

RESEARCH AND DEVELOPMENT TESTING FOR PERAM™ SMART TUBES

Tested Sample(s)	: Puncture Protector
Brand	: Peram
Model	: Smart Tube
Color	: Black
Size	: 700c X 23c
Stock / Model Number	: Not Specified
Country of Origin	: Vietnam
Age Grading	: Not Specified
Children's Product	: No

Prepared For:

PERAM™ LLC
1318 Lititz Pike
Lancaster, PA 17601



Issue Date: 13 April 2018

Final Report: 788.0002

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Contract File No.: 788.0002.001
T:\ACT Testing\Peram - 788.0002
Control Document Rev. 27 Dec. 2016

Technician: Francis Prieto



CONCLUSION

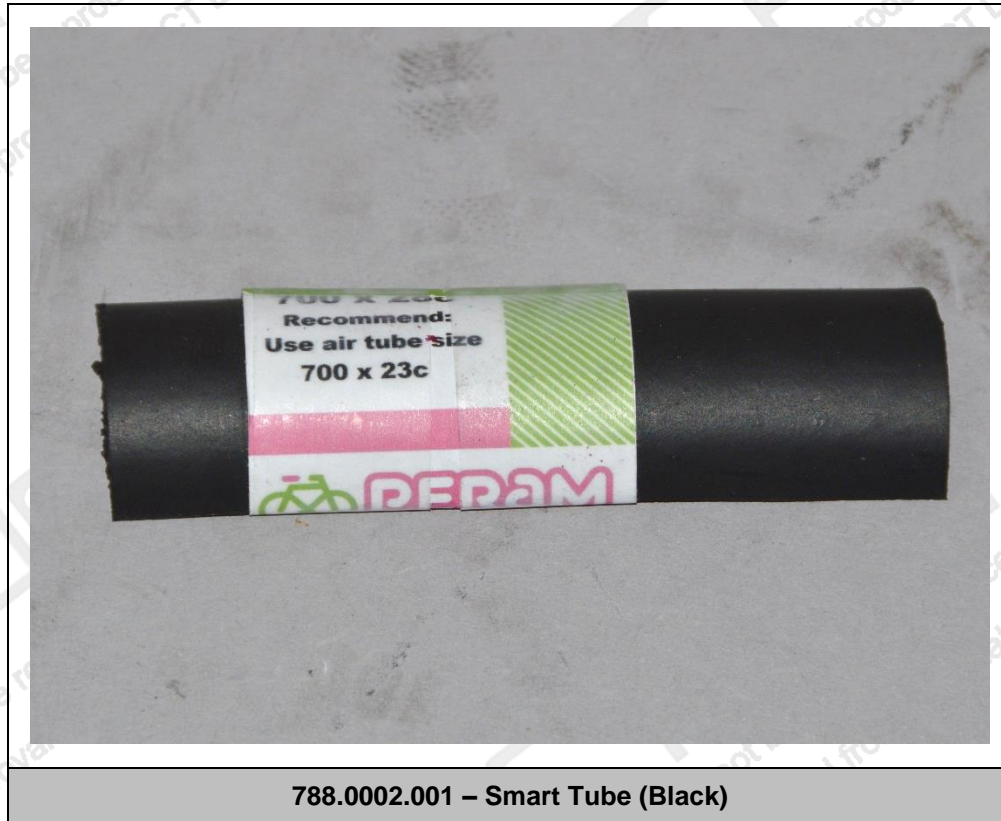
788.0002.001 – PERAM™ SMART TUBES, Smart Tube (Black)		
Purpose of Test - Each test performed is intended to check compliance with the following:	Result	Comment
European Commission Regulation 1907/2006 (REACH Act)	C	

President,

John A. Bogler

SAMPLE IDENTIFICATION

Brand:	Peram	Job No.:	788.0002
Model:	Smart Tube	Sample ID:	788.0002.001
Manufacturer:	Peram LLC	Type:	Puncture Protector
Stock No.:	Not Specified	Size:	700c X 23c
UPC:	Not Specified	Color(s):	Black
Serial No.:	Not Specified	Weight (g):	53
Serial No.:	Not Specified	Country of Origin:	Vietnam



DATE AND PLACE OF TEST

Sample(s) received on : 13 March 2018
Testing was initiated on : 08 April 2018
Testing was completed on : 12 April 2018
Testing was performed at : Taicang ACT Sporting Goods Testing Co., Ltd.
Taicang City, Suzhou, Jiangsu Province, China

TEST METHODS

Method for each test conducted is as follows:

- In-house test method with reference to EPA: 8270D, 3052, 3050B, 6010C, 3550C, 8321B, EN14362, DIN EN ISO 17353, IEC 62321, AfPS GS 2014:01 PAK and EN 14582.

TEST RESULTS

C: Compliant; Product meets specified standard
NC: Non-Compliant; Product does not meet specified standard
NA: Not Applicable to this design
NR: Not Requested by the Applicant
NP: Not Present

ND: None Detected
IC: Inconclusive
NT: Not Tested
FTR: Further Testing Recommended
PPM: Parts Per Million
*: See Comments

CHEMICAL: SVCH (168) CONTENTS

Seq.	Test Item(s)	EC. No.	CAS No.	MDL (%)	Test Results (%)
					#1
1	2,4-Dinitrotoluene	204-450-0	121-14-2	0.01	ND
2	2-Ethoxyethanol	203-804-1	110-80-5	0.005	ND
3	2-Methoxyethanol	203-713-7	109-86-4	0.005	ND
4	4,4'- Diaminodiphenylmethane(MDA)	202-974-4	101-77-9	0.005	ND
5	5-tert-butyl-2,4,6-trinitro-m-xylene(musk xylene)	201-329-4	81-15-2	0.005	ND
6	Acrylamide	201-173-7	79-06-1	0.01	ND
7	Alkanes, C ₁₀₋₁₃ , chloro (Short Chain Chlorinated Paraffins)	287-476-5	85535-84-8	0.005	ND
8	<p>Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.2 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 two following conditions:</p> <p>a) Al₂O₃ and SiO₂ are present within the following concentration ranges: Al₂O₃: 43.5 – 47 % w/w, and SiO₂: 49.5 – 53.5 % w/w, or Al₂O₃: 45.5 – 50.5 % w/w, and SiO₂: 48.5 – 54 % w/w, b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm)***</p>	---	---	0.01	ND
9	Ammonium dichromate*	232-143-1	7789-09-5	0.01	ND
10	Anthracene	204-371-1	120-12-7	0.005	ND
11	Anthracene oil	292-602-7	90640-80-5	0.01	ND
12	Anthracene oil, anthracene paste	292-603-2	90640-81-6	0.01	ND
13	Anthracene oil, anthracene paste, anthracene fraction	295-275-9	91995-15-2	0.01	ND
14	Anthracene oil, anthracene paste; distn. Lights	295-278-5	91995-17-4	0.01	ND
15	Anthracene oil, anthracene-low	292-604-8	90640-82-7	0.01	ND
16	Benzyl butyl phthalate(BBP)	201-622-7	85-68-7	0.01	ND

Seq.	Test Item(s)	EC. No.	CAS No.	MDL (%)	Test Results (%)
					#1
17	Bis(2-ethylhexyl)phthalate(DEHP)	204-211-0	117-81-7	0.01	0.084
18	Bis(tributyltin)oxide(TBTO)**	200-268-0	56-35-9	0.005	ND
19	Boric acid*	233-139-2 234-343-4	10043-35-3 11113-50-1	0.01	ND
20	Chromic acid, Oligomers of chromic acid and dichromic acid, Dichromic acid	231-801-5 236-881-5	7738-94-5 13530-68-2	0.01	ND
21	Chromium trioxide*	215-607-8	1333-82-0	0.01	ND
22	Cobalt dichloride*	231-589-4	7646-79-9	0.01	ND
23	Cobalt(II) carbonate*	208-169-4	513-79-1	0.01	ND
24	Cobalt(II) diacetate*	200-755-8	71-48-7	0.01	ND
25	Cobalt(II) dinitrate*	233-402-1	10141-05-6	0.01	ND
26	Cobalt(II) sulphate*	233-334-2	10124-43-3	0.01	ND
27	Diarsenic pentaoxide*	215-116-9	1303-28-2	0.01	ND
28	Diarsenic trioxide*	215-481-4	1327-53-3	0.01	ND
29	Dibutyl Phthalate(DBP)	201-557-4	84-74-2	0.01	ND
30	Diisobutyl Phthalate(DIBP)	201-553-2	84-69-5	0.01	ND
31	Disodium tetraborate, anhydrous*	215-540-4	1303-96-4 1330-43-4 12179-04-3	0.01	ND
32	Hexabromocyclododecane(HBCDD) and all major diastereoisomers identified: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane	247-148-4 221-695-9	25637-99-4 3194-55-6 (134237-50-6) (134237-51-7) (134237-52-8)	0.002	ND
33	Lead chromate*	231-846-0	7758-97-6	0.01	ND
34	Lead chromate molybdate sulfate red (C.I. Pigment Red 104)*	235-759-9	12656-85-8	0.01	ND
35	Lead hydrogen arsenate*	232-064-2	7784-40-9	0.01	ND
36	Lead sulfochromate yellow (C.I. Pigment Yellow 34)*	215-693-7	1344-37-2	0.01	ND
37	Coal tar pitch, high temperature	266-028-2	65996-93-2	0.01	ND
38	Potassium chromate*	232-140-5	7789-00-6	0.01	ND

Seq.	Test Item(s)	EC. No.	CAS No.	MDL (%)	Test Results (%)
					#1
39	Potassium dichromate*	231-906-6	7778-50-9	0.01	ND
40	Sodium chromate*	231-889-5	7775-11-3	0.01	ND
41	Sodium dichromate*	234-190-3	7789-12-0 10588-01-9	0.01	ND
42	Tetraboron disodium heptaoxide, hydrate*	235-541-3	12267-73-1	0.01	ND
43	Trichloroethylene	201-167-4	79-01-6	0.01	ND
44	Triethyl arsenate*	427-700-2	15606-95-8	0.01	ND
45	Tris(2-chloroethyl)phosphate	204-118-5	115-96-8	0.01	ND
46	Zirconia Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.2 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 two following conditions: a) Al ₂ O ₃ , SiO ₂ and ZrO ₂ are present within the following concentration ranges: Al ₂ O ₃ : 35 – 36 % w/w, and SiO ₂ : 47.5 – 50 % w/w, and ZrO ₂ : 15 - 17 % w/w, b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm)***	---	---	0.01	ND
47	2-ethoxyethyl acetate	203-839-2	111-15-9	0.01	ND
48	Strontium chromate*	232-142-6	7789-06-2	0.01	ND
49	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	271-084-6	68515-42-4	0.01	ND
50	Hydrazine	206-114-9	7803-57-8 302-01-2	0.01	ND
51	1-methyl-2-pyrrolidone	212-828-1	872-50-4	0.01	ND
52	1,2,3-trichloropropane	202-486-1	96-18-4	0.01	ND
53	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	276-158-1	71888-89-6	0.01	ND
54	Lead dipicrate*	229-335-2	6477-64-1	0.01	ND
55	Lead styphnate*	239-290-0	15245-44-0	0.01	ND

Seq.	Test Item(s)	EC. No.	CAS No.	MDL (%)	Test Results (%)
					#1
56	Lead azide Lead diazide*	236-542-1	13424-46-9	0.01	ND
57	Phenolphthalein	201-004-7	77-09-8	0.01	ND
58	2,2'-dichloro-4,4'-methylenedianiline	202-918-9	101-14-4	0.01	ND
59	N,N-dimethylacetamide	204-826-4	127-19-5	0.01	ND
60	Trilead diarsenate*	222-979-5	3687-31-8	0.01	ND
61	Calcium arsenate*	231-904-5	7778-44-1	0.01	ND
62	Arsenic acid*	231-901-9	7778-39-4	0.01	ND
63	Bis(2-methoxyethyl) ether	203-924-4	111-96-6	0.01	ND
64	1,2-Dichloroethane	203-458-1	107-06-2	0.01	ND
65	4-(1,1,3,3-tetramethylbutyl)phenol	205-426-2	140-66-9	0.01	ND
66	2-Methoxyaniline; o-Anisidine	201-963-1	90-04-0	0.01	ND
67	Bis(2-methoxyethyl) phthalate	204-212-6	117-82-8	0.01	ND
68	Formaldehyde, oligomeric reaction products with aniline	500-036-1	25214-70-4	0.01	ND
69	Pentazinc chromate octahydroxide*	256-418-0	49663-84-5	0.01	ND
70	Potassium hydroxyoctaoxodizincatedi-chromate*	234-329-8	11103-86-9	0.01	ND
71	Dichromium tris(chromate)*	246-356-2	24613-89-6	0.01	ND
72	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	203-977-3	112-49-2	0.01	ND
73	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	203-794-9	110-71-4	0.01	ND
74	Diboron trioxide*	215-125-8	1303-86-2	0.01	ND
75	Formamide	200-842-0	75-12-7	0.01	ND
76	Lead(II) bis(methanesulfonate) *	401-750-5	17570-76-2	0.01	ND
77	TGIC (1,3,5-tris(oxiranylmethyl)-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione)	219-514-3	2451-62-9	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)	423-400-0	59653-74-6	0.01	ND

Seq.	Test Item(s)	EC. No.	CAS No.	MDL (%)	Test Results (%)
					#1
79	4,4'-bis(dimethylamino) benzophenone (Michler's ketone)	202-027-5	90-94-8	0.01	ND
80	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	202-959-2	101-61-1	0.01	ND
81	[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)] ****	208-953-6	548-62-9	0.01	ND
82	[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)] ****	219-943-6	2580-56-5	0.01	ND
83	α,α-Bis[4-(dimethylamino)phenyl]-4-(phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4) [with ≥ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)] ****	229-851-8	6786-83-0	0.01	ND
84	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)] ****	209-218-2	561-41-1	0.01	ND
85	Bis(pentabromophenyl) ether (DecaBDE)	214-604-9	1163-19-5	0.01	ND
86	Pentacosaflluorotridecanoic acid	276-745-2	72629-94-8	0.01	ND
87	Tricosaflluorododecanoic acids	206-203-2	307-55-1	0.01	ND
88	Henicosaflluoroundecanoic acid	218-165-4	2058-94-8	0.01	ND
89	Heptacosaflluorotetradecanoic acid	206-803-4	376-06-7	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

Seq.	Test Item(s)	EC. No.	CAS No.	MDL (%)	Test Results (%)
					#1
92	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	204-650-8	123-77-3	0.01	ND
93	Cyclohexane-1,2-dicarboxylic anhydride (Hexahydrophthalic anhydride - HHPA)	201-604-9	85-42-7	0.01	ND
94	Hexahydromethylphthalic anhydride, Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride	247-094-1 243-072-0 256-356-4 260-566-1	25550-51-0 19438-60-9 48122-14-1 57110-29-9	0.01	ND
95	Methoxy acetic acid	210-894-6	625-45-6	0.01	ND
96	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	284-032-2	84777-06-0	0.01	ND
97	Diisopentylphthalate (DIPP)	210-088-4	605-50-5	0.01	ND
98	N-pentyl-isopentyl phthalate	---	---	0.01	ND
99	1,2-Diethoxyethane	211-076-1	629-14-1	0.01	ND
100	N,N-dimethylformamide; dimethyl formamide	200-679-5	68-12-2	0.01	ND
101	Dibutyltin dichloride (DBT)	211-670-0	683-18-1	0.01	ND
102	Acetic acid, lead salt, basic*	257-175-3	51404-69-4	0.01	ND
103	Basic lead carbonate (trilead bis(carbonate)dihydroxide)*	215-290-6	1319-46-6	0.01	ND
104	Lead oxide sulfate (basic lead sulfate)*	234-853-7	12036-76-9	0.01	ND
105	[Phthalato(2-)]dioxotrilead (dibasic lead phthalate)*	273-688-5	69011-06-9	0.01	ND
106	Dioxobis(stearato)trilead*	235-702-8	12578-12-0	0.01	ND
107	Fatty acids, C16-18, lead salts*	292-966-7	91031-62-8	0.01	ND
108	Lead bis(tetrafluoroborate)*	237-486-0	13814-96-5	0.01	ND
109	Lead cyanamidate*	244-073-9	20837-86-9	0.01	ND
110	Lead dinitrate*	233-245-9	10099-74-8	0.01	ND
111	Lead oxide (lead monoxide)*	215-267-0	1317-36-8	0.01	ND
112	Lead tetroxide (orange lead)*	215-235-6	1314-41-6	0.01	ND
113	Lead titanium trioxide*	235-038-9	12060-00-3	0.01	ND
114	Lead Titanium Zirconium Oxide*	235-727-4	12626-81-2	0.01	ND
115	Pentalead tetraoxide sulphate*	235-067-7	12065-90-6	0.01	ND

Seq.	Test Item(s)	EC. No.	CAS No.	MDL (%)	Test Results (%)
					#1
116	Pyrochlore, antimony lead yellow*	232-382-1	8012-00-8	0.01	ND
117	Silicic acid, barium salt, lead-doped*	272-271-5	68784-75-8	0.01	ND
118	Silicic acid, lead salt*	234-363-3	11120-22-2	0.01	ND
119	Sulfurous acid, lead salt, dibasic*	263-467-1	62229-08-7	0.01	ND
120	Tetraethyllead*	201-075-4	78-00-2	0.01	ND
121	Tetralead trioxide sulphate*	235-380-9	12202-17-4	0.01	ND
122	Trilead dioxide phosphonate*	235-252-2	12141-20-7	0.01	ND
123	Furan	203-727-3	110-00-9	0.01	ND
124	Propylene oxide; 1,2-epoxypropane; methyloxirane	200-879-2	75-56-9	0.01	ND
125	Diethyl sulphate	200-589-6	64-67-5	0.01	ND
126	Dimethyl sulphate	201-058-1	77-78-1	0.01	ND
127	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	421-150-7	143860-04-2	0.01	ND
128	Dinoseb	201-861-7	88-85-7	0.01	ND
129	4,4'-methylenedi-o-toluidine	212-658-8	838-88-0	0.01	ND
130	4,4'-oxydianiline and its salts	202-977-0	101-80-4	0.01	ND
131	4-Aminoazobenzene	200-453-6	60-09-3	0.01	ND
132	4-methyl-m-phenylenediamine (toluene -2,4 -diamine)	202-453-1	95-80-7	0.01	ND
133	6-methoxy-m-toluidine (p-cresidine)	204-419-1	120-71-8	0.01	ND
134	Biphenyl-4-ylamine	202-177-1	92-67-1	0.01	ND
135	O-aminoazotoluene	202-591-2	97-56-3	0.01	ND
136	O-Toluidine	202-429-0	95-53-4	0.01	ND
137	N-methylacetamide	201-182-6	79-16-3	0.01	ND
138	1-bromopropane(n-propyl bromide)	203-445-0	106-94-5	0.01	ND
139	Cadmium*	231-152-8	7440-43-9	0.01	ND
140	Cadmium oxide*	215-146-2	1306-19-0	0.01	ND

Seq.	Test Item(s)	EC. No.	CAS No.	MDL (%)	Test Results (%)
					#1
141	Ammonium pentadecafluorooctanoate(APFO)	223-320-4	3825-26-1	0.01	ND
142	Pentadecafluorooctanoic acid(PFOA)	206-397-9	335-67-1	0.01	ND
143	Dipentyl phthalate(DPP)	205-017-9	131-18-0	0.01	ND
144	4-Nonylphenol, branched and linear,ethoxylated	---	---	0.01	ND
145	Cadmium sulphide*	215-147-8	1306-23-6	0.01	ND
146	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate)(C.I.Direct Red 28)	209-358-4	573-58-0	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)	217-710-3	1937-37-7	0.03	ND
148	Dihexyl phthalate	201-559-5	84-75-3	0.01	ND
149	Imidazolidine-2-thione (2-imidazoline-2-thiol)	202-506-9	96-45-7	0.03	ND
150	Lead di(acetate) *	206-104-4	301-04-2	0.01	ND
151	Trixylyl phosphate	246-677-8	25155-23-1	0.01	ND
152	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	271-093-5	68515-50-4	0.01	ND
153	Sodium perborate; perboric acid, sodium salt *	239-172-9 234-390-0	---	0.01	ND
154	Sodium peroxometaborate*	231-556-4	7632-04-4	0.01	ND
155	Cadmium chloride*	233-296-7	10108-64-2	0.01	ND
156	Cadmium fluoride*	232-222-0	7790-79-6	0.01	ND
157	Cadmium sulphate*	233-331-6	10124-36-4 31119-53-6	0.01	ND
158	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	223-346-6	3846-71-7	0.01	ND
159	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	247-384-8	25973-55-1	0.01	ND
160	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	239-622-4	15571-58-1	0.01	ND

Seq.	Test Item(s)	EC. No.	CAS No.	MDL (%)	Test Results (%)
					#1
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)	---	---	0.01	ND
162	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyldiesters with ≥ 0.3% of dihexyl phthalate (EC No. 201-559-5)	271-094-0 272-013-1	68515-51-5 68648-93-1	0.01	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]	---	---	0.01	ND
164	Nitrobenzene	202-716-0	98-95-3	0.01	ND
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl) phenol (UV-327)	223-383-8	3864-99-1	0.01	ND
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	253-037-1	36437-37-3	0.01	ND
167	1,3-propanesultone	214-317-9	1120-71-4	0.01	ND
168	Perfluorononan-1-oic-acid and its sodium and ammonium saltspropanesultone	206-801-3	375-95-1 21049-39-8 4149-60-4	0.01	ND

END OF REPORT