



Test Report

Report No.: TS18070928

Applicant

Bagco Asia Limited

Address

Suite 1902, Tamson Plaza, 161 Wai Yip Street,
Kwun Tong, Kowloon, Hongkong

Report Date

2018-07-25

Hangzhou C&K Testing Technic Co., Ltd.





Test Report

Applicant	Bagco Asia Limited
Address	Suite 1902, Tamson Plaza, 161 Wai Yip Street, Kwun Tong, Kowloon, Hongkong
Sample Name	Bonded leather
Type/ Model	/
Material	/
Other Info.	Colour:Black
Sample Received Date	2018-07-19
Test Period	2018-07-19~ 2018-07-25
Test Requirement	One hundred and ninety one (191) Substances of Very High Concern (SVHC) analysis. SVHC list is based on the publication by European Chemical Agency (ECHA), regarding regulation (EC) No 1907/2006 concerning the REACH (191 SVHCs are less than the concentration limit of 0.1 % weight by weight (w/w).).
Test Method	CIRS-TC-SVHC001, CIRS-TC-SVHC002, CIRS-TC-SVHC003, CIRS-TC-SVHC004, CIRS-TC-SVHC005, CIRS-TC-SVHC006
Test Results	The concentrations of the 191 SVHCs defined in Article 57 of REACH Regulation in the client's product(s) are exceed the concentration limit of 0.1 % weight by weight (w/w). - N,N-dimethylformamide

Complied by

Beta Xu

Beta Xu

Inspected by

Li Xuefeng

Li Xuefeng

Authorized by

Li Changhai

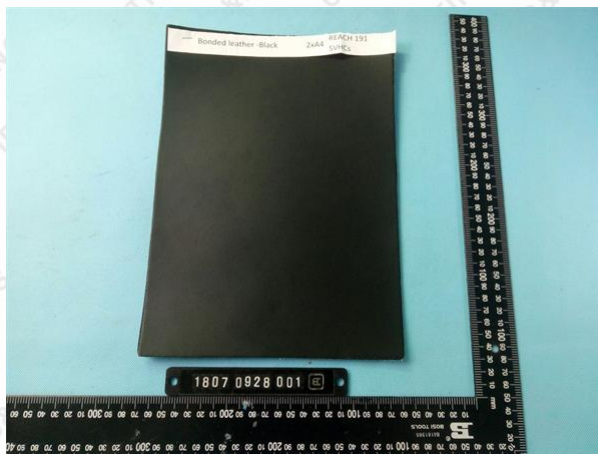
Li Changhai
Accredited Signatory



Test Component(s):

No.	Sample Serial No.	Test Component(s)	Type/Model	Material	Other Info.
001	TS18070928001	Bonded leather	/	/	/

Photo(s):



TS18070928001



Test Result(s):

No.	Test Item(s)	CAS No.	MDL	Test Result(s)
				001
1	Anthracene	120-12-7	100	N.D.
2	4,4'- Diaminodiphenylmethane(MDA)	101-77-9	100	N.D.
3	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	100	N.D.
4	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane	25637-99-4, 3194-55-6 (134237-50-6) (134237-51-7) (134237-52-8)	100	N.D.
5	Alkanes, C10-13,chloro (Short ChainChlorinated Paraffins)	85535-84-8	100	N.D.
6	Dibutyl phthalate(DBP)	84-74-2	100	N.D.
7	Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7	100	N.D.
8	Benzyl butyl phthalate(BBP)	85-68-7	100	N.D.
9	Cobalt dichloride	7646-79-9	100	N.D.
10	Bis(tributyltin)oxide(TBTO)	56-35-9	100	N.D.
11	Sodium dichromate	7789-12-0, 10588-01-9	100	N.D.
12	Lead hydrogen arsenate	7784-40-9	100	N.D.
13	Diarsenic trioxide	1327-53-3	100	N.D.
14	Diarsenic pentaoxide	1303-28-2	100	N.D.
15	Triethyl arsenate	15606-95-8	100	N.D.
16	Anthracene oil	90640-80-5	100	N.D.
17	Anthracene oil, anthracene paste, distn. lights	91995-17-4	100	N.D.
18	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	100	N.D.
19	Anthracene oil, anthracene-low	90640-82-7	100	N.D.
20	Anthracene oil, anthracene paste	90640-81-6	100	N.D.
21	Pitch, coal tar, high temp.	65996-93-2	100	N.D.
22	Acrylamide	79-06-1	100	N.D.
23	2,4-Dinitrotoluene	121-14-2	100	N.D.
24	Diisobutyl phthalate	84-69-5	100	N.D.
25	Tris(2-chloroethyl)phosphate	115-96-8	100	N.D.
26	Lead chromate	7758-97-6	100	N.D.
27	Lead chromate molybdate sulphate red(C.I. Pigment Red 104)	12656-85-8	100	N.D.



No.	Test Item(s)	CAS No.	MDL	Test Result(s)
				001
28	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	100	N.D.
29	Trichloroethylene	79-01-6	100	N.D.
30	Boric acid	10043-35-3, 11113-50-1	100	N.D.
31	Disodium tetraborate, anhydrous	1303-96-4, 1330-43-4, 12179-04-3	100	N.D.
32	Tetraboron disodium heptaoxide, hydrate	12267-73-1	100	N.D.
33	Sodium chromate	7775-11-3	100	N.D.
34	Potassium chromate	7789-00-6	100	N.D.
35	Ammonium dichromate	7789-09-5	100	N.D.
36	Potassium dichromate	7778-50-9	100	N.D.
37	Chromium trioxide	1333-82-0	100	N.D.
38	2-Ethoxyethanol	110-80-5	100	N.D.
39	2-Methoxyethanol	109-86-4	100	N.D.
40	Cobalt(II) diacetate	71-48-7	100	N.D.
41	Cobalt (II) carbonate	513-79-1	100	N.D.
42	Cobalt dinitrate	10141-05-6	100	N.D.
43	Cobalt (II) sulphate	10124-43-3	100	N.D.
44	Acids generated from chromium trioxide and their oligomers. Group containing: Chromic acid, Dichromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid	7738-94-5, 13530-68-2	100	N.D.
45	2-Ethoxyethyl acetate	111-15-9	100	N.D.
46	Strontium chromate	7789-06-2	100	N.D.
47	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	100	N.D.
48	Hydrazine	7803-57-8 302-01-2	100	N.D.
49	N-methyl-2-pyrrolidone; 1-methyl-2-pyrrolidone	872-50-4	100	N.D.
50	1,2,3-trichloropropane	96-18-4	100	N.D.
51	1, 2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	100	N.D.



No.	Test Item(s)	CAS No.	MDL	Test Result(s)
				001
52	Calcium arsenate	7778-44-1	100	N.D.
53	Bis(2-methoxyethyl) ether	111-96-6	100	N.D.
54	Potassium hydroxyoctaoxodizincatedichromate	11103-86-9	100	N.D.
55	Lead dipicrate	6477-64-1	100	N.D.
56	N,N-dimethylacetamide	127-19-5	100	N.D.
57	Arsenic acid	7778-39-4	100	N.D.
58	2-Methoxyaniline; o-Anisidine	90-04-0	100	N.D.
59	Trilead diarsenate	3687-31-8	100	N.D.
60	1,2-dichloroethane	107-06-2	100	N.D.
61	Pentazinc chromate octahydroxide	49663-84-5	100	N.D.
62	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	100	N.D.
63	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	100	N.D.
64	Bis(2-methoxyethyl) phthalate	117-82-8	100	N.D.
65	Lead diazide, Lead azide	13424-46-9	100	N.D.
66	Lead styphnate	15245-44-0	100	N.D.
67	2,2'-dichloro-4,4'-methylenedianiline	101-14-4	100	N.D.
68	Phenolphthalein	77-09-8	100	N.D.
69	Dichromium tris(chromate)	24613-89-6	100	N.D.
70*	Aluminosilicate Refractory Ceramic Fibres	--	100	N.D.
71*	Zirconia Aluminosilicate, Refractory Ceramic Fibres	--	100	N.D.
72	1,2-bis (2-methoxyethoxy) ethane (TEGDME; triglyme)	112-49-2	100	N.D.
73	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	100	N.D.
74	Diboron trioxide	1303-86-2	100	N.D.
75	Formamide	75-12-7	100	N.D.
76	Lead (II) bis (methanesulfonate)	17570-76-2	100	N.D.
77	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazine-2,4,6-trione (TGIC)	2451-62-9	100	N.D.
78	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β-TGIC)	59653-74-6	100	N.D.
79	4,4'-bis (dimethylamino) benzophenone (Michler's ketone)	90-94-8	100	N.D.
80	N, N, N', N' -tetramethyl -4,4'-methylenedianiline (Michler's base)	101-61-1	100	N.D.



No.	Test Item(s)	CAS No.	MDL	Test Result(s)
				001
81**	[4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3)	548-62-9	100	N.D.
82**	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Blue 26)	2580-56-5	100	N.D.
83**	α,α -Bis[4-(dimethylamino)phenyl]-4-(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)	6786-83-0	100	N.D.
84**	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	561-41-1	100	N.D.
85	Bis(pentabromophenyl) ether (decabromodiphenylether; DecaBDE)	1163-19-5	100	N.D.
86	Pentacosafuorotridecanoic acid	72629-94-8	100	N.D.
87	Tricosafuorododecanoic acid	307-55-1	100	N.D.
88	Henicosafuoroundecanoic acid	2058-94-8	100	N.D.
89	Heptacosafuorotetradecanoic acid	376-06-7	100	N.D.
90	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	100	N.D.
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	100	N.D.
92	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	100	N.D.
93	4-Nonylphenol, branched and linear	--	100	N.D.
94	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated	--	100	N.D.



No.	Test Item(s)	CAS No.	MDL	Test Result(s)
				001
95	Methoxyacetic acid	625-45-6	100	N.D.
96	N,N-dimethylformamide	68-12-2	100	13400
97	Dibutyltin dichloride (DBTC)	683-18-1	100	N.D.
98	Lead monoxide (Lead oxide)	1317-36-8	100	N.D.
99	Orange lead (Lead tetroxide)	1314-41-6	100	N.D.
100	Lead bis(tetrafluoroborate)	13814-96-5	100	N.D.
101	Trilead bis(carbonate)dihydroxide	1319-46-6	100	N.D.
102	Lead titanium trioxide	12060-00-3	100	N.D.
103	Lead titanium zirconium oxide	12626-81-2	100	N.D.
104	Silicic acid, lead salt	11120-22-2	100	N.D.
105	Silicic acid (H ₂ Si ₂ O ₅), barium salt (1:1), lead-doped	68784-75-8	100	N.D.
106	1-bromopropane (n-propyl bromide)	106-94-5	100	N.D.
107	Methyloxirane (Propylene oxide)	75-56-9	100	N.D.
108	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	100	N.D.
109	Diisopentylphthalate (DIPP)	605-50-5	100	N.D.
110	N-pentyl-isopentylphthalate	776297-69-9	100	N.D.
111	1,2-diethoxyethane	629-14-1	100	N.D.
112	Acetic acid, lead salt, basic	51404-69-4	100	N.D.
113	Lead oxide sulfate	12036-76-9	100	N.D.
114	[Phthalato(2-)]dioxotrilead	69011-06-9	100	N.D.
115	Dioxobis(stearato)trilead	12578-12-0	100	N.D.
116	Fatty acids, C16-18, lead salts	91031-62-8	100	N.D.
117	Lead cyanamate	20837-86-9	100	N.D.
118	Lead dinitrate	10099-74-8	100	N.D.
119	Pentalead tetraoxide sulphate	12065-90-6	100	N.D.
120	Pyrochlore, antimony lead yellow	8012-00-8	100	N.D.
121	Sulfurous acid, lead salt, dibasic	62229-08-7	100	N.D.
122	Tetraethyllead	78-00-2	100	N.D.
123	Tetralead trioxide sulphate	12202-17-4	100	N.D.
124	Trilead dioxide phosphonate	12141-20-7	100	N.D.
125	Furan	110-00-9	100	N.D.
126	Diethyl sulphate	64-67-5	100	N.D.
127	Dimethyl sulphate	77-78-1	100	N.D.
128	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	100	N.D.
129	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	100	N.D.



No.	Test Item(s)	CAS No.	MDL	Test Result(s)
				001
130	4,4'-methylenedi-o-toluidine	838-88-0	100	N.D.
131	4,4'-oxydianiline and its salts	101-80-4	100	N.D.
132	4-aminoazobenzene	60-09-3	100	N.D.
133	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	100	N.D.
134	6-methoxy-m-toluidine (p-cresidine)	120-71-8	100	N.D.
135	Biphenyl-4-ylamine	92-67-1	100	N.D.
136	o-aminoazotoluene [(4-o-tolylazo-o-toluidine)]	97-56-3	100	N.D.
137	o-toluidine	95-53-4	100	N.D.
138	N-methylacetamide	79-16-3	100	N.D.
139	Cadmium	7440-43-9	100	N.D.
140	Cadmium oxide	1306-19-0	100	N.D.
141	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	100	N.D.
142	Pentadecafluorooctanoic acid (PFOA)	335-67-1	100	N.D.
143	Dipentyl phthalate (DPP)	131-18-0	100	N.D.
144	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]	--	100	N.D.
145	Cadmium sulphide	1306-23-6	100	N.D.
146	Dihexyl phthalate (DHXP)	84-75-3	100	N.D.
147	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis (azo)]bis(4-aminonaphthalene-1-sulp honate) (C.I. Direct Red 28)	573-58-0	100	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)	1937-37-7	100	N.D.



No.	Test Item(s)	CAS No.	MDL	Test Result(s)
				001
149	Imidazolidine-2-thione; 2-imidazoline-2-thiol	96-45-7	100	N.D.
150	Lead di(acetate)	301-04-2	100	N.D.
151	Trixylyl phosphate	25155-23-1	100	N.D.
152	Cadmium chloride	10108-64-2	100	N.D.
153	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	100	N.D.
154	Sodium peroxometaborate	7632-04-4	100	N.D.
155	Sodium perborate; perboric acid, sodium salt	--	100	N.D.
156	Cadmium fluoride	7790-79-6	100	N.D.
157	Cadmium sulphate	10124-36-4; 31119-53-6	100	N.D.
158	2-benzotriazol-2-yl-4,6-di-tert-butylp henol (UV-320)	3846-71-7	100	N.D.
159	2-(2H-benzotriazol-2-yl)-4,6-diterte ntylphenol (UV-328)	25973-55-1	100	N.D.
160	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5 -dithia-4-stannatetradecanoate (DOTE)	15571-58-1	100	N.D.
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- oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3 ,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)	--	100	N.D.
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 (EC No. 201-559-5)	68515-51-5; 68648-93-1	100	N.D.



No.	Test Item(s)	CAS No.	MDL	Test Result(s)
				001
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]	--	100	N.D.
164	Nitrobenzene	98-95-3	100	N.D.
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl) phenol (UV-327)	3864-99-1	100	N.D.
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl) phenol (UV-350)	36437-37-3	100	N.D.
167	1,3-propanesultone	1120-71-4	100	N.D.
168	Perfluorononan-1-oic-acid and its sodium and ammonium salts	375-95-1 21049-39-8 4149-60-4	100	N.D.
169	Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8	100	N.D.
170	Bisphenol A (BPA)	80-05-7	100	N.D.
171	Perfluorononan-1-kwai-acid and its sodium and ammonium salts	335-76-2, 3108-42-7, 3830-45-3	100	N.D.
172	4-heptylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]	--	100	N.D.
173	p-(1,1-Dimethylpropyl)phenol	80-46-6	100	N.D.
174	Perfluorohexane-1-sulphonic acid and its salts (PFHxS)	--	100	N.D.
175	Benzo(a)anthracene	56-55-3 1718-53-2	100	N.D.
176	Cadmium carbonate	513-78-0	100	N.D.
177	Cadmium hydroxide	21041-95-2	100	N.D.



No.	Test Item(s)	CAS No.	MDL	Test Result(s)
				001
178	Cadmium nitrate	10022-68-1 10325-94-7	100	N.D.
179	Chrysene	218-01-9 1719-03-5	100	N.D.
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"™) [covering any of its individual anti- and syn-isomers or any combination thereof]	--	100	N.D.
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	--	100	N.D.
182	Octamethylcyclotetrasiloxane (D4)	556-67-2	100	N.D.
183	Decamethylcyclopentasiloxane (D5)	541-02-6	100	N.D.
184	Dodecamethylcyclohexasiloxane (D6)	540-97-6	100	N.D.
185	Lead	7439-92-1	100	N.D.
186	Disodium octaborate	12008-41-2	100	N.D.
187	Benzo[ghi]perylene	191-24-2	100	N.D.
188	Terphenyl hydrogenated	61788-32-7	100	N.D.
189	Ethylenediamine (EDA)	107-15-3	100	N.D.
190	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride) (TMA)	552-30-7	100	N.D.
191	Dicyclohexyl phthalate (DCHP)	84-61-7	100	N.D.

Remarks:

- Unit: mg/kg. 1000mg/kg = 1000ppm= 0.1%. N.D. = Not detected (<MDL); MDL= Method Detection Limits.
- *: Be covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures:
(70*) Aluminosilicate Refractory Ceramic Fibres
 - oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges
 - fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or

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less micrometres (μm)

- c) alkaline oxide and alkali earth oxide ($\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{CaO}+\text{MgO}+\text{BaO}$) content less or equal to 18% by weight

(71*) Zirconia Aluminosilicate Refractory Ceramic Fibres

- a) oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges
- b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (μm).
- c) alkaline oxide and alkali earth oxide ($\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{CaO}+\text{MgO}+\text{BaO}$) content less or equal to 18% by weight

3. ** (Items 81, 82, 83, 84) [with $\geq 0.1\%$ of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)] is identified as a substance meeting the criteria of Article 57 (a) of Regulation (EC) 1907/2006 (REACH) owing to its classification as carcinogen category 1A or 1B.

4. The substances are tested by in-house methods: CIRS-TC-SVHC001, CIRS-TC-SVHC002, CIRS-TC-SVHC003, CIRS-TC-SVHC004, CIRS-TC-SVHC005 and CIRS-TC-SVHC006 which refer to the methods listed below:

- 1) US EPA 3540C:1996 Soxhlet Extraction
- 2) US EPA 3550C:2007 Ultrasonic Extraction
- 3) US EPA 8270D:2014 Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry
- 4) EN 14372:2004 Child use and care articles-Cutlery and feeding utensils-Safety requirements and tests
- 5) ISO 14362-1:2017 Textiles - Methods for determination of certain aromatic amines derived from Azo colorants - Part 1: Detection of the use of certain Azo colorants accessible with and without extracting the fibres
- 6) ISO 14362-3:2017 Textiles. Methods for determination of certain aromatic amines derived from Azo colorants. Part 3:Detection of the use of certain Azo colorants, which may release 4-aminoazobenzene
- 7) ISO 18219:2012 Leather. Chemical tests. Determination of short-chain chlorinated paraffins
- 8) ISO 16189:2013 Footwear-Critical substances potentially present in footwear and footwear components -Test method to quantitatively determine dimethylformamide in footwear materials
- 9) EN 71-3:2013+A1:2014 Safety Of Toys - Part 3: Migration Of Certain Elements Annex G: Method of analysis for organic tin
- 10) AfPS GS 2014:01 PAK Testing and assessment of polycyclic aromatic hydrocarbons (PAHs) in the course of awarding the GS mark
- 11) IEC 62321-6:2015 Polybrominated biphenyls and polybrominated diphenyl ethers in polymers by gas chromatography -mass spectrometry (GC-MS)
- 12) EPA 8061A:1996 Phthalate Esters by Gas Chromatography with Electron Capture Detection (GC/ECD)
- 13) US EPA 8260B:1996 Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)
- 14) EPA 5021A:2014 Volatile Organic Compounds in Soils and Other Solid Matrices Using Equilibrium Headspace Analysis
- 15) CNS 15493-2015 Safety requirements of plastic puzzle ground mat
- 16) US EPA 3050B:1996 Acid Digestion of Sediments, Sludges, and Soils
- 17) US EPA 3052:1996 Microwave Assisted Acid Digestion of Siliceous and Organically Based Matrices
- 18) US EPA 3051A:2007 Microwave Assisted Acid Digestion of Sediments, Sludges, Soils, and Oils



- 19) US EPA 6010D:2014 Inductively Coupled Plasma-Optical Emission Spectrometry
 - 20) ISO 17075-1:2017 Leather-Chemical tests-Determination of chromium(VI) content
 - 21) US EPA 3060A:1996 Alkaline Digestion for Hexavalent Chromium
 - 22) US EPA 7196A:1992 Chromium, Hexavalent (Colorimetric)
 - 23) ISO 3613:2010 Test methods—Metallic and other inorganic coatings — Chromate conversion coatings on zinc, cadmium, aluminium-zinc alloys and zincaluminium alloys
 - 24) ASTM D7065:2011 Standard Test Method for Determination of Nonylphenol, Bisphenol A, p-tert-Octylphenol, Nonylphenol Monoethoxylate and Nonylphenol Diethoxylate in Environmental Waters by Gas Chromatography Mass Spectrometry
 - 25) ISO 18218-2:2015 Leather - Determination of ethoxylated alkylphenols. Part 2: Indirect
 - 26) SN/T 1850.1-2006 Determination of alkylphenol polyethoxylates in textiles. Part 1: High performance liquid chromatography method
 - 27) US EPA 8321B:2007 Solvent-extractable nonvolatile compounds by high-performance liquid chromatography/ thermospray/ mass spectrometry (HPLC/TS/MS) or ultraviolet(UV) detection
 - 28) DIN 54231:2005 Textiles - Detection of disperse dyestuffs
 - 29) GB/T 29609-2013 Rubber-Determination of phenol and biphenyl-A
5. Because it is difficult to detect the substances (CoCl_2 , $\text{C}_{24}\text{H}_{54}\text{OSn}_2$, $\text{Na}_2\text{Cr}_2\text{O}_7$, PbAsHO_4 , As_2O_3 , As_2O_5 , Triethyl arsenate PbCrO_4 , Lead chromate molybdate sulphate red (C.I. Pigment Red 104), Lead sulfochromate yellow (C.I. Pigment Yellow 34), Triethyl arsenate, H_3BO_3 , $\text{Na}_2\text{B}_4\text{O}_7$, $\text{Na}_2\text{B}_4\text{O}_7 \cdot 7\text{H}_2\text{O}$, Na_2CrO_4 , K_2CrO_4 , $(\text{NH}_4)_2\text{Cr}_2\text{O}_7$, $\text{K}_2\text{Cr}_2\text{O}_7$, CrO_3 , $\text{Co}(\text{CH}_3\text{COO})_2$, CoCO_3 , $\text{Co}(\text{NO}_3)_2$, CoSO_4 , SrCrO_4 , Calcium arsenate, Potassium hydroxyoctaoxodizincatedichromate, Lead dipicrate, Arsenic acid, Trilead diarsenate, Pentazinc chromate octahydroxide, Lead diazide, Lead azide, Lead styphnate, Diboron trioxide, Lead (II) bis (methanesulfonate), Aluminosilicate Refractory Ceramic Fibres, Zirconia Aluminosilicate, Refractory Ceramic Fibres, Dichromium tris(chromate), Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid, Dibutyltin dichloride (DBTC), Lead monoxide (Lead oxide), Orange lead (Lead tetroxide), Lead bis(tetrafluoroborate), Trilead bis(carbonate)dihydroxide, Lead titanium trioxide, Lead titanium zirconium oxide, Silicic acid, lead salt, (Silicic acid ($\text{H}_2\text{Si}_2\text{O}_5$), barium salt (1:1), lead-doped), (Acetic acid, lead salt, basic), Lead oxide sulfate, [Phthalato(2-)]dioxotrilead, Dioxobis(stearato)trilead, (Fatty acids, C16-18, lead salts), Lead cyanidate, Lead dinitrate, Pentalead tetraoxide sulphate, (Pyrochlore, antimony lead yellow), (Sulfurous acid, lead salt, dibasic), Tetraethyllead, Tetralead trioxide sulphate, Trilead dioxide phosphonate, Cadmium oxide, Cadmium sulphide, Lead di(acetate), Cadmium chloride, Sodium peroxometaborate, (Sodium perborate; perboric acid, sodium salt), Cadmium fluoride, Cadmium sulphate, Cadmium carbonate, Cadmium hydroxide, Cadmium nitrate, Lead, Disodium octaborate) via direct tests but via converting them into detectable elements, we consider that all the relative elements exist in the form of their compounds when having the test.



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