



Test Report

Report No.: HAP180908664

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Applicant JF Polymers(Suzhou) Co.,Ltd.

Address Haicheng Industrial Park,Bldg 7,Changshu Economic and Technological Zone,Changshu, Jiangsu Province ,China

Sample Information

Sample Name PolyCast™

Wire diameter 1.75mm / 2.85mm

Sample color Solid color

*The information above is provided and confirmed by the applicant

Sample Received Date Sep.04,2018

Testing Period Sep.04,2018 to Sep.08,2018

Testing Requested

As per client's request,

(1) According to European Commission Regulation 1907/2006(REACH Act),to test the SVHC content which have been listed in REACH's SVHC candidate list .

<http://echa.europa.eu/web/guest/candidate-list-table> ;

(2) to determine the RoHS 6 (Pb,Cd,Hg,Cr⁶⁺, PBBs, PBDEs) in the submitted sample according to RoHS Directive 2011/65/EU Annex II;

(3) to determine the Polynuclear Aromatic Hydrocarbons (PAHs) content in the submitted sample according to AfPS GS 2014:01 PAK.

Testing Results

According to the analytical results,concentrations of 191 SVHC substances are all Compliance with EC Regulation 1907/2006 (REACH Act) (< 0.1%) in the submitted sample.Please refer to next page(s).

Signer :

Paul Chen

Date :



Website of verification report: CNCA verification platform yz.cncaic.cn

江苏环谱检测技术服务有限公司

JIANGSU HAP TESTING SERVICE CO.,LTD

地址: 扬州市经济技术开发区吴州东路 198 号

Address:NO.198 Wuzhou East Road,economic and technological development zone,YangZhou

URL: www.hap-test.com

E-mail: hap@hap-test.com

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1. Determination of REACH-SVHC (unit: %)

Testing method with reference to AFPS GS 2014:01 PAK, EPA 3550C:2007, EPA 3052:1996, EPA 6010C:2007, EPA 5021:1996, EPA 8270D:2007, IEC 62321:2008, EN 14362-1:2012, DIN EN ISO 17353:2005, By GC-MS, HPLC, UV-VIS, ICP-OES for measuring.

No.	Testing Item(s)	CASNo.	EC No.	MDL	Results
1	Anthracene	120-12-7	204-371-1	0.005	ND
2	4,4'-diaminodiphenylmethane (MDA)	101-77-9	202-974-4	0.005	ND
3	Dibutyl Phthalate (DBP)	84-74-2	201-557-4	0.005	ND
4	Cobalt dichloride*	7646-79-9	231-589-4	—	ND
5	Diarsenic pentaoxide*	1303-28-2	215-116-9	—	ND
6	Diarsenic trioxide*	1327-53-3	215-481-4	—	ND
7	Sodium dichromate*	7789-12-0/105 88-01-09	234-190-3	—	ND
8	5-tert-butyl-2,4,6-trinitro-m-xylene(Musk xylene)	81-15-2	201-329-4	0.005	ND
9	Bis-(2-ethylhexyl) Phthalate (DEHP)	117-81-7	204-211-0	0.005	ND
10	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane	25637-99-4/31 94-55-6	247-148-4/ 221-695-9	0.005	ND
11	Short Chain Chlorinated Paraffins (SCCPs)	85535-84-8	287-476-5	0.01	ND
12	Bis (tributyltin) oxide (TBTO) **	56-35-9	200-268-0	0.05	ND
13	Lead hydrogen arsenate*	7784-40-9	232-064-2	—	ND
14	Benzylbutyl Phthalate (BBP)	85-68-7	201-622-7	0.005	ND
15	Triethyl arsenate*	15606-95-8	427-700-2	—	ND
16	Anthracene oil	90640-80-5	292-602-7	0.05	ND
17	Anthracene oil,anthracene paste,distn.Lights	91995-17-4	295-278-5	0.05	ND
18	Anthracene oil,anthracene paste,anthracene fraction	91995-15-2	295-275-9	0.05	ND
19	Anthracene oil,anthracene-low	90640-82-7	292-604-8	0.05	ND
20	Anthracene oil,anthracene paste	90640-81-6	292-603-2	0.05	ND
21	Coal tar pitch,high temperature	659969-93-2	266-028-2	0.05	ND



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No.	Testing Item(s)	CAS No.	EC No.	MDL	Results
22	2,4-Dinitrotoluene	121-14-2	204-450-0	0.01	ND
23	Diisobutyl phthalate (DIBP)	84-69-5	201-553-2	0.005	ND
24	Lead chromate*	7758-97-6	231-846-0	—	ND
25	Lead chromate molybdate sulphate red (C.I.Pigment Red 104) *	12656-85-8	235-759-9	—	ND
26	Lead sulphochromate yellow (C.I.Pigment Yellow 34) *	1344-37-2	215-693-7	—	ND
27	Tris (2-chloroethyl) phosphate (TCEP)	115-96-8	204-118-5	0.01	ND
28	Acrylamide	79-06-1	201-173-7	0.01	ND
29	Trichloroethylene	79-01-6	201-167-4	0.005	ND
30	Boric acid*	10043-35-3 11113-50-1	233-139-2 234-343-4	—	ND
31	Disodium tetraborate,anhydrous*	1330-43-4 12179-04-3 1303-96-4	215-540-4	—	ND
32	Tetraboron disodium heptaoxide,hydrate*	12267-73-1	235-541-3	—	ND
33	Sodium chromate*	7775-11-3	231-889-5	—	ND
34	Potassium chromate*	7789-00-6	232-140-5	—	ND
35	Ammonium dichromate*	7789-09-5	232-143-1	—	ND
36	Potassium dichromate*	7778-50-9	231-906-6	—	ND
37	Cobalt(II) sulphate *	10124-43-3	233-334-2	—	ND
38	Cobalt(II) dinitrate *	10141-05-6	233-402-1	—	ND
39	Cobalt(II) carbonate*	513-79-1	208-169-4	—	ND
40	Cobalt(II) diacetate *	71-48-7	200-755-8	—	ND
41	2-Methoxyethanol	109-86-4	203-713-7	0.01	ND
42	2-Ethoxyethanol	110-80-5	203-804-1	0.01	ND
43	Chromium trioxide*	1333-82-0	215-607-8	—	ND
44	Chromic acid、Dichromic acid、acids generated from chromium trioxide and their oligomers*	7738-94-5; 13530-68-2	231-801-5,236 -881-5	—	ND
45	2-ethoxyethyl acetate	111-15-9	203-839-2	0.05	ND

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No.	Testing Item(s)	CAS No.	EC No.	MDL	Results
46	strontium chromate (1,2-Benzenedic) *	7789-6-2	232-142-6	—	ND
47	1,2-Benzenedicarboxylic acid, di-(C7-11)-branched and linear alkyl esters	68515-42-4	271-084-6	0.01	ND
48	Hydrazine	7803-57-8、 302-01-2	206-114-9	0.05	ND
49	1-Methyl-2-pyrrolidinone	872-50-4	212-828-1	0.01	ND
50	1,2,3-trichloropropane (1,2-Benzenedic)	96-18-4	202-486-1	0.01	ND
51	1,2-Benzenedicarboxylic acid, di-(C6-8)-branched alkyl esters, C7-rich	71888-89-6	276-158-1	0.01	ND
52	Dichromium tris(chromate)*	24613-89-6	246-356-2	—	ND
53	Potassium hydroxyoctaoxodizincatedi-chromate*	11103-86-9	234-329-8	—	ND
54	Pentazinc chromate octahydroxide*	49663-84-5	256-418-0	—	ND
55	Aluminosilicate Refractory Ceramic Fibres (RCF)***	—	650-017-00-8	0.05	ND
56	Zirconia Aluminosilicate Refractory Ceramic Fibres***	—	650-017-00-8	0.05	ND
57	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	500-036-01	0.05	ND
58	Bis(2-methoxyethyl) phthalate	117-82-8	204-212-6	0.005	ND
59	2-Methoxyaniline; o-Anisidine	90-04-0	201-963-1	0.01	ND
60	4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol)	140-66-9	205-426-2	0.01	ND
61	1,2-Dichloroethane	107-06-2	203-458-1	0.01	ND
62	Bis(2-methoxyethyl) ether	111-96-6	203-924-4	0.01	ND
63	Arsenic acid*	7778-39-4	231-901-9	—	ND
64	Trilead diarsenate*	3687-31-8	222-979-5	—	ND
65	Calcium arsenate*	7778-44-1	231-904-5	—	ND
66	N,N-dimethylacetamide	127-19-5	204-826-4	0.01	ND
67	Phenolphthalein	77-09-8	201-004-7	0.05	ND
68	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	202-918-9	0.01	ND



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No.	Testing Item(s)	CAS No.	EC No.	MDL	Results
69	Lead azide Lead diazide*	13424-46-9	236-542-1	—	ND
70	Lead styphnate*	15245-44-0	239-290-0	—	ND
71	Lead dipicrate*	6477-64-1	229-335-2	—	ND
72	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	2003-977-3	0.01	ND
73	1,2-dimethoxyethane;ethylene glycol dimethyl ether (EGDME)	110-71-4	203-794-9	0.01	ND
74	Diboron trioxide*	1303-86-2	215-125-8	—	ND
75	Formamide	75-12-7	200-842-0	0.01	ND
76	Lead(II)bis(methanesulfonate)*	17570-76-2	401-750-5	—	ND
77	TGIC(1,3,5-tris[oxiranylmethyl]-1,3,5-triazine-2,4,6(1H,3H,5H)-trione)	2451-62-9	219-514-3	0.01	ND
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	423-400-0	0.01	ND
79	4,4'-bis(dimethylamino)benzophenone(Michler's ketone)	90-94-8	202-027-5	0.01	ND
80	N,n,n',n'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	202-959-2	0.01	ND
81	[4-[4,4'-bis(dimethylamino)benzhydrydene]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)]****	548-62-9	208-953-6	0.01	ND
82	[4-[[4-anilino-1-naphthyl][1-(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)]****	2580-56-5	219-943-6	0.01	ND
83	α,α-Bis[4-(dimethylamino)phenyl]-4(phenylamino)naphthalene-1-methanol(C.I.SolventBlue4)[with h ≥0.1% of Michler's ketone(EC No.202-027-5)or Michler's base(EC No.202-959-2)]****	6786-83-0	229-851-8	0.01	ND



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No.	Testing Item(s)	CAS No.	EC No.	MDL	Results
84	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [with $\geq 0.1\%$ of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]****	561-41-1	209-218-2	0.01	ND
85	Bis(pentabromophenyl) ether (DecaBDE)	1163-19-5	214-604-9	0.001	ND
86	Pentacosafuorotridecanoic acid	72629-94-8	276-745-2	0.01	ND
87	Tricosafuorododecanoic acid	307-55-1	206-203-2	0.01	ND
88	Henicosafuoroundecanoic acid	2058-94-8	218-165-4	0.01	ND
89	Heptacosafuorotetradecanoic acid	376-06-7	206-803-4	0.01	ND
90	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated -covering well-defined substances and UVCB substances, polymers and homologues	—	—	0.01	ND
91	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	ND
92	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	204-650-8	0.01	ND
93	Cyclohexane-1,2-dicarboxylic anhydride (Hexahydrophthalic anhydride - HHPA)	85-42-7	201-604-9	0.01	ND
94	Hexahydromethylphthalic anhydride, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	247-094-1, 243-072-0, 256-356-4, 260-566-1	0.01	ND
95	Methoxy acetic acid	625-45-6	210-894-6	0.01	ND
96	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	284-032-2	0.01	ND
97	Diisopentylphthalate (DIPP)	605-50-5	210-088-4	0.01	ND
98	N-pentyl-isopentylphthalate	—	—	0.01	ND
99	1,2-Diethoxyethane	629-14-1	211-076-1	0.01	ND
100	N,N-dimethylformamide; dimethyl formamide	68-12-2	200-679-5	0.01	ND
101	Dibutyltin dichloride (DBT)	683-18-1	211-670-0	0.01	ND
102	Acetic acid, lead salt, basic*	51404-69-4	257-175-3	—	ND



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No.	Testing Item(s)	CAS No.	EC No.	MDL	Results
103	Basic lead carbonate (trilead bis(carbonate)dihydroxide)*	1319-46-6	215-290-6	—	ND
104	Lead oxide sulfate (basic lead sulfate)*	12036-76-9	234-853-7	—	ND
105	[Phthalato(2-)]dioxotrilead (dibasic lead phthalate)*	69011-06-9	273-688-5	—	ND
106	Dioxobis(stearato)trilead*	12578-12-0	235-702-8	—	ND
107	Fatty acids, C16-18, lead salts*	91031-62-8	292-966-7	—	ND
108	Lead bis(tetrafluoroborate)*	13814-96-5	237-486-0	—	ND
109	Lead cyanamide*	20837-86-9	244-073-9	—	ND
110	Lead dinitrate*	10099-74-8	233-245-9	—	ND
111	Lead oxide (lead monoxide)*	1317-36-8	215-267-0	—	ND
112	Lead tetroxide (orange lead)*	1314-41-6	215-235-6	—	ND
113	Lead titanium trioxide*	12060-00-3	235-038-9	—	ND
114	Lead Titanium Zirconium Oxide*	12626-81-2	235-727-4	—	ND
115	Pentalead tetraoxide sulphate*	12065-90-6	235-067-7	—	ND
116	Pyrochlore, antimony lead yellow*	8012-00-8	232-382-1	—	ND
117	Silicic acid, barium salt, lead-doped*	68784-75-8	272-271-5	—	ND
118	Silicic acid, lead salt*	11120-22-2	234-363-3	—	ND
119	Sulfurous acid, lead salt, dibasic*	62229-08-7	263-467-1	—	ND
120	Tetraethyllead*	78-00-2	201-075-4	—	ND
121	Tetralead trioxide sulphate*	12202-17-4	235-380-9	—	ND
122	Trilead dioxide phosphonate*	12141-20-7	235-252-2	—	ND
123	Furan	110-00-9	203-727-3	0.01	ND
124	Propylene oxide; 1,2-epoxypropane; methyloxirane	75-56-9	200-879-2	0.01	ND
125	Diethyl sulphate	64-67-5	200-589-6	0.01	ND
126	Dimethyl sulphate	77-78-1	201-058-1	0.01	ND
127	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	421-150-7	0.01	ND
128	Dinoseb	88-85-7	201-861-7	0.01	ND

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URL: www.hap-test.com

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129	4,4'-methylenedi-o-toluidine	838-88-0	212-658-8	0.01	ND
130	4,4'-oxydianiline and its salts	101-80-4	202-977-0	0.001	ND
131	4-Aminoazobenzene; 4-Phenylazoaniline	1960-9-3	200-453-6	0.001	ND
132	4-methyl-m-phenylenediamine (toluene-2,4--diamine)	95-80-7	202-453-1	0.001	ND
133	6-methoxy-m-toluidine (p-cresidine)	120-71-8	204-419-1	0.001	ND
134	Biphenyl-4-ylamine	92-67-1	202-177-1	0.01	ND
135	o-aminoazotoluene	97-56-3	202-591-2	0.001	ND
136	o-Toluidine; 2-Aminotoluene	95-53-4	202-429-0	0.001	ND
137	N-methylacetamide	79-16-3	201-182-6	0.01	ND
138	1-bromopropane; n-propyl bromide	106-94-5	203-445-0	0.01	ND
139	Cadmium*	7440-43-9	231-152-8	—	ND
140	Cadmium oxide*	1306-19-0	215-146-2	—	ND
141	Ammonium pentadecafluorooctanoate(APFO)	3825-26-1	223-320-4	0.01	ND
142	Pentadecafluorooctanoic acid(PFOA)	335-67-1	206-397-9	0.01	ND
143	Dipentyl phthalate(DPP)	131-18-0	205-017-9	0.01	ND
144	4-Nonylphenol, branched and linear,ethoxylated	—	—	0.01	ND
145	Cadmium sulphide*	1306-23-6	215-147-8	—	ND
146	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminophthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	209-358-4	0.03	ND
147	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	217-710-3	0.03	ND
148	Dihexyl phthalate	84-75-3	201-559-5	0.01	ND



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149	Imidazolidine-2-thione (2-imidazoline-2-thiol)	96-45-7	202-506-9	0.03	ND
150	Lead di(acetate)*	301-04-2	206-104-4	—	ND
151	Trixyly phosphate	25155-23-1	246-677-8	0.01	ND
152	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	271-093-5	0.01	ND
153	Sodium perborate; perboric acid, sodium salt*	—	239-172-9 234-390-0	—	ND
154	Sodium peroxometaborate*	7632-04-4	231-556-4	—	ND
155	Cadmium chloride*	10108-64-2	233-296-7	—	ND
156	Cadmium fluoride*	7790-79-6	232-222-0	—	ND
157	Cadmium sulphate*	10124-36-4 31119-53-6	233-331-6	—	ND
158	2-benzotriazol-2-yl-4,6-di-tert-butylphenol	3846-71-7	223-346-6	0.01	ND
159	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol	25973-55-1	247-384-8	0.01	ND
160	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stanna tetradecanoate	15571-58-1	239-622-4	0.01	ND
161	reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stanna tetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]- 4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoat e	—	—	0.01	ND
162	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	271-094-0 272-013-1	0.05	ND
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 stereoisomers of [1] and [2] or any combination thereof]	—	—	0.05	ND



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164	1,3-Propanesultone	1120-71-4	214-317-9	0.01	ND
165	2,4-Di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	223-383-8	0.01	ND
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol(UV-350)	36437-37-3	253-037-1	0.01	ND
167	Nitrobenzene	98-95-3	202-716-0	0.01	ND
168	Perfluorononan-1-oic acid (2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-heptafluorooxanoic acid) and its sodium and ammonium salts	375-95-1/ 21049-39-8 / 4149-60-4	206-801-3	0.01	ND
169	Benzo (e) pyrene	50-32-8	200-028-5	0.005	ND
170	4,4'-isopropylidenediphenol (bisphenol A)	80-05-7	201-245-8	0.01	ND
171	nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	335-76-2	206-400-3	0.01	ND
172	4-heptylphenol, branched and linear (4-HPbl)	/	/	0.01	ND
173	4-tert-pentylphenol (PTAP)	80-46-6	201-280-9	0.01	ND
174	Perfluorohexane-1-Sulphonic acid and its salts(PFHxS)	355-46-4	206-587-1	0.05	ND
175	Dechlorane Plus(TM)	—	—	0.05	ND
176	Tetraphene	56-55-3	200-280-6	0.01	ND
177	Cadmium nitrate	10325-94-7	233-710-6	0.01	ND
178	Cadmium carbonate	513-78-0	208-168-9	0.01	ND
179	Cadmium hydroxide	21041-95-2	244-168-5	0.01	ND
180	Chrysene	218-01-9	205-923-4	0.01	ND
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].	—	—	0.05	ND
182	1,2,4-Benzenetricarboxylic anhydride	552-30-7	209-008-0	0.05	ND
183	Dicyclohexyl phthalate (DCHP)	84-61-7	201-545-9	0.005	ND



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No.	Testing Item(s)	CAS No.	EC No.	MDL	Results
184	Octamethylcyclotetrasiloxane (D4)	556-67-2	209-136-7	0.05	ND
185	Decamethylcyclopentasiloxane (D5)	541-02-6	208-764-9	0.05	ND
186	Dodecamethylcyclohexasiloxane (D6)	540-97-6	208-762-8	0.05	ND
187	Lead	7439-92-1	231-100-4	0.01	ND
188	Disodium octaborate	12008-41-2	234-541-0	—	ND
189	Benzo[ghi]perylene	191-24-2	205-883-8	0.005	ND
190	Terphenyl, hydrogenated	61788-32-7	262-967-7	0.05	ND
191	Ethylenediamine (EDA)	107-15-3	203-468-6	0.05	ND

*****To be continued*****



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Remark 1 (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), if both the following conditions are met;

(a) The substance is present in those articles in quantities totalling over 1 tonne per producer or importer per year;

(b) The substance is present in those articles above a concentration of 0.1% weight by weight (w/w).

(2) From 28 October 2008, EU & EEA suppliers of articles which contain substances on the Candidate List in a concentration above 0.1% (w/w) must provide sufficient information, available to them, to their customers and on request to a consumer within 45 days of the receipt of this request. This information must ensure safe use of the article and, as a minimum, include the name of the substance.

Remark 2 (1) Calculated concentration of cobalt dichloride, cobalt(II) sulphate, cobalt(II) dinitrate, cobalt(II) carbonate and cobalt(II) diacetate is based on the identified heavy metal and anion result.

Calculated concentration of diarsenic pentoxide, diarsenic trioxide, chromium trioxide, sodium dichromate, dehydrate, lead hydrogen arsenate, triethyl arsenate, lead chromate, sodium chromate, strontium chromate, potassium chromate, ammonium dichromate, potassium dichromate, lead chromate molybdate sulfate red, lead sulfochromate yellow and acids generated from chromium trioxide and their oligomers, Lead dipicrate, Lead styphnate, Lead azide, Lead diazide, Trilead diarsenate, Calcium arsenate, Arsenic acid, Potassium hydroxyoctaoxidizincatedi-chromate, Dichromium tris(chromate), Pentazinc chromate octahydroxide, Lead(II) bis(methanesulfonate), Diboron trioxide, Acetic acid, lead salt, basic, Basic lead carbonate (trilead bis(carbonate) dihydroxide), Lead oxide sulfate (basic lead sulfate), [Phthalato(2-)]dioxotrilead (dibasic lead phthalate), Dioxobis(stearato)trilead, Fatty acids, C16-18, lead salts, Lead bis(tetrafluoroborate), Lead cyanamide, Lead dinitrate, Lead oxide (lead monoxide), Lead tetroxide (orange lead), Lead titanium trioxide, Lead Titanium Zirconium Oxide, Pentalead tetraoxide sulphate, Pyrochlore, antimony lead yellow, Silicic acid, barium salt, lead-doped, Sulfurous acid, lead salt, dibasic, Tetraethyllead, Tetralead trioxide sulphate, Trilead dioxide phosphonate, Cadmium, Cadmium oxide, Cadmium sulphide and Lead di(acetate), Cadmium chloride, Cadmium fluoride, Cadmium sulphate are based on the identified heavy metal result, boric acid, disodium tetraborate, anhydrous and tetraboron disodium heptaoxide, hydrate, Sodium perborate; perboric acid, sodium salt, Sodium peroxometaborate, Disodium octaborate are based on the identified result of boron and sodium result. The identities of above metal substances present in the article have to be further confirmed; The RL (Reporting Limit) for these test items are 0.05%.

(2)** Concentration of bis(tributyltin)oxide, TBTO is reported as tributyltin, TBT. The result is a screening test of TBTO and can cover TBTO and other salts under current technologies. Further investigation is needed to have the exact amount of TBTO;



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- Remark 2**
- (3)*** Calculated concentration of Aluminosilicate, Refractory Ceramic Fibres ;Zirconia Aluminosilicate, Refractory Ceramic Fibres is based on the identified heavy metal result and confirmation by microscope;
 - (4)****The substance does only fulfil the criteria of REACH Art. 57 (a) if it contains Michler's ketone (EC Number: 202-027-5) or Michler's base (EC Number: 202-959-2) in a concentration $\geq 0.1\%$ (weight / weight);
 - (5) ND= Not detected, less than MDL;
 - (6) MDL=Method Detection Limit;
 - (7) Sample test harness section



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2.Determination of RoHS 6 (unit: mg/kg)

- Testing method**
- (1) With reference to IEC 62321-5:2013. By ICP - OES for measuring;
 - (2) With reference to IEC 62321-4:2013. By ICP-OES for measuring;
 - (3) With reference to IEC 62321-7-2:2017. By UV-VIS for measuring;
 - (4) With reference to IEC 62321-6:2015. By GC-MS for measuring.

Testing Item(s)	Method	MDL	Limit	Results
Lead (Pb)	(1)	2	1000	ND
Cadmium (Cd)		2	100	ND
Mercury (Hg)	(2)	2	1000	ND
Chromium(VI) (Cr ⁶⁺)	(3)	8	1000	ND
Polybrominated Biphenyls (PBBs)	(4)	—	1000	ND
Polybrominated Diphenyl Ethers (PBDEs)		—	1000	ND

Note:

- (1) 1 mg/kg=1 ppm=0.0001%
- (2) MDL=Method Detection Limit
- (3) ND=Not Detected (<MDL)
- (4) "—" =Not Regulated
- (5) Polybrominated diphenyl ethers
- (6) Polybrominated Biphenyls、Polybrominated Diphenyl Ethers list,and detection limit (MDL)

Polybrominated Biphenyls (PBBs)	MDL	Polybrominated Diphenyl Ethers (PBDEs)	MDL
Bromobiphenyl	5	Bromobiphenyl ether	5
Dibromobiphenyl	5	Dibromobiphenyl ether	5
Tribromobiphenyl	5	Tribromobiphenyl ether	5
Tetrabromobiphenyl	5	Tetrabromodiphenyl ether	5
Pentabromobiphenyl	5	Pentabromodiphenyl ether	5
Hexabromobiphenyl	5	Hexabromodiphenyl ether	5
Heptabromobiphenyl	5	Heptabromodiphenyl ether	5
Octabromobiphenyl	5	Octabromobiphenyl ether	5
Nonabromobiphenyl	5	Nonabromobiphenyl ether	5
Decabromodiphenyl	5	Decabromobiphenyl ether	5

- (7) Sample test harness section

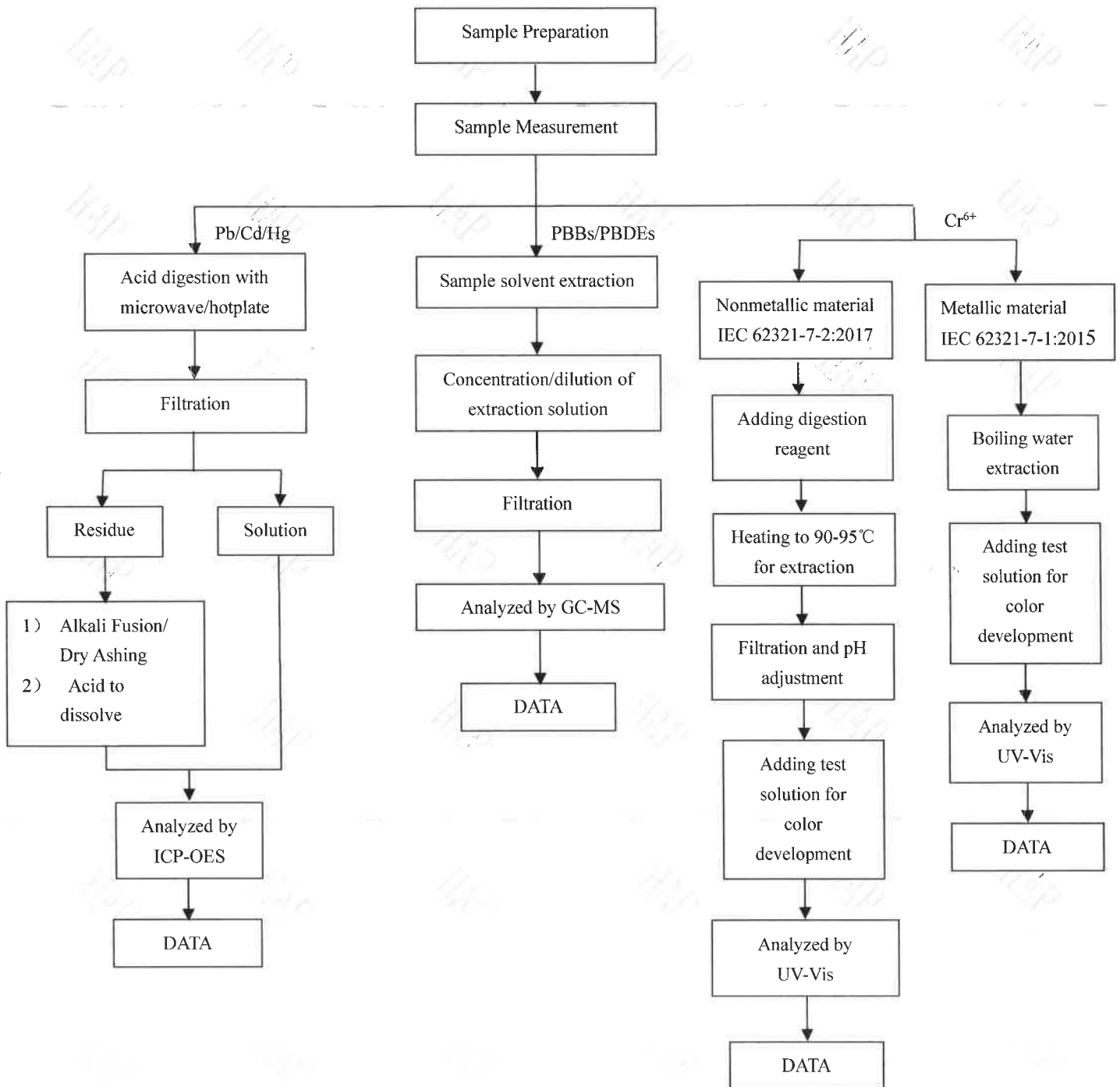


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RoHS Testing Flow Chart





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3.Determination of Polynuclear Aromatic Hydrocarbons (PAHs) (unit: mg/kg)

Testing method With reference to AfPS GS 2014:01 PAK . By GC-MS for measuring.

Testing Item(s)	MDL	Results
Naphthalene	0.2	ND
Acenaphthene	0.2	ND
Fluorene	0.2	ND
Phenanthrene	0.2	ND
Anthracene	0.2	0.2
Pyrene	0.2	ND
Chrysene	0.2	ND
Acenaphthylene	0.2	ND
Fluoranthene	0.2	ND
Benzo (a) anthracene	0.2	ND
Benzo (a) pyrene	0.2	ND
Benzo (e) pyrene	0.2	ND
Benzo (b) fluoranthene	0.2	ND
Benzo (j) fluoranthene	0.2	ND
Benzo (k) fluoranthene	0.2	ND
Benzo (a, h, i) perlene	0.2	ND
Dibenzo (a, h) anthracene	0.2	ND
Indeno (1,2,3-c, d) pyrene	0.2	ND
Sum of Acenaphthylene Acenaphthene Anthracene Fluoranthene Fluorene Phenanthrene Pyrene	—	0.2
The sum of 18 PAHs	—	0.2

- Note:
- (1) 1mg/kg=1ppm=0.0001%
 - (2) MDL=Method Detection Limit
 - (3) ND=Not Detected (<MDL)
 - (4) “—”=Not Regulated
 - (5) Sample test harness section



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AfPS GS 2014:01 PAK: Product of the control values (unit: mg/kg)

parameter	Category 1	Category 2		Category 3	
	Materials indented to be put in the mouth, or materials of toys with intended long-term skin contact (longer than 30 s)	Materials not covered by category 1, with foreseeable skin contact for longer than 30 seconds (long-term skin contact) or repeated short-term skin contact)		Materials not covered by category 1 or 2 with foreseeable skin contact up to 30 seconds (short term skin contact)	
		Toys in the scope of 2009/48/EC	Other products in the scope of ProdSG	Toys in the scope of 2009/48/EC	Other products in the scope of ProdSG
Benzo[a]pyren mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Benzo[e]pyren mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Benzo[a]anthracen mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Benzo[b]fluoranthen mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Benzo[j]fluoranthen mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Benzo[k]fluoranthen mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Chrysen mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Dibenzo[a,h]anthracen mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Benzo[ghi]perylene mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Indeno[1,2,3-cd]pyren mg/kg	<0.2	<0.2	<0.5	<0.5	<1
Acenaphthylen, Acenaphthen, Fluoren, Phenanthren, Pyren, Anthracen, Fluoranthen, mg/kg	<1 Sum	<5 Sum	<10 Sum	<20 Sum	<50 Sum
Naphthalin mg/kg	<1	<2		<10	
Sum 18 PAH	<1	<5	<10	<20	<50



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Sample photo:



End of report

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江苏环谱检测技术服务有限公司

JIANGSU HAP TESTING SERVICE CO.,LTD

地址：扬州市经济技术开发区吴州东路 198 号

Address: NO.198 Wuzhou East Road, economic and technological development zone, Yangzhou

URL: www.hap-test.com

E-mail: hap@hap-test.com

☎: 400-6600-776 ☎: 0514-89711561