



**TEST REPORT**  
**Report No. 119080008**  
Dated August 30, 2019

**Client** : LIANG HAH HENG INTERNATIONAL RUBBER CO., LTD.  
863/4 EKACHAI ROAD, BANGBON, BANGBON, BANGKOK 10150  
ATTN: MS. JJ EIAM

**Manufacturer** : LIANG HAH HENG INTERNATIONAL RUBBER CO., LTD.

**Test Sample Received** : RECEIVED ON 20/08/2019

**Test Period** : FROM 21/08/2019 TO 30/08/2019

**Sample Description** : RUBBER BAND 100%, 80%, 55%

**Country of Origin** : THAILAND

TEST REQUESTED	CONCLUSION	REMARK
HEAVY METALS AND FLAME RETARDANTS CONTENT - EUROPEAN PARLIAMENT AND COUNCIL DIRECTIVE 2011/65/EU ON THE RESTRICTION OF THE USE OF CERTAIN HAZARDOUS SUBSTANCES IN ELECTRICAL AND ELECTRONIC EQUIPMENT (ROHS) WITH ITS AMENDMENTS	PASS	/
PHthalATES CONTENT - DIRECTIVE 2015/863/EU AMENDMENT OF EUROPEAN PARLIAMENT AND COUNCIL DIRECTIVE 2011/65/EU ON THE RESTRICTION OF THE USE OF CERTAIN HAZARDOUS SUBSTANCE IN ELECTRICAL AND ELECTRONIC EQUIPMENT (ROHS)	PASS	/
CANDIDATE LIST OF SUBSTANCES OF VERY HIGH CONCERN FOR AUTHORIZATION PUBLISHED BY EUROPEAN CHEMICALS AGENCY (ECHA) REGARDING REGULATION (EC) NO.1907/2006 CONCERNING REACH	PASS	/
FDA 21 CFR 177.2600 RUBBER ARTICLES INTENDED FOR REPEATED USE	PASS	/



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For technical enquiries or any other concerns, please contact:

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**SUZEN CHONG**  
**GENERAL MANAGER**



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**SAMPLE PHOTO**



**RUBBER BAND 100%**



**RUBBER BAND 80%**



**RUBBER BAND 55%**





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Remarks:

- The list of analytes is summarized in table of Appendix.
- The test flowchart of heavy metals and flame retardants content is listed in table of Appendix.
- Result(s) of Cr VI for metallic material(s) was (were) expressed in term of positive and negative. Negative means the absence of Cr VI on the tested areas and the result(s) was (were) regarded as in compliance with European Parliament and Council Directive 2011/65/EU, Article 4(1). While, positive means the presence of Cr VI on tested areas and the result(s) was (were) regarded as in conflict with European Parliament and Council Directive 2011/65/EU, Article 4(1). According to European Parliament and Council Directive 2011/65/EU, Article 5 "Adaptation of the Annexes to scientific and technical progress", exemption(s) should be granted to the materials and components of Test Item(s) in the lists in Annexes III and IV of this directive.

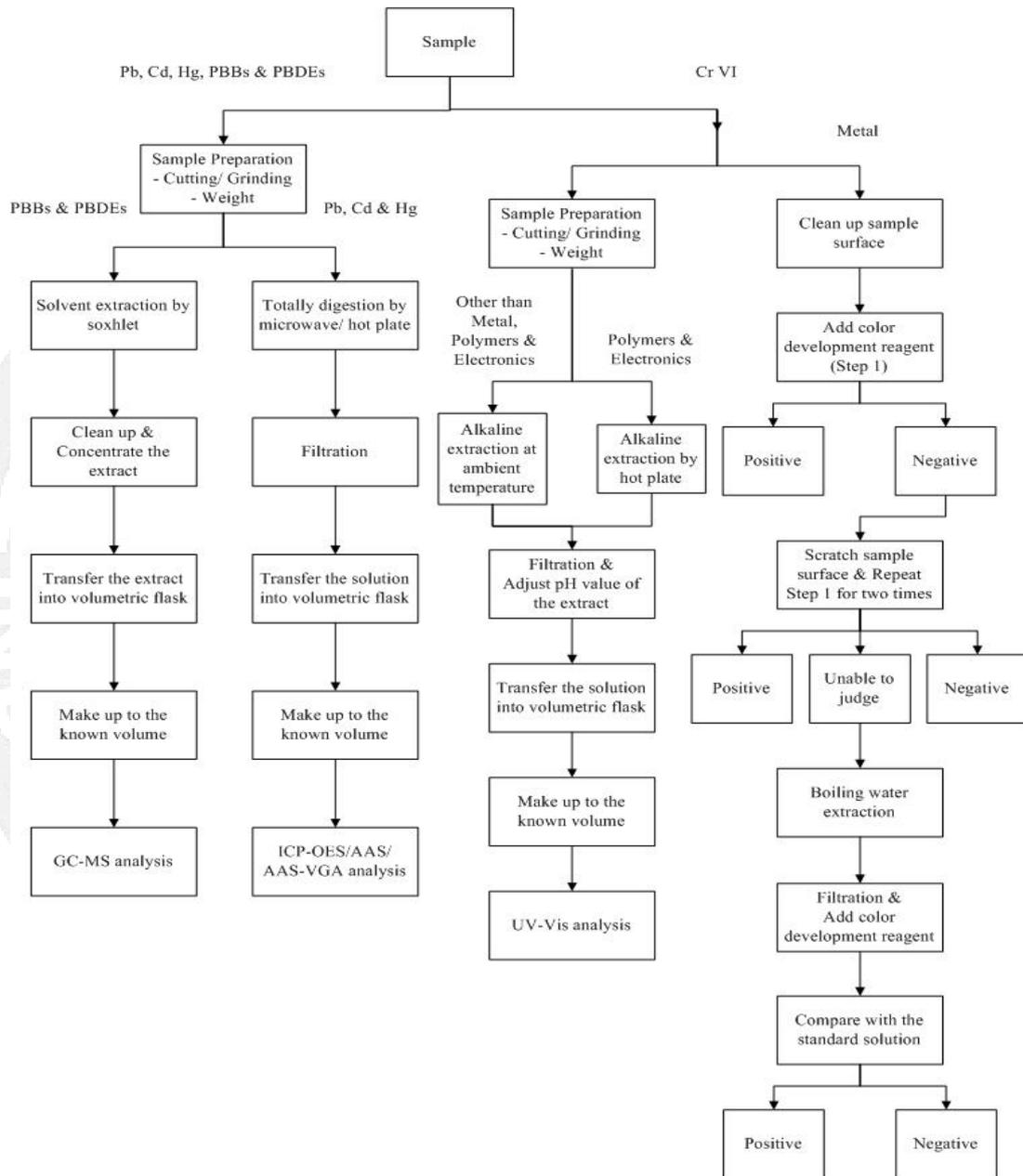
**APPENDIX**

**List of Analytes and their Corresponding Test Methods**

**[ European Parliament and Council Directive 2011/65/EU ] :**

No.	Name of Analyte(s)	Test Method(s)
1	Lead (Pb)	With reference to International Standard IEC 62321-5: 2013.
2	Cadmium (Cd)	
3	Mercury (Hg)	
4	Chromium VI (Cr VI)	<u>Metal:</u> With reference to IEC 62321-7-1:2015. <u>Polymers &amp; Electronics:</u> With reference to EN 62321: 2009, Annex C. <u>Leather:</u> International Standard ISO 17075: 2007 <u>Other than Metal, Polymers, Electronics &amp; Leather:</u> With reference to ISO 17075: 2007
5	Polybromobiphenyls (PBBs) - Bromobiphenyl (MonoBB) - Dibromobiphenyl (DiBB) - Tribromobiphenyl (TriBB) - Tetrabromobiphenyl (TetraBB) - Pentabromobiphenyl (PentaBB) - Hexabromobiphenyl (HexaBB) - Heptabromobiphenyl (HeptaBB) - Octabromobiphenyl (OctaBB) - Nonabromobiphenyl (NonaBB) - Decabromobiphenyl (DecaBB)	With reference to IEC 62321-6: 2015.
6	Polybromodiphenyl ethers (PBDEs) - Bromodiphenyl ether (MonoBDE) - Dibromodiphenyl ether (DiBDE) - Tribromodiphenyl ether (TriBDE) - Tetrabromodiphenyl ether (TetraBDE) - Pentabromodiphenyl ether (PentaBDE) - Hexabromodiphenyl ether (HexaBDE) - Heptabromodiphenyl ether (HeptaBDE) - Octabromodiphenyl ether (OctaBDE) - Nonabromodiphenyl ether (NonaBDE) - Decabromodiphenyl ether (DecaBDE)	
[a]	The principle of this method was evaluated and supported by two studies organized by IEC TC 111 WG3. These studies were focused on detecting the presence of Cr VI in the corrosion protection coatings on metallic samples.	

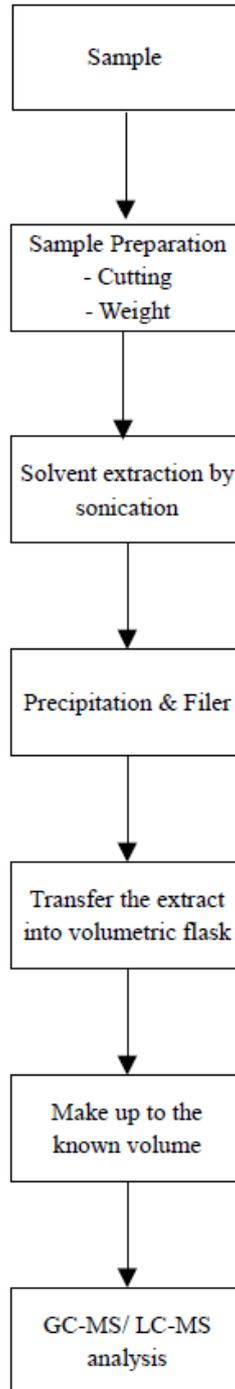
**Test Flowchart of Heavy Metals and Flame Retardants Content**  
**[ European Parliament and Council Directive 2011/65/EU ]**







**Test Flowchart of Phthalates Content**





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**TEST RESULT(S): (Continued)**

**Candidate List of Substances of Very High Concern for authorization published by European Chemicals Agency (ECHA) Regarding Regulation (EC) No. 1907/2006 concerning REACH**

Test Item(s)	Item / Component Description(s)
1	RUBBER BAND 100%
2	RUBBER BAND 80%
3	RUBBER BAND 55%

No.	Substance name	CAS No.	EC No.	Result, %			Detection Limit, %	Basis for identification as a SVHC
				1	2	3		
1	Triethyl arsenate*	15606-95-8	427-700-2	ND	ND	ND	0.03	Carcinogenic
2	Anthracene	120-12-7	204-371-1	ND	ND	ND	0.03	PBT
3	4,4'-Diaminodiphenyl methane (MDA)	101-77-9	202-974-4	ND	ND	ND	0.03	Carcinogenic
4	Dibutyl phthalate (DBP)	84-74-2	201-557-4	ND	ND	ND	0.03	Toxic for reproduction; Equivalent level of concern having probable serious effects to human health
5	Cobalt dichloride*	7646-79-9	231-589-4	ND	ND	ND	0.03	Carcinogenic
6	Diarsenic pentaoxide*	1303-28-2	215-116-9	ND	ND	ND	0.03	Carcinogenic
7	Diarsenic trioxide*	1327-53-3	215-481-4	ND	ND	ND	0.03	Carcinogenic
8	Sodium dichromate*	7789-12-0 <sup>(1)</sup> , 10588-01-9 <sup>(2)</sup>	234-190-3	ND	ND	ND	0.03	Carcinogenic; Mutagenic; Toxic for reproduction
9	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	201-329-4	ND	ND	ND	0.03	vPvB
10	Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7	204-211-0	ND	<b>ND</b>	<b>ND</b>	0.03	Toxic for reproduction; Equivalent level of concern having probable serious effects to environment and human health
11	Hexabromo cyclododecane (HBCDD) and all major diastereoisomers identified: α - HBCDD β - HBCDD γ - HBCDD	3194-55-6 <sup>(3)</sup> , 25637-99-4 <sup>(4)</sup>  134237-50-6 134237-51-7 134237-52-8	247-148-4, 221-695-9	ND	ND ND ND	ND ND ND	0.03	PBT
12	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins) (SCCP)	85535-84-8	287-476-5	ND	ND	ND	0.03	PBT, vPvB
13	Bis(tributyltin)oxide (TBTO)**	56-35-9	200-268-0	ND	ND	ND	0.03	PBT



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14	Lead hydrogen arsenate*	7784-40-9	232-064-2	ND	ND	ND	0.03	Carcinogenic; Toxic for reproduction
15	Benzyl butyl phthalate (BBP)	85-68-7	201-622-7	ND	ND	ND	0.03	Toxic for reproduction; Equivalent level of concern having probable serious effects to human health
16	2,4-Dinitrotoluene	121-14-2	204-450-0	ND	ND	ND	0.03	Carcinogenic
17	Anthracene oil	90640-80-5	292-602-7	ND	ND	ND	0.03	Carcinogenic, PBT, vPvB
18	Anthracene oil, anthracene paste, distn. Lights	91995-17-4	295-278-5	ND	ND	ND	0.03	Carcinogenic; Mutagenic, PBT, vPvB
19	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	295-275-9	ND	ND	ND	0.03	Carcinogenic; Mutagenic, PBT, vPvB
20	Anthracene oil, anthracene-low	90640-82-7	292-604-8	ND	ND	ND	0.03	Carcinogenic; Mutagenic, PBT, vPvB
21	Anthracene oil, anthracene paste	90640-81-6	292-603-2	ND	ND	ND	0.03	Carcinogenic; Mutagenic, PBT, vPvB
22	Diisobutyl phthalate	84-69-5	201-553-2	ND	ND	ND	0.03	Toxic for reproduction; Equivalent level of concern having probable serious effects to human health
23	Aluminosilicate, Refractory Ceramic Fibres* <sup>a</sup>	Index no. 650-017-00-8		ND		ND	ND	Carcinogenic
24	Zirconia Aluminosilicate, Refractory Ceramic Fibres* <sup>b</sup>	Index no. 650-017-00-8		ND		ND	ND	Carcinogenic
25	Lead chromate*	7758-97-6	231-846-0	ND	ND	ND	0.03	Carcinogenic; Toxic for reproduction
26	Lead chromate molybdate sulfate red (C.I. Pigment Red 104)*	12656-85-8	235-759-9	ND	ND	ND	0.03	Carcinogenic; Toxic for reproduction
27	Lead sulfochromate yellow (C.I. Pigment Yellow 34)*	1344-37-2	215-693-7	ND	ND	ND	0.03	Carcinogenic; Toxic for reproduction
28	Tris(2-chloroethyl) phosphate	115-96-8	204-118-5	ND	ND	ND	0.03	Toxic for reproduction
29	Coal tar pitch, high temperature	65996-93-2	266-028-2	ND	ND	ND	0.03	Carcinogenic, PBT, vPvB
30	Acrylamide	79-06-1	201-173-7	ND	ND	ND	0.03	Carcinogenic; Mutagenic
31	Trichloroethylene	79-01-6	201-167-4	ND	ND	ND	0.03	Carcinogenic
32	Boric acid*	10043-35-3, 11113-50-1	233-139-2 / 234-343-4	ND	ND	ND	0.03	Toxic for reproduction
33	Disodium tetraborate, anhydrous*	1330-43-4 <sup>(5)</sup> , 12179-04-3 <sup>(6)</sup> , 1303-96-4 <sup>(7)</sup>	215-540-4	ND	ND	ND	0.03	Toxic for reproduction
34	Tetraboron disodium heptaoxide, hydrate*	12267-73-1	235-541-3	ND	ND	ND	0.03	Toxic for reproduction



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35	Sodium chromate*	7775-11-3	231-889-5	ND	ND	ND	0.03	Carcinogenic; Mutagenic; Toxic for reproduction
36	Potassium chromate*	7789-00-6	232-140-5	ND	ND	ND	0.03	Carcinogenic; Mutagenic
37	Ammonium dichromate*	7789-09-5	232-143-1	ND	ND	ND	0.03	Carcinogenic; Mutagenic; Toxic for reproduction
38	Potassium dichromate*	7778-50-9	231-906-6	ND	ND	ND	0.03	Carcinogenic; Mutagenic; Toxic for reproduction
39	Cobalt(II) sulphate*	10124-43-3	233-334-2	ND	ND	ND	0.03	Carcinogenic; Toxic for reproduction
40	Cobalt(II) dinitrate*	10141-05-6	233-402-1	ND	ND	ND	0.03	Carcinogenic; Toxic for reproduction
41	Cobalt(II) carbonate*	513-79-1	208-169-4	ND	ND	ND	0.03	Carcinogenic; Toxic for reproduction
42	Cobalt(II) diacetate*	71-48-7	200-755-8	ND	ND	ND	0.03	Carcinogenic; Toxic for reproduction
43	2-Methoxyethanol	109-86-4	203-713-7	ND	ND	ND	0.03	Toxic for reproduction
44	2-Ethoxyethanol	110-80-5	203-804-1	ND	ND	ND	0.03	Toxic for reproduction
45	Chromium trioxide*	1333-82-0	215-607-8	ND	ND	ND	0.013	Carcinogenic; Mutagenic
46	Acid generated from chromium trioxide and their oligomers: Chromic acid* Dichromic acid* Oligomers of chromic acid and dichromic acid*	7738-94-5 13530-68-2 -	231-801-5 236-881-5 -	ND	ND ND ND	ND ND ND	0.03	Carcinogenic
47	2-Ethoxyethyl acetate	111-15-9	203-839-2	ND	ND	ND	0.03	Toxic for reproduction
48	Strontium Chromate*	7789-06-2	232-142-6	ND	ND	ND	0.03	Carcinogenic
49	1,2-benzenedicarboxylic acid, di-C7-11 branched alkyl ester and linear alkyl ester	68515-42-4	271-084-6	ND	ND	ND	0.03	Toxic for reproduction
50	Hydrazine	302-01-2 7803-57-8	206-114-9	ND	ND	ND	0.03	Carcinogenic
51	1-Methyl-2-pyrrolidone	872-50-4	212-828-1	ND	ND	ND	0.03	Toxic for reproduction
52	1,2,3-trichloropropane	96-18-4	202-486-1	ND	ND	ND	0.03	Toxic for reproduction
53	1,2-benzenedicarboxylic acid, di-C6-8-branched alkyl ester, C7-rich (DIHP)	71888-89-6	276-158-1	ND	ND	ND	0.03	Toxic for reproduction
54	Dichromium tris(chromate)*	24613-89-6	246-356-2	ND	ND	ND	0.03	Carcinogenic
55	Potassium hydroxyoctaoxodizincatedi-chromate*	11103-86-9	234-329-8	ND	ND	ND	0.03	Carcinogenic
56	Pentazinc chromate octahydroxide*	49663-84-5	256-418-0	ND	ND	ND	0.03	Carcinogenic
57	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4	500-036-1	ND	ND	ND	0.03	Carcinogenic
58	Bis(2-methoxyethyl) phthalate	117-82-8	204-212-6	ND	ND	ND	0.03	Toxic for reproduction
59	2-Methoxyaniline; o-Anisidine	90-04-0	201-963-1	ND	ND	ND	0.03	Carcinogenic



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60	4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol)	140-66-9	205-426-2	ND	ND	ND	0.03	Equivalent level of concern
61	1,2-Dichloroethane	107-06-2	203-458-1	ND	ND	ND	0.03	Carcinogenic
62	Bis(2-methoxyethyl) ether	111-96-6	203-924-4	ND	ND	ND	0.03	Toxic for reproduction
63	Arsenic acid*	7778-39-4	231-901-9	ND	ND	ND	0.03	Carcinogenic
64	Calcium arsenate*	7778-44-1	231-904-5	ND	ND	ND	0.03	Carcinogenic
65	Trilead diarsenate*	3687-31-8	222-979-5	ND	ND	ND	0.03	Carcinogenic; Toxic for reproduction
66	N,N-dimethylacetamide (DMAC)	127-19-5	204-826-4	ND	ND	ND	0.03	Toxic for reproduction
67	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	202-918-9	ND	ND	ND	0.03	Carcinogenic
68	Phenolphthalein	77-09-8	201-004-7	ND	ND	ND	0.03	Carcinogenic
69	Lead azide, Lead diazide*	13424-46-9	236-542-1	ND	ND	ND	0.03	Toxic for reproduction
70	Lead styphnate*	15245-44-0	239-290-0	ND	ND	ND	0.03	Toxic for reproduction
71	Lead dipicrate*	6477-64-1	229-335-2	ND	ND	ND	0.03	Toxic for reproduction
72	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	203-977-3	ND	ND	ND	0.03	Toxic for reproduction
73	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	203-794-9	ND	ND	ND	0.03	Toxic for reproduction
74	Diboron trioxide*	1303-86-2	215-125-8	ND	ND	ND	0.03	Toxic for reproduction
75	Formamide	75-12-7	200-842-0	ND	ND	ND	0.03	Toxic for reproduction
76	Lead(II) bis(methanesulfonate)*	17570-76-2	401-750-5	ND	ND	ND	0.03	Toxic for reproduction
77	TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione) §	2451-62-9	219-514-3	ND	ND	ND	0.03	Mutagenic
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	ND	ND	ND	0.03	Mutagenic
79	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	202-027-5	ND	ND	ND	0.03	Carcinogenic
80	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	202-959-2	ND	ND	ND	0.03	Carcinogenic
81	[4-[4,4'-bis(dimethylamino)benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3)	548-62-9	208-953-6	ND	ND	ND	0.03	Carcinogenic
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	219-943-6	ND	ND	ND	0.03	Carcinogenic



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83	$\alpha,\alpha$ -Bis[4-(dimethylamino)phenyl]-4-(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)	6786-83-0	229-851-8	ND	ND	ND	0.03	Carcinogenic
84	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	561-41-1	209-218-2	ND	ND	ND	0.03	Carcinogenic
85	Bis(pentabromophenyl) ether (DecaBDE)	1163-19-5	214-604-9	ND	ND	ND	0.03	Persistent, bioaccumulative and toxic; very persistent and very bioaccumulative
86	N,N-dimethylformamide; dimethyl formamide	68-12-2	200-679-5	ND	ND	ND	0.03	Toxic for reproduction
87	Methoxy acetic acid	625-45-6	210-894-6	ND	ND	ND	0.03	Toxic for reproduction ; equivalent level of concern
88	Dibutyltin dichloride (DBT) <sup>ph</sup>	683-18-1	211-670-0	ND	ND	ND	0.03	Toxic for reproduction
89	1,2-Diethoxyethane	629-14-1	211-076-1	ND	ND	ND	0.03	Toxic for reproduction
90	Hexahydro-2-benzofuran-1,3-dione (HHPA), cis-cyclohexane-1,2-dicarboxylic anhydride, trans-cyclohexane-1,2-dicarboxylic anhydride	85-42-7, 13149-00-3, 14166-21-3	201-604-9, 236-086-3, 238-009-9	ND	ND	ND	0.03	Equivalent level of concern
91	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	ND	ND	ND	0.03	Equivalent level of concern
92	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	-	-	ND	ND	ND	0.03	Equivalent level of concern
93	Heptacosafuorotetradecanoic acid	376-06-7	206-803-4	ND	ND	ND	0.03	Very persistent and very bioaccumulative
94	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear <sup>+</sup>	84777-06-0	284-032-2	ND	ND	ND	0.03	Toxic for reproduction
95	Henicosafuoroundecanoic acid	2058-94-8	218-165-4	ND	ND	ND	0.03	Very persistent and very bioaccumulative
96	N-pentyl-isopentylphthalate (iPnPP) <sup>+</sup>	776297-69-9	-	ND	ND	ND	0.03	Toxic for reproduction
97	Pentacosafuorotridecanoic acid	72629-94-8	276-745-2	ND	ND	ND	0.03	Very persistent and very bioaccumulative



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98	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated - covering well-defined substances and UVCB substances, polymers and homologues	-	-	ND	ND	ND	0.03	Equivalent level of concern
99	Tricosafuorododecanoic acid	307-55-1	206-203-2	ND	ND	ND	0.03	Very persistent and very bioaccumulative
100	Lead bis(tetrafluoroborate)*	13814-96-5	237-486-0	ND	ND	ND	0.03	Toxic for reproduction
101	Lead tetroxide (orange lead)*	1314-41-6	215-235-6	ND	ND	ND	0.03	Toxic for reproduction
102	Diethyl sulphate	64-67-5	200-589-6	ND	ND	ND	0.03	Carcinogenic; Mutagenic
103	Dinoseb	88-85-7	201-861-7	ND	ND	ND	0.03	Toxic for reproduction
104	Lead Titanium Zirconium Oxide*	12626-81-2	235-727-4	ND	ND	ND	0.03	Toxic for reproduction
105	Acetic acid, lead salt, basic*	51404-69-4	257-175-3	ND	ND	ND	0.03	Toxic for reproduction
106	Furan	110-00-9	203-727-3	ND	ND	ND	0.03	Carcinogenic
107	N-methylacetamide	79-16-3	201-182-6	ND	ND	ND	0.03	Toxic for reproduction
108	o-Toluidine; 2-Aminotoluene	95-53-4	202-429-0	ND	ND	ND	0.03	Carcinogenic
109	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	421-150-7	ND	ND	ND	0.03	Toxic for reproduction
110	4,4'-oxydianiline and its salts	101-80-4	202-977-0	ND	ND	ND	0.03	Carcinogenic; Mutagenic
111	[Phthalato(2-)]dioxotrilead (Dibasic lead phthalate)*	69011-06-9	273-688-5	ND	ND	ND	0.03	Toxic for reproduction
112	Lead titanium trioxide*	12060-00-3	235-038-9	ND	ND	ND	0.03	Toxic for reproduction
113	Lead oxide sulphate*	12036-76-9	234-853-7	ND	ND	ND	0.03	Toxic for reproduction
114	Lead dinitrate*	10099-74-8	233-245-9	ND	ND	ND	0.03	Toxic for reproduction
115	4-Aminoazobenzene; 4-Phenylazoaniline	60-09-3	200-453-6	ND	ND	ND	0.03	Carcinogenic
116	Lead cyanamidate*	20837-86-9	244-073-9	ND	ND	ND	0.03	Toxic for reproduction
117	Tetralead trioxide sulphate*	12202-17-4	235-380-9	ND	ND	ND	0.03	Toxic for reproduction
118	4-methyl-m-phenylenediamine (2,4-toluene-diamine)	95-80-7	202-453-1	ND	ND	ND	0.03	Carcinogenic
119	Pyrochlore, antimony lead yellow*	8012-00-8	232-382-1	ND	ND	ND	0.03	Toxic for reproduction
120	Trilead bis(carbonate)dihydroxide (basic lead carbonate)*	1319-46-6	215-290-6	ND	ND	ND	0.03	Toxic for reproduction
121	Dimethyl sulphate	77-78-1	201-058-1	ND	ND	ND	0.03	Carcinogenic
122	Dioxobis(stearato)trilead*	12578-12-0	235-702-8	ND	ND	ND	0.03	Toxic for reproduction
123	Silicic acid, barium salt, lead-doped*	68784-75-8	272-271-5	ND	ND	ND	0.03	Toxic for reproduction
124	Biphenyl-4-ylamine	92-67-1	202-177-1	ND	ND	ND	0.03	Carcinogenic
125	Lead oxide (lead monoxide)*	1317-36-8	215-267-0	ND	ND	ND	0.03	Toxic for reproduction
126	Pentalead tetraoxide sulphate*	12065-90-6	235-067-7	ND	ND	ND	0.03	Toxic for reproduction
127	Propylene oxide; 1,2-epoxypropane; methyloxirane	75-56-9	200-879-2	ND	ND	ND	0.03	Carcinogenic; Mutagenic
128	Silicic acid, lead salt*	11120-22-2	234-363-3	ND	ND	ND	0.03	Toxic for reproduction



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				1	2	3		
129	Trilead dioxide phosphonate*	12141-20-7	235-252-2	ND	ND	ND	0.03	Toxic for reproduction
130	o-aminoazotoluene	97-56-3	202-591-2	ND	ND	ND	0.03	Carcinogenic
131	1-bromopropane	106-94-5	203-445-0	ND	ND	ND	0.03	Toxic for reproduction
132	6-methoxy-m-toluidine (p-cresidine)	120-71-8	204-419-1	ND	ND	ND	0.03	Carcinogenic
133	4,4'-methylenedi-o-toluidine	838-88-0	212-658-8	ND	ND	ND	0.03	Carcinogenic
134	Tetraethyllead*	78-00-2	201-075-4	ND	ND	ND	0.03	Toxic for reproduction
135	Sulfurous acid, lead salt, dibasic*	62229-08-7	263-467-1	ND	ND	ND	0.03	Toxic for reproduction
136	Fatty acids, C16-18, lead salts*	91031-62-8	292-966-7	ND	ND	ND	0.03	Toxic for reproduction
137	Diisopentylphthalate +	605-50-5	210-088-4	ND	ND	ND	0.03	Toxic for reproduction
138	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	204-650-8	ND	ND	ND	0.03	Equivalent level of concern
139	Cadmium*	7440-43-9	231-152-8	ND	ND	ND	0.03	Carcinogenic; Equivalent level of concern
140	Cadmium oxide*	1306-19-0	215-146-2	ND	ND	ND	0.03	Carcinogenic; Equivalent level of concern
141	Dipentyl phthalate (DPP) +	131-18-0	205-017-9	ND	ND	ND	0.03	Toxic for reproduction
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]	-	-	ND	ND	ND	0.03	Equivalent level of concern
143	Ammonium pentadecafluorooctanoate (APFO) †	3825-26-1	223-320-4	ND	ND	ND	0.03	Toxic for reproduction; PBT
144	Pentadecafluorooctanoic acid (PFOA) †	335-67-1	206-397-9	ND	ND	ND	0.03	Toxic for reproduction; PBT
145	Cadmium sulphide*	1306-23-6	215-147-8	ND	ND	ND	0.03	Carcinogenic; Equivalent level of concern
146	Dihexyl phthalate	84-75-3	201-559-5	ND	ND	ND	0.03	Toxic for reproduction
147	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	209-358-4	ND	ND	ND	0.03	Carcinogenic



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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	217-710-3	ND	ND	ND	0.03	Carcinogenic
149	Imidazolidine-2-thione (2-imidazoline-2-thiol)	96-45-7	202-506-9	ND	ND	ND	0.03	Toxic for reproduction
150	Lead di(acetate)*	301-04-2	206-104-4	ND	ND	ND	0.03	Toxic for reproduction
151	Trixylyl phosphate	25155-23-1	246-677-8	ND	ND	ND	0.03	Toxic for reproduction
152	Cadmium chloride*	10108-64-2	233-296-7	ND	ND	ND	0.03	Carcinogenic; Mutagenic; Toxic for Reproduction; Equivalent level of concern having probable serious effects to human health
153	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear**	68515-50-4	271-093-5	ND	ND	ND	0.03	Toxic for reproduction
154	Sodium peroxometaborate*	7632-04-4	231-556-4	ND	ND	ND	0.03	Toxic for reproduction
155	Sodium perborate; perboric acid, sodium salt*	-	239-172-9; 234-390-0	ND	ND	ND	0.03	Toxic for reproduction
156	Cadmium fluoride *	7790-79-6	232-222-0	ND	ND	ND	0.03	Carcinogenic; Mutagenic; Toxic for Reproduction; Equivalent level of concern having probable serious effects to human health
157	Cadmium sulphate *	10124-36-4; 31119-53-6	233-331-6	ND	ND	ND	0.03	Carcinogenic; Mutagenic; Toxic for Reproduction; Equivalent level of concern having probable serious effects to human health
158	2-benzotriazol-2-yl-4,6-ditert-butylphenol (UV-320)	3846-71-7	223-346-6	ND	ND	ND	0.03	PBT; vPvB
159	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	247-384-8	ND	ND	ND	0.03	PBT; vPvB
160	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE) <sup>ph</sup>	15571-58-1	239-622-4	ND	ND	ND	0.03	Toxic for Reproduction



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No.	Substance name	CAS No.	EC No.	Result, %			Detection Limit, %	Basis for identification as a SVHC
				1	2	3		
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) <sup>db</sup>	-	-	ND	ND	ND	0.03	Toxic for Reproduction
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	ND	ND	ND	0.03	Toxic for reproduction
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]	-	-	ND	ND	ND	0.03	vPvB
164	1,3-propanesultone	1120-71-4	214-317-9	ND	ND	ND	0.03	Carcinogenic
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl) phenol (UV-327)	3864-99-1	223-383-8	ND	ND	ND	0.03	vPvB
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl) phenol (UV-350)	36437-37-3	253-037-1	ND	ND	ND	0.03	vPvB
167	Nitrobenzene	98-95-3	202-716-0	ND	ND	ND	0.03	Toxic for reproduction
168	Perfluorononan-1-oic acid acid and its sodium and ammonium salts	375-95-1; 21049-39-8; 4149-60-4	206-801-3	ND	ND	ND	0.03	Toxic for reproduction; PBT
169	Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8	200-028-5	ND	ND	ND	0.03	Carcinogenic; Mutagenic; Toxic for Reproduction; PBT; vPvB
170	4,4'-isopropylidenediphenol (bisphenol A; BPA)	80-05-7	201-245-8	ND	ND	ND	0.03	Toxic for reproduction; Equivalent level of concern having probable serious effects to human health & environment



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No.	Substance name	CAS No.	EC No.	Result, %			Detection Limit, %	Basis for identification as a SVHC
				1	2	3		
171	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] (4-Hpbl)	-	-	ND	ND	ND	0.03	Equivalent level of concern having probable serious effects to the environment
172	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	3830-45-3, 335-76-2, 3108-42-7	-, 206-400-3, 221-470-5	ND	ND	ND	0.03	Toxic for reproduction; PBT
173	p-(1,1-dimethylpropyl)phenol (PTAP)	80-46-6	201-280-9	ND	ND	ND	0.03	Equivalent level of concern having probable serious effects to the environment
174	Perfluorohexane-1-sulphonic acid and its salts (PFHxS)	-	-	ND	ND	ND	0.03	vPvB
175	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]	-	-	ND	ND	ND	0.03	vPvB
176	Benz[a]anthracene	56-55-3	200-280-6	ND	ND	ND	0.03	Carcinogenic; PBT; vPvB
177	Cadmium nitrate	10325-94-7	233-710-6	ND	ND	ND	0.03	Carcinogenic; Mutagenic; Specific target organ toxicity after repeated exposure - human health
178	Cadmium carbonate	513-78-0	208-168-9	ND	ND	ND	0.03	Carcinogenic; Mutagenic; Specific target organ toxicity after repeated exposure - human health
179	Cadmium hydroxide	21041-95-2	244-168-5	ND	ND	ND	0.03	Carcinogenic; Mutagenic; Specific target organ toxicity after repeated exposure - human health
180	Chrysene	218-01-9	205-923-4	ND	ND	ND	0.03	Carcinogenic; PBT; vPvB



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No.	Substance name	CAS No.	EC No.	Result, %			Detection Limit, %	Basis for identification as a SVHC
				1	2	3		
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]	-	-	ND	ND	ND	0.03	Endocrine disrupting properties - environment
182	Octamethylcyclotetrasiloxane (D4)	556-67-2	209-136-7	ND	ND	ND	0.03	PBT (Article 57d); VpvB (Article 57e)
183	Decamethylcyclopentasiloxane (D5)	541-02-6	208-764-9	ND	ND	ND	0.03	PBT (Article 57d); VpvB (Article 57e)
184	Dodecamethylcyclohexasiloxane (D6)	540-97-6	208-762-8	ND	ND	ND	0.03	PBT (Article 57d); VpvB (Article 57e)
185	Lead	7439-92-1	231-100-4	ND	ND	ND	0.03	Toxic for reproduction (Article 57c)
186	Disodium octaborate	12008-41-2	234-541-0	ND	ND	ND	0.03	Toxic for reproduction (Article 57c)
187	Benzo(ghi)perylene	191-24-2	205-883-8	ND	ND	ND	0.03	PBT (Article 57d); vPvB (Article 57e)
188	Terphenyl hydrogenated	61788-32-7	262-967-7	ND	ND	ND	0.03	vPvB (Article 57e)
189	Ethylenediamine (EDA)	107-15-3	203-468-6	ND	ND	ND	0.03	Respiratory sensitising properties (Article 57(f) – human health)
190	Benzene-1,2,4-tricarboxylic acid 1,2-anhydride (trimellitic anhydride) (TMA)	552-30-7	209-008-0	ND	ND	ND	0.03	Respiratory sensitising properties (Article 57(f) – human health)
191	Dicyclohexyl phthalate (DCHP)	84-61-7	201-545-9	ND	ND	ND	0.03	Toxic for reproduction (Article 57(c)); Endocrine disrupting properties (Article 57(f) – human health)
192	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	401-720-1	ND	ND	ND	0.03	Toxic for reproduction (Article 57c)
193	Benzo[k]fluoranthene	207-08-9	205-916-6	ND	ND	ND	0.03	Carcinogenic (Article 57a)  PBT (Article 57d)  vPvB (Article 57e)



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No.	Substance name	CAS No.	EC No.	Result, %			Detection Limit, %	Basis for identification as a SVHC
				1	2	3		
194	Fluoranthene	206-44-0	205-912-4	ND	ND	ND	0.03	PBT (Article 57d); VpvB (Article 57e)
195	Phenanthrene	85-01-8	201-581-5	ND	ND	ND	0.03	vPvB (Article 57e)
196	Pyrene	129-00-0	204-927-3	ND	ND	ND	0.03	PBT (Article 57d); VpvB (Article 57e)
197	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one	15087-24-8	239-139-9	ND	ND	ND	0.03	Endocrine disrupting properties (Article 57(f) - environment)
198	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP)	-	-	ND	ND	ND	0.03	Endocrine disrupting properties (Article 57(f) - environment)
199	4-tert-butylphenol	98-54-4	202-679-0	ND	ND	ND	0.03	Endocrine disrupting properties (Article 57(f) - environment)
200	2-methoxyethyl acetate	110-49-6	203-772-9	ND	ND	ND	0.03	Toxic for reproduction (Article 57c)
201	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides	-	-	ND	ND	ND	0.03	<ul style="list-style-type: none"> <li>• Equivalent level of concern having probable serious effects to human health (Article 57(f) - human health)</li> <li>• Equivalent level of concern having probable serious effects to the environment (Article 57(f) - environment)</li> </ul>

**Note / Key:**

ND: Not Detected

The substances are tested in terms of its respective elements and the test result is based on the calculation of selected elements/marker(s) and to the worst-case scenario. Calculated concentration of boric and arsenic compounds are based on the water extractive boron and arsenic. Due to the limit of the analytical technology available, any further investigation is not feasible. The client is strongly advised to review the chemical formulation to ascertain.

**Remarks:**

1. The limit of 0.1% (w/w) applies to an article. The results were calculated assuming as the submitted sample was an article. However, the results may not be applicable if the intended use of the sample is a substance or mixture. According to REACH, definition of an article, substance and mixture are:
  - i. Article - An object during production is given a special shape, surface or design which determines its function to a greater degree than does its chemical composition
  - ii. Substance - A chemical element and its compound in the natural state or obtained by any manufacturing process
  - iii. Mixture (Previously known as "Preparation") - A mixture or solution composed of two or more substances



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2. In accordance of Article 7 of Regulation (EC) No. 1907/2006 (REACH regulation) – Registration and notification of substances in articles, any producer or importer of articles shall notify ECHA, if a substance meets in criteria in Article 57 and is identified in accordance with Article 59(1), if both (1) the substance is present in those articles in quantities totalling over 1 tonne per producer or importer per year & (2) the substance is present in those articles above a concentration of 0.1% weight by weight (w/w) are met. The information to be notified shall include (a) identity and contact details of the producer or importer, (b) the registration numbers, (c) the identity of the substance and (d) the classification of the substance, (e) a brief description of the use of the substance and (f) the tonnage range of the substance.
3. 3. In accordance of Article 33 of Regulation (EC) No. 1907/2006 (REACH regulation) – Duty to communicate information on substances in articles, any supplier of an article containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in 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. On request by a consumer the relevant information shall be provided by any supplier of an article free of charge, within 45 days of receipt of the request.

**FDA 21 CFR 177.2600 Rubber Articles Intended for Repeated Use**

Test Item(s)	Item / Component Description(s)
1	RUBBER BAND 100%
2	RUBBER BAND 80%
3	RUBBER BAND 55%

Test Item		Result			FDA Specification [mg/in <sup>2</sup> ]
		1	2	3	
Distilled water extractives at reflux temperature	First 7 hours	13.94	13.32	12.65	20
	Succeeding 2 hours	0.38	0.26	0.13	1
n-Hexane derivatives at reflux temperature	First 7 hours	13.87	13.24	12.69	175
	Succeeding 2 hours	0.39	0.27	0.16	4

Note / Key:

mg/in<sup>2</sup>: Milligram per square inch

Specifications are quoted from FDA 21 CFR 177.2600.

END



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Note:

This report sets forth our findings solely with respect to the test samples identified herein. The results in this report are not representative of the quality or characteristics of the lot/batch from which a test sample was taken or any similar or identical product unless specifically and expressly noted. The sample/s mentioned in this report is/are submitted/supplied/manufactured by the Client, GIC Testing & Inspection Services Pte. Ltd. therefore assumes no responsibility for the accuracy of information on the brand name, model/ style number, consignment or any information supplied. Unless otherwise stated in this report, no tests were conducted to determine long term effects of using the specific product. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission.

