

Test Report

Report No. : WP-22016419-JC-02En

SampleOrigin : Customer Sample Delivery

Client : NorthBridge New Material Technology(Suzhou) Co.,Ltd

Building# B2, Chaoyang Industrial square, Caohu

Address: Industrial Park, Xiangcheng District, Suzhou. CN.



Shanghai WEIPU Chemical Technology Service Co., Ltd

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Test Report

The following sample(s) was/were submitted and identified on behalf of the applicant:

Sample Name: PLA K5P

Sample character: solid

Type: /

Testing information:

Date of Sample Received: 2022-01-26

Testing Period: 2022-01-26~2022-02-09

Test Item(s): Selected test (s) as requested by client.

Test Criterion: Please refer to next page(s).

Test Result: Please refer to next page(s).

Complied by :

fj Luo.

Approved by :

JJ Lee

Issued Date :

2022-02-09

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Test Part Description :

<u>Serial No.</u>	<u>Name</u>	<u>Sample ID</u>	<u>Description</u>
001	PLA K5P	220107118-1	Light blue solid

Test Method and Apparatus :

SVHC screening is performed according to: 223 substances in the Candidate List of Substances of Very High Concern (SVHC) for authorization published by European Chemicals Agency (ECHA) regarding Regulation (EC) No 1907/2006 concerning the REACH. Analyzed by ICP-OES, UV-Vis, GC-MS, HPLC, LC-MS, UPLC-MS/MS.

Test Results:

<u>Substance Name</u>	<u>CAS No.</u>	<u>MDL (%)</u>	<u>Result(s) (%)</u>
All tested SVHC in candidate list	-	-	N.D.

Summary: PASS

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 and evaluation screening, the test results of SVHC are $\leq 0.1\%$ (w/w) in the articles of the submitted sample.

Notes :

- (1) The table above only shows detected SVHC, and SVHC that below MDL are not reported. Please refer to Appendix for the full list of tested SVHC.
- (2) MDL = Method Detection Limit
- (3) N.D. = Not Detected ($< \text{MDL}$)
- (4) “-” = Not Regulated
- (5) “ Δ ” : The test result is based on the calculation of selected element(s) and to the worst-case scenario.
- (6) “**” : The substance is proposed for the identification as SVHC only where it contains Michler's ketone (CAS No. 90-94-8) or Michler's base (CAS No. 101-61-1) $\geq 0.1\%$ (w/w).
- (7) In view of the analysis demand and the limitation in the sample, the screening rule is only applied to the parts and materials that are enough tested in the finished product.
- (8) NA[^] = Based on the verification of the specific element detected and the information provided by the customer, the possibility of this element in the form of SVHC is very small, although the possibility of its existence cannot be completely excluded. The specific element in this sample should come from other compounds.

Remarks :

1. In accordance with Regulation (EC) No 1907/2006, any producer or importer of articles shall notify

ECHA,in accordance with paragraph 4 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 (1) the substance is present in those articles in quantities totaling over one tonne per producer or importer per year; and (2) the substance is present in those articles above a concentration of 0.1% weight by weight (w/w);

2. 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.
3. The chemical analysis of specified SVHC is performed by means of currently available analytical techniques against the following SVHC related documents published by ECHA:
<http://echa.europa.eu/web/guest/candidate-list-table>

These lists are under evaluation by ECHA and may subject to change in the future.

Appendix :

<u>No.</u>	<u>Substance Name</u>	<u>CAS No.</u>	<u>MDL (%)</u>
1	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	0.01
2	Anthracene	120-12-7	0.01
3	Benzyl butyl phthalate (BBP)	85-68-7	0.01
4	Bis(2-ethylhexyl)phthalate (DEHP)	117-81-7	0.01
5	Bis(tributyltin)oxid (TBTO)	56-35-9	0.01
6	Cobalt dichlorid△	7646-49-9	0.001
7	Diarsenicpentaoxide△	1303-28-2	0.001
8	Diarsenic trioxide△	1327-53-3	0.001
9	Dibutyl phthalate (DBP)	84-74-2	0.01
10	4, 4'-Diaminodiphenylmethane (MDA)	101-77-9	0.01
11	5-tert-butyl-2,4,6-trinitro-m-xylene	81-15-2	0.01
12	Hexabromocyclododecane (α- HBCDD, β- HBCDD, γ- HBCDD)	25637-99-4, 3194-55-6 (134237-50-6, 134237-51-7, 134237-52-8)	0.01
13	Lead hydrogen arsenate△	7784-40-9	0.001
14	Sodium dichromate△	7789-12-0, 10588-01-9	0.001
15	Triethyl arsenate△	15606-95-8	0.001
16	Anthracene oil	90640-80-5	0.01
17	Anthracene oil, anthracene paste, distn. Lights	91995-17-4	0.01

No.	Substance Name	CAS No.	MDL (%)
18	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	0.01
19	Anthracene oil, anthracene-low	90640-82-7	0.01
20	Anthracene oil, anthracene paste	90640-81-6	0.01
21	Pitch, coal tar, high temp.	65996-93-2	0.01
22	Acrylamide	79-06-1	0.01
23	2,4-Dinitrotoluene	121-14-2	0.01
24	Diisobutyl phthalate (DIBP)	84-69-5	0.01
25	Lead chromate△	7758-97-6	0.001
26	C.I. Pigment Red 104△	12656-85-8	0.001
27	C.I. Pigment Yellow 34△	1344-37-2	0.001
28	Tris(2-chloroethyl)phosphate	115-96-8	0.01
29	Trichloroethylene	79-01-6	0.01
30	Boric acid△	10043-35-3/11113-50-1	0.001
31	Disodium tetraborate, anhydrous△	1330-43-4, 12179-04-3 1303-96-4	0.001
32	Tetraboron disodium heptaoxide, hydrate△	12267-73-1	0.001
33	Sodium chromate△	7775-11-3	0.001
34	Potassium chromate△	7789-00-6	0.001
35	Ammonium dichromate△	7789-09-5	0.001
36	Potassium dichromate△	7778-50-9	0.001
37	Cobalt(II) sulphate△	10124-43-3	0.001
38	Cobalt(II) dinitrate△	10141-05-6	0.001
39	Cobalt(II) carbonate△	513-79-1	0.001
40	Cobalt(II) diacetate△	71-48-7	0.001
41	2-Methoxyethanol	109-86-4	0.01
42	2-Ethoxyethanol	110-80-5	0.01
43	Chromium trioxide△	1333-82-0	0.001
44	Acids generated from chromium trioxide and their oligomers: Chromic acid△, Dichromic acid△, Oligomers of chromic acid and dichromic acid△	- 7738-94-5 13530-68-2 -	0.001
45	2-ethoxyethyl acetate	111-15-9	0.01
46	1, 2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	0.01
47	Hydrazine	7803-57-8, 302-01-2	0.01

No.	Substance Name	CAS No.	MDL (%)
48	1-methyl-2-pyrrolidone	872-50-4	0.01
49	1, 2, 3-trichloropropane	96-18-4	0.01
50	1, 2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	0.01
51	strontium chromate Δ	7789-06-2	0.001
52	Dichromiumtris(chromate) Δ	24613-89-6	0.001
53	Potassium Δ	11103-86-9	0.001
54	Pentazinc chromate octahydroxide Δ	49663-84-5	0.001
55	Aluminosilicate RefractoryCeramicFibres Δ	-	0.001
56	ZirconiaAluminosilicate Refractory Ceramic Fibres Δ	-	0.001
57	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	0.01
58	Bis(2-methoxyethyl) phthalate	117-82-8	0.01
59	2-Methoxyaniline	90-04-0	0.01
60	4-(1, 1, 3, 3-tetramethylbutyl)phenol	140-66-9	0.01
61	1, 2-Dichloroethane	107-06-2	0.01
62	Bis(2-methoxyethyl) ether	111-96-6	0.01
63	Arsenic acid Δ	7778-39-4	0.001
64	Calcium arsenate Δ	7778-44-1	0.001
65	Trileaddiarsenate Δ	3687-31-8	0.001
66	N, N-dimethylacetamide	127-19-5	0.01
67	2, 2'-dichloro-4, 4'- methylenedianiline	101-14-4	0.01
68	Phenolphthalein	77-09-8	0.01
69	Lead diazide, Lead azide Δ	13424-46-9	0.001
70	Lead styphnate Δ	15245-44-0	0.001
71	Lead dipicrate Δ	6477-64-1	0.001
72	1, 2-bis(2-methoxyethoxy) ethane(TEGDME)	112-49-2	0.01
73	1, 2-dimethoxyethane(EGDME)	110-71-4	0.01
74	Diboron trioxide Δ	1303-86-2	0.001
75	Formamide	75-12-7	0.01
76	Lead(II) bis(methanesulfonate) Δ	17570-76-2	0.001
77	TGIC (1, 3, 5-tris(oxiranylmethyl)- 1, 3, 5-triazine-2, 4, 6(1H, 3H, 5H)-trione)	2451-62-9	0.01
78	β -TGIC(1, 3, 5-tris[(2S and 2R)- 2, 3-epoxypropyl]- 1, 3, 5-triazine- 2, 4, 6-(1H, 3H, 5H)-trione)	59653-74-6	0.01

No.	Substance Name	CAS No.	MDL (%)
79	4, 4'-bis(dimethylamino)benzophenone (Michler's Ketone)	90-94-8	0.01
80	N, N, N', N'-tetramethyl-4, 4'-methylenedianiline (Michler's base)	101-61-1	0.01
81	C.I. Basic Blue 26**	2580-56-5	0.01
82	C.I. Basic Violet 3**	548-62-9	0.01
83	4, 4'-bis(dimethylamino)- 4''-(methylamino)trityl alcohol**	561-41-1	0.01
84	C.I. Solvent Blue 4**	6786-83-0	0.01
85	Bis(pentabromophenyl) ether	1163-19-5	0.01
86	Pentacosafuorotridecanoic acid	72629-94-8	0.01
87	Tricosafuorododecanoic acid	307-55-1	0.01
88	Henicosafuoroundecanoic acid	2058-94-8	0.01
89	Heptacosafuorotetradecanoic acid	376-06-7	0.01
90	Diazene-1, 2-dicarboxamide	123-77-3	0.01
91	Cyclohexane-1, 2-dicarboxylic anhydride、 cis-cyclohexane-1, 2-dicarboxylic anhydride trans-cyclohexane-1, 2-dicarboxylic anhydride	85-42-7, 13149-00-3, 14166-21-3	0.01
92	MHHPA、 Hexahydro-4-methylphthalic anhydride、 Hexahydro-1-methylphthalic anhydride、 Hexahydro-3-methylphthalic anhydride	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	0.01
93	4-Nonylphenol, branched and linear	/	0.01
94	4-(1, 1, 3, 3-tetramethylbutyl) phenol, ethoxylated	/	0.01
95	Methoxyacetic acid	625-45-6	0.01
96 96	N, N-Dimethylformamide	68-12-2	0.01
97	Dibutyltin dichloride	683-18-1	0.01
98	Lead monoxide△	1317-36-8	0.001
99	Lead tetroxide (orange lead)△	1314-41-6	0.001
100	Lead bis(tetrafluoroborate)△	13814-96-5	0.001
101	Trileadbis(carbonate) dihydroxid(basic lead carbonate) △	1319-46-6	0.001
102	Lead titanium trioxide△	12060-00-3	0.001
103	Lead titanium zirconium oxide△	12626-81-2	0.001
104	Silicic acid, lead salt△	11120-22-2	0.001
105	Silicic acid, barium salt, lead-doped△	68784-75-8	0.001
106	1-Bromopropane	106-94-5	0.01

No.	Substance Name	CAS No.	MDL (%)
107	Methyloxirane (Propylene oxide)	75-56-9	0.01
108	1, 2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	0.01
109	Diisopentylphthalate	605-50-5	0.01
110	N-Pentyl-isopentylphthalate	776297-69-9	0.01
111	1, 2-Diethoxyethane	629-14-1	0.01
112	Acetic acid, lead salt, basic	51404-69-4	0.001
113	Lead oxide sulfate△	12036-76-9	0.001
114	[Phthalato(2-)]dioxotrilead△	69011-06-9	0.001
115	Dioxobis(stearato)trilead△	12578-12-0	0.001
116	Fatty acids, C16-18, lead salts△	91031-62-8	0.001
117	Lead cyanamidate△	20837-86-9	0.001
118	Lead dinitrate△	10099-74-8	0.001
119	Pentaleadtetraoxidesulphate△	12065-90-6	0.001
120	Pyrochlore, antimony lead yellow△	8012-00-8	0.001
121	Sulfurous acid, lead salt, dibasic△	62229-08-7	0.001
122	Tetraethyllead△	78-00-2	0.001
123	Tetralead trioxide sulphate△	12202-17-4	0.001
124	Trilead dioxide phosphonate△	12141-20-7	0.001
125	Furan	110-00-9	0.01
126	Diethyl sulphate	64-67-5	0.01
127	Dimethyl sulphate	77-78-1	0.01
128	3-Ethyl-2-methyl-2-(3-methylbutyl)-1, 3-oxazolidine	143860-04-2	0.01
129	Dinoseb	88-85-7	0.01
130	4, 4'-Methylenedi-o-toluidine	838-88-0	0.01
131	4, 4'-Oxydianiline and its salts	101-80-4	0.01
132	4-Aminoazobenzene	60-09-3	0.01
133	4-Methyl-m-phenylenediamine	95-80-7	0.01
134	6-Methoxy-m-toluidine	120-71-8	0.01
135	Biphenyl-4-ylamine	92-67-1	0.01
136	o-Aminoazotoluene	97-56-3	0.01
137	o-Toluidine	95-53-4	0.01
138	N-Methylacetamide	79-16-3	0.01
139	Cadmium△	7440-43-9	0.001
140	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	0.01
141	Pentadecafluorooctanoic acid (PFOA)	335-67-1	0.01
142	Dipentyl phthalate (DPP)	131-18-0	0.01

No.	Substance Name	CAS No.	MDL (%)
143	4-Nonylphenol, branched and linear, ethoxylated	-	0.01
144	Cadmium oxide Δ	1306-19-0	0.001
145	Cadmium sulphide Δ	1306-23-6	0.001
146	C.I. Direct black 38	1937-37-7	0.01
147	Dihexyl Phthalate	84-75-3	0.01
148	Imidazolidine-2-thione; 2-imidazoline-2-thiol	96-45-7	0.01
149	Trixylyl Phosphate	25155-23-1	0.01
150	C.I. Direct Red 28	573-58-0	0.01
151	Lead di(acetate) Δ	301-04-2	0.001
152	1, 2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	0.01
153	Cadmium chloride Δ	10108-64-2	0.001
154	Sodium perborate Δ ; perboric acid, sodium salt Δ	-	0.001
155	Sodium peroxometaborate Δ	7632-04-4	0.001
156	Cadmium fluoride Δ	7790-79-6	0.001
157	Cadmium sulphate Δ	10124-36-4, 31119-53-6	0.001
158	2-benzotriazol-2-yl-4, 6-di-tert-butylphenol	3846-71-7	0.01
159	2-(2H-benzotriazol-2-yl)- 4, 6-ditertpentylphenol	25973-55-1	0.01
160	DOTP	15571-58-1	0.01
161	Reaction mass of DOTP and MOTE	-	0.01
162	1, 2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1, 2-benzenedicarboxylic acid, mixed decyl and hexyl and octyldiesters with $\geq 0.3\%$ of dihexyl phthalate	68515-51-5, 68648-93-1	0.01
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]	-	0.01
164	1, 3-propanesultone	1120-71-4	0.01
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl) phenol	3864-99-1	0.01

No.	Substance Name	CAS No.	MDL (%)
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol	36437-37-3	0.01
167	Nitrobenzene	98-95-3	0.01
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	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 (BPA)	80-05-7	0.01
171	Nonadecafluorodecanoic acid and its sodium and ammonium salts	3108-42-7 335-76-2 3830-45-3	0.01
172	p-(1,1-dimethylpropyl)phenol	80-46-6	0.01
173	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
174	Perfluorohexane-1-sulphonic acid and its salts	-	0.01
175	Chrysene	218-01-9	0.01
176	Benz[a]anthracene	56-55-3	0.01
177	Cadmium nitrate Δ	10325-94-7	0.001
178	Cadmium hydroxide Δ	21041-95-2	0.001
179	Cadmium carbonate Δ	513-78-0	0.001
180	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" TM) [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 $\geq 0.1\%$ w/w 4-heptylphenol, branched and linear]	-	0.01
182	Benzene-1, 2, 4-tricarboxylic acid 1, 2 anhydride (trimellitic anhydride)	552-30-7	0.01
183	Benzo[ghi]perylene	191-24-2	0.01

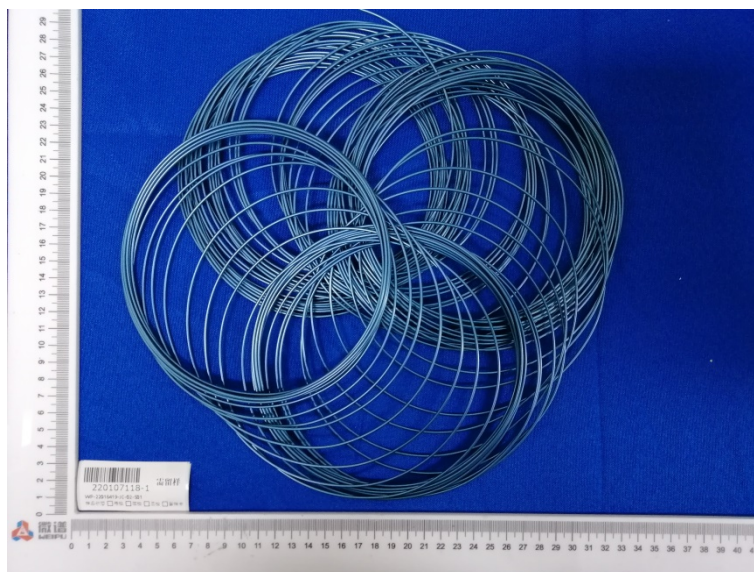
No.	Substance Name	CAS No.	MDL (%)
184	Decamethylcyclopentasiloxane	541-02-6	0.01
185	Dicyclohexyl phthalate (DCHP)	84-61-7	0.01
186	Disodium octaborate Δ	12008-41-2	0.001
187	Dodecamethylcyclohexasiloxane (D6)	540-97-6	0.01
188	Ethylenediamine	107-15-3	0.01
189	Lead Δ	7439-92-1	0.001
190	Octamethylcyclotetrasiloxane (D4)	556-67-2	0.01
191	Terphenyl hydrogenated	61788-32-7	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	BENZYLIDENE CAMPHOR	15087-24-8	0.01
198	2, 3, 3, 3-tetrafluoro-2-(heptafluoropropoxy) propionic acid, its Acyl halides(coveing any of their individual Isomers and combinations there of) (HFPO-DA)	-	0.01
199	2-Methoxyethyl acetate	110-49-6	0.01
200	4-tert-Butylphenol	98-54-4	0.01
201	Tris(4-nonylphenyl, branched and linear) phosphite with $\geq 0.1\%$ w/w of 4-Nonylphenol, branched and linear(4-NP)	-	0.01
202	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1	0.01
203	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5	0.01
204	Diisohexyl phthalate	71850-09-4	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	Dibutlbis (pentane-2 , 4-dionto-O , O')tin	22673-19-4	0.01
210	Tetraethylene glycol dimethyl ether	143-24-28	0.01
211	Diocetyl tin dilaurate and other Dioctyltin bis (fatty acyloxy) derivatives	3648-18-8	0.01
212	1,4-Dioxane	123-91-1	0.01

<u>No.</u>	<u>Substance Name</u>	<u>CAS No.</u>	<u>MDL (%)</u>
213	2,2-Bis(bromomethyl)propane-1,3-diol (BMP) Trisbromoneopentyl alcohol (TBNPA) 2,3-Dibromo-1-propanol (2,3-DBPA)	3296-90-0, 36483-57-5, 1522-92-5, 96- 13-9	0.01
214	2 - (4-tert-butylbenzyl) propionaldehyde and its stereoisomers	-	0.01
215	2,2-Bis(4-hydroxyphenyl)butane	77-40-7	0.01
216	Glutaraldehyde	111-30-8	0.01
217	Medium chain chlorinated paraffins (MCCP) (UVCB material, consisting of more than 80% linear chlorinated alkanes with carbon chain length between C ₁₄ and C ₁₇)	-	0.01
218	Boric acid	13840-56-7	0.01
219	Alkylphenols, whose carbon chain (C ₁₂ based, straight or branched) is mainly in the para position, including any single isomer or combination (PDDP)	-	0.01
220*	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	119-47-1	0.05
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	0.05
222*	tris(2-methoxyethoxy)vinylsilane	1067-53-4	0.05
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)	-	0.05

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Sample picture(s):



220107118-1

End of the Report

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1. The report is invalid without the stamp of "Special Seal for Inspection or Testing" or without "Special Seal for the Report" or without the signature of the compiler and the approver.
2. No unauthorized changes, additions or deletions shall be made to the report.
3. Neither fragmented report nor its incomplete copy shall be deemed valid. The complete copy is invalid without the stamp of "Special Seal for Inspection or Testing" or "Special Seal for the Report".
4. Any queries on the report shall be presented to us within 15 working days after receipt of the report.
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