



South Asia

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Test Report No. BLR/H(Re)/13/001134
Dated 20.08.2013

Applicant	:	AVI GLOBAL PLAST PVT. LTD., SURVEY NO. 266/4,5,6, 269/4, 268/1, COASTAL HIGHWAY, VILLAGE DUNETHA, DAMAN – 369 210. INDIA
Attention	:	Mr. Prashant Malawe
Tested Sample	:	Received on 12.08.2013
Test Period	:	12.08.2013 to 20.08.2013
Sample Description	:	Sample A: PVC – RIGID FILM
Part No.	:	-
Colour	:	-
Buyer Name	:	-
Supplier Name	:	-
Purpose of Examination	:	Analysis of the 144 substances of very high concern (SVHC) on the Candidate List for authorization, concerning Regulation (EC) No. 1907/2006 as published on the European Chemicals Agency (ECHA) website in October 2008, January 2010, March 2010, June 2010, December 2010, June 2011, December 2011, June 2012, December 2012 and June 2013.
<i>Note: the submitted samples are Not Drawn by the Laboratory</i>		

Prepared by

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Authorised by

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Note: (1) General Terms & Conditions as mentioned overleaf, (2) The results relate only to the items tested, (3) The test report shall not be reproduced except in full without the written approval of the laboratory (4) For details of the accredited scope please contact the laboratory or visit www.nabl-india.org

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TEST RESULTS AND CONCLUSION:

Analysis of the 144 substances of very high concern (SVHC) on the Candidate List for authorization, concerning Regulation (EC) No. 1907/2006 as published on the European Chemicals Agency (ECHA) website in October 2008, January 2010, March 2010, June 2010, December 2010, June 2011, December 2011, June 2012, December 2012 and June 2013.

Analysis based on LCMS, GCMS, Headspace-GCMS, UPLC, ICP-OES and UV-VIS.

Requirement Limit for all individual parameters = <0.1%

S.No.	Substance Name	CAS Number	LOQ (%)	Result (%)	Conclusion
1	Anthracene	120-12-7	0.005	<0.005	Pass
2	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	0.005	<0.005	Pass
3	4,4'- Diaminodiphenylmethane (MDA)	101-77-9	0.005	<0.005	Pass
4	Dibutyl phthalate (DBP)	84-74-2	0.005	<0.005	Pass
5	Sodium dichromate	7789-12-0, 10588-01-9	0.005	<0.005	Pass
6	Diarsenic pentaoxide	1303-28-2	0.005	<0.005	Pass
7	Triethyl arsenate	15606-95-8	0.005	<0.005	Pass
8	Bis(tributyltin)oxide (TBTO)	56-35-9	0.005	<0.005	Pass
9	Diarsenic trioxide	1327-53-3	0.005	<0.005	Pass
10	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	0.005	<0.005	Pass
11	Bis (2-ethylhexyl)phthalate (DEHP)	117-81-7	0.005	<0.005	Pass
12	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)	0.005	<0.005	Pass
13	Benzyl butyl phthalate (BBP)	85-68-7	0.005	<0.005	Pass
14	Lead hydrogen arsenate	7784-40-9	0.005	<0.005	Pass
15	Anthracene oil, anthracene paste, distn. lights	91995-17-4	0.005	<0.005	Pass
16	Pitch, coal tar, high temp.	65996-93-2	0.005	<0.005	Pass
17	Anthracene oil, anthracene paste	90640-81-6	0.005	<0.005	Pass
18	Lead chromate	7758-97-6	0.005	<0.005	Pass
19	Diisobutyl phthalate	84-69-5	0.005	<0.005	Pass
20	Tris(2-chloroethyl)phosphate	115-96-8	0.005	<0.005	Pass

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S.No.	Substance Name	CAS Number	LOQ (%)	Result (%)	Conclusion
21	Anthracene oil, anthracene-low	90640-82-7	0.005	<0.005	Pass
22	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	0.005	<0.005	Pass
23	2,4-Dinitrotoluene	121-14-2	0.005	<0.005	Pass
24	Anthracene oil	90640-80-5	0.005	<0.005	Pass
25	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8	0.005	<0.005	Pass
26	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	0.005	<0.005	Pass
27	Acrylamide	79-06-1	0.005	<0.005	Pass
28	Potassium chromate	7789-00-6	0.005	<0.005	Pass
29	Disodium tetraborate, anhydrous	1303-96-4, 1330-43-4, 12179-04-3	0.005	<0.005	Pass
30	Sodium chromate	7775-11-3	0.005	<0.005	Pass
31	Boric acid	10043-35-3, 11113-50-1	0.005	<0.005	Pass
32	Ammonium dichromate	7789-09-5	0.005	<0.005	Pass
33	Tetraboron disodium heptaoxide, hydrate	12267-73-1	0.005	<0.005	Pass
34	Potassium dichromate	7778-50-9	0.005	<0.005	Pass
35	Trichloroethylene	79-01-6	0.005	<0.005	Pass
36	Cobalt(II) dinitrate	10141-05-6	0.005	<0.005	Pass
37	Cobalt(II) carbonate	513-79-1	0.005	<0.005	Pass
38	Chromium trioxide	1333-82-0	0.005	<0.005	Pass
39	2-Methoxyethanol	109-86-4	0.005	<0.005	Pass
40	Acids generated from chromium trioxide and their oligomers. Names of the acids and their oligomers: Chromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid.	7738-94-5, 13530-68-2	0.005	<0.005	Pass
41	2-Ethoxyethanol	110-80-5	0.005	<0.005	Pass
42	Cobalt(II) sulphate	10124-43-3	0.005	<0.005	Pass
43	Cobalt(II) diacetate	71-48-7	0.005	<0.005	Pass
44	Hydrazine	302-01-2, 7803-57-8	0.005	<0.005	Pass
45	2-Ethoxyethyl acetate	111-15-9	0.005	<0.005	Pass
46	1,2,3-Trichloropropane	96-18-4	0.005	<0.005	Pass
47	1-Methyl-2-pyrrolidone	872-50-4	0.005	<0.005	Pass
48	Strontium chromate	7789-06-2	0.005	<0.005	Pass
49	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	0.005	<0.005	Pass

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S.No.	Substance Name	CAS Number	LOQ (%)	Result (%)	Conclusion
50	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	0.005	<0.005	Pass
51	Cobalt dichloride	7646-79-9	0.005	<0.005	Pass
52	2,2'-dichloro-4,4'-methylenedianiline	101-14-4	0.005	<0.005	Pass
53	Bis(2-methoxyethyl) ether	111-96-6	0.005	<0.005	Pass
54	Aluminosilicate Refractory Ceramic Fibres are fibres 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, and fulfil the three following conditions: a) oxides of aluminium and silicon 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 (Na ₂ O+K ₂ O+CaO+MgO+BaO) content less or equal to 18% by weight ⁽¹⁾	-	0.005	<0.005	Pass
55	Bis(2-methoxyethyl) phthalate	117-82-8	0.005	<0.005	Pass
56	Zirconia Aluminosilicate Refractory Ceramic Fibres are fibres 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, and fulfil the three following conditions: 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 (Na ₂ O+K ₂ O+CaO+MgO+BaO) content less or equal to 18% by weight ⁽¹⁾	-	0.005	<0.005	Pass

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S.No.	Substance Name	CAS Number	LOQ (%)	Result (%)	Conclusion
57	Trilead diarsenate	3687-31-8	0.005	<0.005	Pass
58	Lead styphnate	15245-44-0	0.005	<0.005	Pass
59	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	0.005	<0.005	Pass
60	Potassium hydroxyoctaoxodizincatedichromate	11103-86-9	0.005	<0.005	Pass
61	Arsenic acid	7778-39-4	0.005	<0.005	Pass
62	Pentazinc chromate octahydroxide	49663-84-5	0.005	<0.005	Pass
63	2-Methoxyaniline; o-Anisidine	90-04-0	0.005	<0.005	Pass
64	Dichromium tris(chromate)	24613-89-6	0.005	<0.005	Pass
65	Calcium arsenate	7778-44-1	0.005	<0.005	Pass
66	1,2-dichloroethane	107-06-2	0.005	<0.005	Pass
67	Lead dipicrate	6477-64-1	0.005	<0.005	Pass
68	Lead diazide, Lead azide	13424-46-9	0.005	<0.005	Pass
69	Phenolphthalein	77-09-8	0.005	<0.005	
70	N,N-dimethylacetamide	127-19-5	0.005	<0.005	Pass
71	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	0.005	<0.005	Pass
72	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	0.005	<0.005	Pass
73	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	0.005	<0.005	Pass
74	[4-[[4-anilino-1-naphthyl][4-(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	0.005	<0.005	Pass
75	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	0.005	<0.005	Pass
76	[4-[4,4'-bis(dimethylamino)benzhydrylidene]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	0.005	<0.005	Pass
77	Formamide	75-12-7	0.005	<0.005	Pass
78	Lead(II) bis(methanesulfonate)	17570-76-2	0.005	<0.005	Pass
79	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	561-41-1	0.005	<0.005	Pass

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S.No.	Substance Name	CAS Number	LOQ (%)	Result (%)	Conclusion
80	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	0.005	<0.005	Pass
81	Diboron trioxide*	1303-86-2	0.005	<0.005	Pass
82	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	0.005	<0.005	Pass
83	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	0.005	<0.005	Pass
84	α,α -Bis[4-(dimethylamino)phenyl]-4-(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) [with $\geq 0.1\%$ of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)]	6786-83-0	0.005	<0.005	Pass
85	Lead cyanamidate*	20837-86-9	0.005	<0.005	Pass
86	Sulfurous acid, lead salt, dibasic	62229-08-7	0.005	<0.005	Pass
87	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	0.01	<0.01	Pass
88	Fatty acids, C16-18, lead salts	91031-62-8	0.005	<0.005	Pass
89	Diisopentylphthalate	605-50-5	0.005	<0.005	Pass
90	Biphenyl-4-ylamine	92-67-1	0.005	<0.005	Pass
91	Orange lead (lead tetroxide)	1314-41-6	0.005	<0.005	Pass
92	4,4'-oxydianiline and its salts	101-80-4	0.005	<0.005	Pass
93	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	0.005	<0.005	Pass
94	o-aminoazotoluene	97-56-3	0.005	<0.005	Pass
95	Trilead dioxide phosphonate	12141-20-7	0.005	<0.005	Pass
96	Methyloxirane (Propylene oxide)	75-56-9	0.005	<0.005	Pass
97	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	0.005	<0.005	Pass
98	Methoxyacetic acid	625-45-6	0.005	<0.005	Pass
99	1-bromopropane (n-propyl bromide)	106-94-5	0.005	<0.005	Pass
100	Heptacosaf fluorotetradecanoic acid	376-06-7	0.005	<0.005	Pass
101	Tricosaf fluorododecanoic acid	307-55-1	0.005	<0.005	Pass
102	Pentacosaf fluorotridecanoic acid	72629-94-8	0.005	<0.005	Pass
103	Pentalead tetraoxide sulphate	12065-90-6	0.005	<0.005	Pass
104	Tetraethyllead*	78-00-2	0.005	<0.005	Pass
105	Dioxobis(stearato)trilead	12578-12-0	0.005	<0.005	Pass
106	N-pentyl-isopentylphthalate	776297-69-9	0.005	<0.005	Pass
107	Tetralead trioxide sulphate	12202-17-4	0.005	<0.005	Pass
108	1,2-Diethoxyethane	629-14-1	0.005	<0.005	Pass
109	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	0.005	<0.005	Pass

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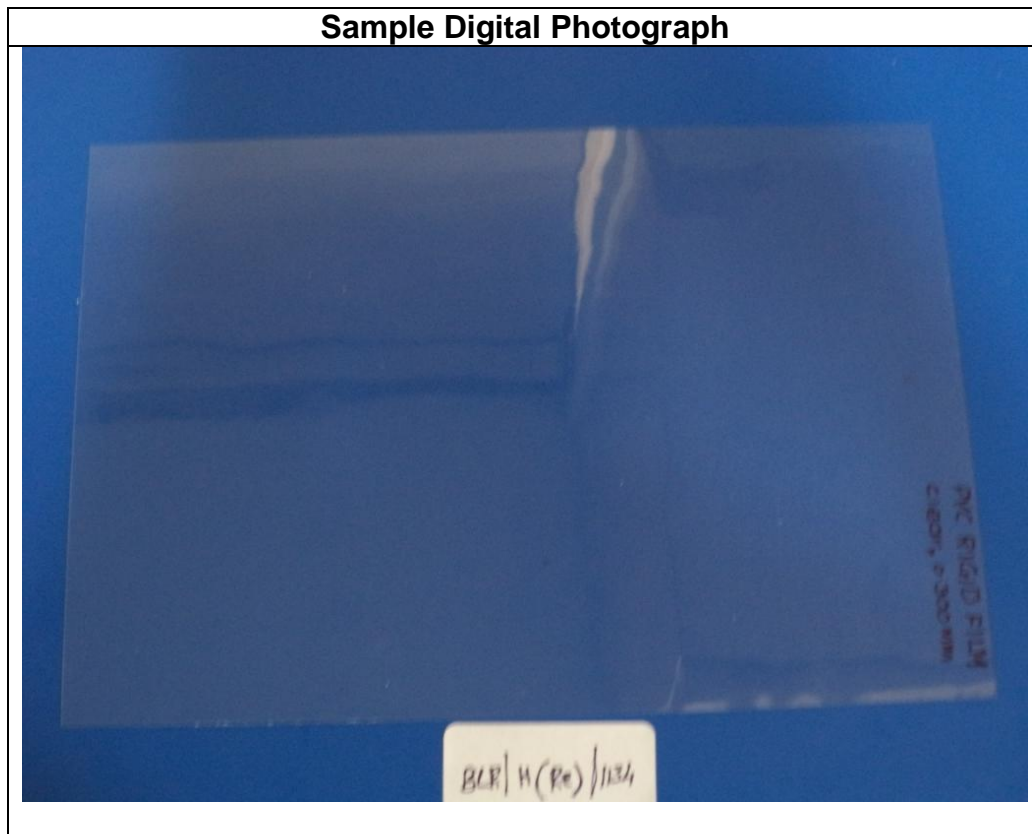
S.No.	Substance Name	CAS Number	LOQ (%)	Result (%)	Conclusion
110	N-methylacetamide	79-16-3	0.005	<0.005	Pass
111	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	0.005	<0.005	Pass
112	[Phthalato(2-)]dioxotrilead	69011-06-9	0.005	<0.005	Pass
113	Acetic acid, lead salt, basic	51404-69-4	0.005	<0.005	Pass
114	Lead titanium trioxide	12060-00-3	0.005	<0.005	Pass
115	Lead oxide sulphate	12036-76-9	0.005	<0.005	Pass
116	Dimethyl sulphate	77-78-1	0.005	<0.005	Pass
117	Diethyl sulphate	64-67-5	0.005	<0.005	Pass
118	4,4'-methylenedi-o-toluidine	838-88-0	0.005	<0.005	Pass
119	4-Nonylphenol, branched and linear <i>[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]</i>	-	0.005	<0.005	Pass
120	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated <i>[covering well-defined substances and UVCB substances, polymers and homologues]</i>	-	0.005	<0.005	Pass
121	N,N-dimethylformamide	68-12-2	0.005	<0.005	Pass
122	Furan	110-00-9	0.005	<0.005	Pass
123	Trilead bis(carbonate)dihydroxide	1319-46-6	0.005	<0.005	Pass
124	Silicic acid (H ₂ Si ₂ O ₅), barium salt (1:1), lead-doped [with lead (Pb) content above the applicable generic concentration limit for 'toxicity for reproduction' Repr. 1A (CLP) or category 1 (DSD); the substance is a member of the group entry of lead compounds, with index number 082-001-00-6 in Regulation (EC) No 1272/2008]	68784-75-8	0.005	<0.005	Pass
125	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	0.005	<0.005	Pass
126	o-Toluidine	95-53-4	0.005	<0.005	Pass
127	Lead monoxide (lead oxide)	1317-36-8	0.005	<0.005	Pass
128	Lead titanium zirconium oxide	12626-81-2	0.005	<0.005	Pass
129	4-Aminoazobenzene	60-09-3	0.005	<0.005	Pass
130	Silicic acid, lead salt	11120-22-2	0.005	<0.005	Pass
131	Lead dinitrate	10099-74-8	0.005	<0.005	Pass

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S.No.	Substance Name	CAS Number	LOQ (%)	Result (%)	Conclusion
132	Lead bis(tetrafluoroborate)	13814-96-5	0.005	<0.005	Pass
133	Dibutyltin dichloride (DBTC)	683-18-1	0.005	<0.005	Pass
134	Cyclohexane-1,2-dicarboxylic anhydride [1], cis-cyclohexane-1,2-dicarboxylic anhydride [2], trans-cyclohexane-1,2-dicarboxylic anhydride [3] <i>[The individual cis- [2] and trans- [3] isomer substances and all possible combinations of the cis- and trans-isomers [1] are covered by this entry]</i>	85-42-7, 13149-00-3, 14166-21-3	0.01	<0.01	Pass
135	Hexahydromethylphthalic anhydride [1], Hexahydro-4-methylphthalic anhydride [2], Hexahydro-1-methylphthalic anhydride [3], Hexahydro-3-methylphthalic anhydride [4] <i>[The individual isomers [2], [3] and [4] (including their cis- and trans- stereo isomeric forms) and all possible combinations of the isomers [1] are covered by this entry]</i>	25550-51-0, 19438-60-9, 48122-14-1, 57110-29-9	0.01	<0.01	Pass
136	Henicosafuoroundecanoic acid	2058-94-8	0.005	<0.005	Pass
137	6-methoxy-m-toluidine (p-cresidine)	120-71-8	0.005	<0.005	Pass
138	Pyrochlore, antimony lead yellow	8012-00-8	0.005	<0.005	Pass
139	Cadmium	7440-43-9	0.005	<0.005	Pass
140	Cadmium oxide	1306-19-0	0.005	<0.005	Pass
141	Dipentyl phthalate (DPP)	131-18-0	0.005	<0.005	Pass
142	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]	-	0.005	<0.005	Pass
143	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	0.005	<0.005	Pass
144	Pentadecafluorooctanoic acid (PFOA)	-	0.005	<0.005	Pass



Note :

LOQ = Limit of quantification. All LOQ are based on homogenous material.

Bis(tributyltin)oxide (TBTO) is tested and calculated in term of Tributyl tin.

The substances are UVCB (substance of unknown or variable composition, complex reaction products or biological materials), which are identified by its main constituents.

Individual concentrations to the constituent of UVCB with an amount of < 0.005% were not considered by the calculation of the sum.

⁽¹⁾ The test result is based on microscopic and chemical evaluation.

* For the substances concentrations are calculated on the basis of total metal content (Pb, Cd, Co, Ti, Zr, Mo, Al, Cr, Ba, B, As, Ca, Zn, K, Sr).

By calculation, if detected, this material probably contains Boric acid (CAS: 10043-35-3/11113-50-1), Disodium tetraborate, anhydrous (CAS: 1330-43-4/12179-04-3/1303-96-4), or Tetraboron disodium heptaoxide hydrate (CAS: 12267-73-1). The calculation is based on the total boron content by ICP-OES. It suggests to check the respective recipe. If the theoretical content of the respective substance is >0.1% in the weight of whole article.

Calculated concentrations of cobalt(II) sulphate, cobalt(II) dinitrate, cobalt(II) carbonate, cobalt(II) diacetate are based on the total cobalt by ICP-OES.

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Calculated concentrations of Sodium dichromate, potassium dichromate, chromium trioxide, chromic acid and dichromic acid are based on the identified chromium(VI) by UV-VIS Spectrophotometer.

LOQ = 0.005% is evaluated for element (i.e. cobalt, arsenic, lead, Cadmium, sodium, chromium, chromium (VI), silicon, aluminum, zirconium, boron, potassium, and molybdenum)

The tested material(s) was analyzed for relevant SVHC substance(s) only as the additional risk for other SVHC substances is low in the tested material(s). The testing is focused on the possibility of contamination during production & material specific contamination of the product.

-- END OF THE TEST REPORT --