	≤0.1%	≤0.1%
Lead dipicrate	6477-64-1	≤0.1%	≤0.1%
Lead hydrogen arsenate	7784-40-9	≤0.1%	≤0.1%
Lead monoxide (lead oxide)	1317-36-8	≤0.1%	≤0.1%
Lead oxide sulfate	12036-76-9	≤0.1%	≤0.1%
Lead salt, acetic acid, basic	51404-69-4	≤0.1%	≤0.1%
Lead salts, fatty acids, C16-18	91031-62-8	≤0.1%	≤0.1%
Lead styphnate	15245-44-0	≤0.1%	≤0.1%
Lead titanium trioxide	12060-00-3	≤0.1%	≤0.1%
Lead titanium zirconium oxide	12626-81-2	≤0.1%	≤0.1%
Orange lead (lead tetroxide)	1314-41-6	≤0.1%	≤0.1%
[Phthalato(2-)]dioxotrilead	69011-06-9	≤0.1%	≤0.1%
Pentalead tetraoxide sulphate	12065-90-6	≤0.1%	≤0.1%
Pyrochlore, antimony lead yellow	8012-00-8	≤0.1%	≤0.1%
Silicic acid (H <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> ), barium salt (1:1), lead-doped	68784-75-8	≤0.1%	≤0.1%
Silicic acid, lead salt	11120-22-2	≤0.1%	≤0.1%
Sulfurous acid, lead salt, dibasic	62229-08-7	≤0.1%	≤0.1%
Tetraethyllead	78-00-2	≤0.1%	≤0.1%
Tetralead trioxide sulphate	12202-17-4	≤0.1%	≤0.1%
Trilead diarsenate	3687-31-8	≤0.1%	≤0.1%
Trilead bis(carbonate)dihydroxide	1319-46-6	≤0.1%	≤0.1%
Trilead dioxide phosphonate	12141-20-7	≤0.1%	≤0.1%
Dibutylbis(pentane-2,4-dionato-O,O')tin	22673-19-4	≤0.1%	≤0.1%
2-Ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	≤0.1%	≤0.1%

Substance name	CAS-No.	Calculated concentration of No. 1 (assuming the worst-case)	Calculated concentration of No. 2 (assuming the worst-case)
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)	-	≤0.1%	≤0.1%
Diocyltin 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 dioctyltin dilaurate; stannane, dioctyl-, bis(coco acyloxy) derivs. Stannane, dioctyl-, bis(coco acyloxy) derivs. Diocyltin dilaurate	91648-39-4 3648-18-8	≤0.1%	≤0.1%
Tributyl tin oxide (TBTO)	56-35-9	≤0.1%	≤0.1%
Dibutyltin dichloride (DBTC)	683-18-1	≤0.1%	≤0.1%

## 6. Organic substances in %

Test method:

Phthalates acc. to 12.01.02.04 (2021-08); SCCP: 12.01.03.01 (2021-08); AP+APEO: 12.01.13.01 (2019-12);  
Formamide, Dimethylformamide: 12.05.01.01 (2018-05);  
Other parameters: extraction with organic solvent, measurement: GC/MS and LC/MS\* resp.

Substance name	LoQ	CAS	No. 1	No. 2
Dinoseb (6-sec-butyl-2,4-dinitrophenol)	0.05%	88-85-7	n.d.	n.d.
Perfluorobutane sulfonic acid (PFBS) and its salts (via PFBS)	0.05%	-	n.d.	n.d.
Perfluorohexane-1-sulphonic acid (PFHxS) and its salts (via PFHxS)	0.05%	-	n.d.	n.d.
Pentadecafluorooctanoic acid (PFOA)	0.05%	335-67-1	n.d.	n.d.
Ammonium pentadecafluorooctanoate (APFO) (via PFOA)	0,05%	3825-26-1	n.d.	n.d.
Perfluorononan-1-oic-acid (PFNA) and its sodium and ammonium salts (via PFNA)	0.05%	375-95-1 21049-39-8 4149-60-4	n.d.	n.d.
Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts (via PFDA)	0.05%	335-76-2 3108-42-7 3830-45-3	n.d.	n.d.
Heneicosfluoroundecanoic acid	0.05%	2058-94-8	n.d.	n.d.
Tricosfluorododecanoic acid	0.05%	307-55-1	n.d.	n.d.
Pentacosfluorotridecanoic acid	0.05%	72629-94-8	n.d.	n.d.
Heptacosfluorotetradecanoic acid	0.05%	376-06-7	n.d.	n.d.
Phenolphthalein	0.05%	77-09-8	n.d.	n.d.
1,3-Propanesultone	0.05%	1120-71-4	n.d.	n.d.
Hexahydromethylphthalic anhydride, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride	0.05%	25550-51-0 19438-60-9 48122-14-1 57110-29-9	n.d.	n.d.
Cyclohexane-1,2-dicarboxylic anhydride, cis-cyclohexane-1,2-dicarboxylic anhydride, trans-cyclohexane-1,2-dicarboxylic anhydride	0.05%	85-42-7 13149-00-3 14166-21-3	n.d.	n.d.
Methoxyacetic acid	0.05%	625-45-6	n.d.	n.d.
Benzene-1,2,4-tricarboxylic acid 1,2 anhydride - trimellitic anhydride (TMA)	0.05%	552-30-7	n.d.	n.d.
3-Ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	0.05%	143860-04-2	n.d.	n.d.

Substance name	LoQ	CAS	No. 1	No. 2
2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides	0.05%	-	n.d.	n.d.
N,N,N',N'-Tetramethyl-4,4'-methylenedianiline (Michler's base)	0.05%	101-61-1	n.d.	n.d.
4,4'-Bis(dimethylamino)benzophenone (Michler's Ketone)	0.05%	90-94-8	n.d.	n.d.
C.I. Solvent Blue 4 with $\geq 0.1\%$ of Michler's ketone or Michler's base (via Michler's ketone resp. Michler's base)	0.05%	6786-83-0	n.d.	n.d.
C.I. Basic Violet 3 with $\geq 0.1\%$ of Michler's ketone or Michler's base (via Michler's ketone resp. Michler's base)	0.05%	548-62-9	n.d.	n.d.
C.I. Basic Blue 26 with $\geq 0.1\%$ of Michler's ketone or Michler's base (via Michler's ketone resp. Michler's base)	0.05%	2580-56-5	n.d.	n.d.
4,4'-Bis(dimethylamino)-4''-(methylamino)trityl alcohol with $\geq 0.1\%$ of Michler's ketone or Michler's base (via Michler's ketone resp. Michler's base)	0.05%	561-41-1	n.d.	n.d.
4-Heptylphenol, branched and linear	0.05%	--	n.d.	n.d.
Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear with $\geq 0.1\%$ w/w 4-heptylphenol, branched and linear	0.05%	-	n.d.	n.d.
4-(1,1,3,3-Tetramethylbutyl)phenol, ethoxylated (OPEO)	0.05%	--	n.d.	n.d.
4-Nonylphenoethoxylate, branched and linear (NPEO)	0.05%	--	n.d.	n.d.
Direct Red 28	0.05%	573-58-0	n.d.	n.d.
Direct Black 38	0.05%	1937-37-7	n.d.	n.d.
4-Aminoazobenzene	0.05%	60-09-3	n.d.	n.d.
o-Anisidine	0.05%	90-04-0	n.d.	n.d.
4-Methyl-m-phenylenediamine (Toluene-2,4-diamine)	0.05%	95-80-7	n.d.	n.d.
o-Aminoazotoluene	0.05%	97-56-3	n.d.	n.d.
4,4'-Oxydianiline	0.05%	101-80-4	n.d.	n.d.
4-Aminobiphenyl	0.05%	92-67-1	n.d.	n.d.
4,4'-Methylenedi-o-toluidine	0.05%	838-88-0	n.d.	n.d.
2,2'-Dichloro-4,4'-methylenedianiline	0.05%	101-14-4	n.d.	n.d.
o-Toluidine	0.05%	95-53-4	n.d.	n.d.
6-methoxy-m-toluidine (p-Cresidine)	0.05%	120-71-8	n.d.	n.d.
4,4'- Diaminodiphenylmethane (DADPM)	0.05%	101-77-9	n.d.	n.d.
Formaldehyde, oligomeric reaction products with aniline - technical MDA (via DADPM)	0.05%	25214-70-4	n.d.	n.d.
Diazeno-1,2-dicarboxamide (C,C'-azodi(formamide))	0.05%	123-77-3	n.d.	n.d.
Diisobutylphthalate (DIBP)	0.05%	84-69-5	n.d.	n.d.
Dibutylphthalate (DBP)	0.05%	84-74-2	n.d.	n.d.
Benzylbutylphthalate (BBP)	0.05%	85-68-7	n.d.	n.d.
Bis(2-ethylhexyl)phthalate (DEHP)	0.05%	117-81-7	n.d.	n.d.
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich - diisoheptylphthalate (DIHP)	0.05%	71888-89-6	n.d.	n.d.
Bis(2-methoxyethyl)phthalate (DMEP)	0.05%	117-82-8	n.d.	n.d.
Dicyclohexyl phthalate (DCHP)	0.05%	84-61-7	n.d.	n.d.
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear (Dipentylphthalates)	0.05%	84777-06-0	n.d.	n.d.
N-pentyl-isopentylphthalate	0.05%	776297-69-9	n.d.	n.d.
Diisopentylphthalate	0.05%	605-50-5	n.d.	n.d.
Dipentylphthalate (DPP)	0.05%	131-18-0	n.d.	n.d.
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	0.05%	68515-42-4	n.d.	n.d.
1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	0.05%	68515-50-4	n.d.	n.d.
Diisohexyl phthalate	0.05%	71850-09-4	n.d.	n.d.
Di-n-hexylphthalate (DnHP)	0.05%	84-75-3	n.d.	n.d.
1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters	0.05%	68515-51-5 68648-93-1	n.d.	n.d.

Substance name	LoQ	CAS	No. 1	No. 2
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.	n.d.
2,4-Dinitrotoluene	0.05%	121-14-2	n.d.	n.d.
5-tert-Butyl-2,4,6-trinitro-m-xylene (musk xylene)	0.05%	81-15-2	n.d.	n.d.
1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	0.05%	2451-62-9	n.d.	n.d.
1,3,5-Tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazin-2,4,6-(1H,3H,5H)-trione (β-TGIC)	0.05%	59653-74-6	n.d.	n.d.
2-Benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	0.05%	3846-71-7	n.d.	n.d.
2-(2H-Benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	0.05%	25973-55-1	n.d.	n.d.
2,4-Di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	0.05%	3864-99-1	n.d.	n.d.
2-(2H-Benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	0.05%	36437-37-3	n.d.	n.d.
Bisphenol A (BPA)	0.05%	80-05-7	n.d.	n.d.
2,2-Bis(4'-hydroxyphenyl)-4-methylpentane	0.05%	6807-17-6	n.d.	n.d.
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]	0.05%	-	n.d.	n.d.
Trixylyl phosphate	0.05%	25155-23-1	n.d.	n.d.
Ethylenediamine (EDA)	0.05%	107-15-3	n.d.	n.d.
tert-Butylphenol	0.05%	98-54-4	n.d.	n.d.
1,7,7-Trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one	0.05%	15087-24-8	n.d.	n.d.
Hydrazine	0.05%	302-01-2 7803-57-8	n.d.	n.d.
p-(1,1-Dimethylpropyl)phenol	0.05%	80-46-6	n.d.	n.d.
Terphenyl hydrogenated	0.05%	61788-32-7	n.d.	n.d.
Butyl 4-hydroxybenzoate - Butylparabene	0.05%	94-26-8	n.d.	n.d.
Bis(pentabromophenyl) ether - Decabromodiphenyl ether (DecaBDE)	0.05%	1163-19-5	n.d.	n.d.
Tris(2-chloroethyl)phosphate (TCEP)	0.05%	115-96-8	n.d.	n.d.
Dechlorane plus™	0.05%	-	n.d.	n.d.
Hexabromocyclododecane (HBCDD)	0.05%	-	n.d.	n.d.
2-Benzyl-2-dimethylamino-4'-morpholinobutyrophenone (BDMBP)	0.05%	119313-12-1	n.d.	n.d.
2-Methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one (MMTMP)	0.05%	71868-10-5	n.d.	n.d.
4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol)	0.05%	140-66-9	n.d.	n.d.
4-Nonylphenol, branched and linear	0.05%	--	n.d.	n.d.
Furan	0.05%	110-00-9	n.d.	n.d.
Methyloxirane (Propylene oxide)	0.05%	75-56-9	n.d.	n.d.
1-Bromopropane (n-Propyl bromide)	0.05%	106-94-5	n.d.	n.d.
1,2-Dimethoxyethane Ethylene glycoldimethylether (EGDME)	0.05%	110-71-4	n.d.	n.d.
2-Methoxyethanol	0.05%	109-86-4	n.d.	n.d.
1,2-Dichloroethane	0.05%	107-06-2	n.d.	n.d.
Trichloroethen	0.05%	79-01-6	n.d.	n.d.
2-Ethoxyethanol	0.05%	110-80-5	n.d.	n.d.
1,2-Diethoxyethane	0.05%	629-14-1	n.d.	n.d.
2-Ethoxyethyl acetate	0.05%	111-15-9	n.d.	n.d.
N-Methylacetamide	0.05%	79-16-3	n.d.	n.d.
Dimethyl sulphate	0.05%	77-78-1	n.d.	n.d.
Bis(2-methoxyethyl) ether	0.05%	111-96-6	n.d.	n.d.
1,2,3-Trichloropropane	0.05%	96-18-4	n.d.	n.d.
Acrylamide	0.05%	79-06-1	n.d.	n.d.
Diethyl sulphate	0.05%	64-67-5	n.d.	n.d.
1,2-Bis(2-methoxyethoxy)ethane (TEGDME; Triglyme)	0.05%	112-49-2	n.d.	n.d.
Nitrobenzene	0.05%	98-95-3	n.d.	n.d.
2-Methoxyethyl acetate	0.05%	110-49-6	n.d.	n.d.
Octamethylcyclotetrasiloxane (D4)	0.05%	556-67-2	n.d.	n.d.
Decamethylcyclopentasiloxane (D5)	0.05%	541-02-6	n.d.	n.d.

Substance name	LoQ	CAS	No. 1	No. 2
Dodecamethylcyclohexasiloxane (D6)	0.05%	540-97-6	n.d.	n.d.
Imidazolidine-2-thione	0.05%	96-45-7	n.d.	n.d.
Formamide	0.05%	75-12-7	n.d.	n.d.
N,N-Dimethylformamide (DMFa)	0.05%	68-12-2	n.d.	n.d.
N,N-Dimethylacetamide (DMAC)	0.05%	127-19-5	n.d.	n.d.
1-Methyl-2-pyrrolidone	0.05%	872-50-4	n.d.	n.d.
2-Methylimidazole	0.05%	693-98-1	n.d.	n.d.
1-Vinylimidazole	0.05%	1072-63-5	n.d.	n.d.
Bis(2-(2-methoxyethoxy)ethyl)ether	0.05%	143-24-8	n.d.	n.d.
Short chain chloroparaffins C <sub>10</sub> -C <sub>13</sub> (SCCP)	0.05%	85535-84-8	n.d.	n.d.
Phenanthrene	0.05%	85-01-8	n.d.	n.d.
Anthracene	0.05%	120-12-7	n.d.	n.d.
Anthracene oils and anthracene pastes (via anthracene)		90640-80-5 91995-17-4 91995-15-2 90640-82-7 90640-81-6	n.d.	n.d.
Fluoranthene	0.05%	206-44-0; 93951-69-0	n.d.	n.d.
Pyrene	0.05%	129-00-0; 1718-52-1	n.d.	n.d.
Benzo[a]anthracene	0.05%	56-55-3, 1718-53-2	n.d.	n.d.
Chrysene	0.05%	218-01-9, 1719-03-5	n.d.	n.d.
Benzo[k]fluoranthene	0.05%	207-08-9	n.d.	n.d.
Benzo(Def)chrysene (=Benzo(a)pyrene, BaP)	0.05%	50-32-8	n.d.	n.d.
Benzo[ghi]perylene	0.05%	191-24-2	n.d.	n.d.
Coal tar (calculated via the concentration of the sum of 13 polycyclic aromatic hydrocarbons)	0.05%	65996-93-2	n.d.	n.d.
Phenol, alkylation products (mainly in para position) with C12-rich branched alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP)	0.05%	-	n.d.	n.d.

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	0.05%	-	n.d.	n.d.
Glutaral	0.05%	111-30-8	n.d.	n.d.
4,4'-(1-Methylpropylidene)bisphenol	0.05%	77-40-7	n.d.	n.d.
2-(4-tert-Butylbenzyl)propionaldehyde and its individual stereoisomers	0.05%	-	n.d.	n.d.
2,2-Bis(bromomethyl)propane-1,3-diol (BMP); 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA); 2,3-dibromo-1-propanol (2,3-DBPA)	0.05%	-	n.d.	n.d.
1,4-Dioxane	0.05%	123-91-1	n.d.	n.d.

## No analysis necessary for the following substances

Substance name	
Aluminosilicate	Ceramic fibres
Zirconia aluminosilicate	

## Conclusion:

The item is free of hazardous substances listed in the SVHC candidate list (8<sup>th</sup> of July 2021) of the REACH-regulation in a concentration greater than 0.1%. There are no obligations according to article 33 of the REACH-regulation or in the SCIP database of Echa.

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END OF REPORT