

Client:
Işık Madencilik San ve Tic Ltd. Şti
Attn to: Tiber Cengiz Serger
Baksan San. Böl. 73/8
Eskişehir

Report No. 27136291 001

Buyer /

Test item: Barite (Natural Barium Sulphate Powder)

Article No: /

Condition at delivery: Samples tested as received

Date of delivery: 28.03.2017 (Samples received HK Lab 01.04.2017)

Test period: 03.04.2017 to 18.04.2017

Test scope: Parameters selected by customer

Test specification: Risk Assessment of Articles:
Screening of substances of very high concern (SVHC) subject to authorisation, according to (EU) No 143/2011, (EU) No 125/2012, (EU) No 348/2013 and (EU) No 895/2014 (Annex XIV of EC No 1907/2006) and candidate list by European Chemical Agency (ECHA), according to the EU Court of Justice rules on SVHCs in articles

Test result: See Results

For and on behalf of
TÜV Rheinland Uluslararası Standartlar Sertifikasyon ve Denetim A.Ş



Tomris Hasancebi / Customer Relations Manager



Duygu Ozturk /Chemical Laboratory Manager

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1. Photo



2. List of Materials

Mat.No.	Article	Material	Colour	Location
M001	1	Powder	White	Powder

3. Product Classification

With reference to Corrigendum to Regulation (EC) no. 1907/2006 and ECHA, this product is classified as:

- Article
- Article with an integral substance/ mixture
- Combinations of an article (functioning as a container or a carrier material) and a substance/ mixture
- Substance/ mixture

Conclusion:

Conclusion			
Product Location	Acc. to authorisation list (EU) No 143/2011, (EU) No 125/2012, (EU) No 348/2013 and (EU) No 895/2014 (Annex XIV of EC No 1907/2006) and candidate list by ECHA, and the EU Court of Justice rules on SVHCs in articles, the detected SVHC concentration in components level is	Obligation of Importer (*) (For article)	Detected Substance (if any)
All tested articles	<0.1%	Not necessary	--

(For article)

(*) To communicate information down the supply chain according to article. 33 of REACH. **OR**

1. Notification to ECHA, if the quantities of SVHC in the produced/imported articles are above 1 ton in total per year per company.
2. Provide sufficient information to ensure safe use of the article and, as minimum, include the name of the substance, to their customers and on request to consumers within 45 days of the receipt of this request.

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4. Results

Test No	T001
Mat. No.	M001
Unit	%
SVHC Screening	
Result	n.d.

n.d.: Not detected (<Reporting limit)

RL: Reporting limit

%: Percentage

(*1) The reporting limit for each individual SVHC subject to authorisation according to (EU) no. 143/2011, (EU) no. 125/2012 and (EU) no. 348/2013 (Annex XIV of EC no. 1907/2006)

Material No.	Substance	CAS No.	Reporting Limit
1	4,4'- Diaminodiphenylmethane (MDA)	101-77-9	0.01%
2	Benzyl butyl phthalate (BBP)	85-68-7	0.01%
3	Bis (2-ethylhexyl)phthalate (DEHP)	117-81-7	0.01%
4	Dibutyl phthalate (DBP)	84-74-2	0.01%
5	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified:	25637-99-4, 3194-55-6	0.01%
	Alpha-hexabromocyclododecane	(134237-50-6)	0.01%
	Beta-hexabromocyclododecane	(134237-51-7)	0.01%
	Gamma-hexabromocyclododecane	(134237-52-8)	0.01%
6	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	0.01%
7	2,4-Dinitrotoluene (2,4- DNT)	121-14-2	0.01%
8	Diisobutyl phthalate (DIBP)	84-69-5	0.01%
9	Tris(2-chloroethyl)phosphate	115-96-8	0.01%
10	Diarsenic pentaoxide (*3)	1303-28-2	0.01%
11	Diarsenic trioxide (*3)	1327-53-3	0.01%
12	Lead chromate (*3)(*4)	7758-97-6	0.01%
13	Lead chromate molybdate sulphate red (C.I. Pigment Red 104) (*3)(*4)	12656-85-8	0.01%

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14	Lead sulfochromate yellow (C.I. Pigment Yellow 34) (*3)	1344-37-2	0.01%
15	Trichloroethylene	79-01-6	0.01%
16	Chromium trioxide (*4)	1333-82-0	0.01%
17	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. (*4)	7738-94-5, 13530-68-2	0.01%
18	Sodium dichromate, dihydrate (*3)	7789-12-0, 10588-01-9	0.01%
19	Potassium dichromate (*4)	7778-50-9	0.01%
20	Ammonium dichromate (*4)	7789-09-5	0.01%
21	Potassium chromate (*4)	7789-00-6	0.01%
22	Sodium chromate (*4)	7775-11-3	0.01%
23	Formaldehyde, oligomeric reaction products with aniline (technical MDA) (*11)	25214-70-4	0.01%
24	1,2-dichloroethane	107-06-2	0.01%
25	Bis(2-methoxyethyl) ether	111-96-6	0.01%
26	Arsenic acid (*3)	7778-39-4	0.01%
27	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	0.01%
28	Dichromium tris(chromate) (*4)	24613-89-6	0.01%
29	Strontium chromate (*4)	2151068	0.01%
30	Potassium hydroxyoctaoxodizincatedichromate (*4)	11103-86-9	0.01%
31	Pentazinc chromate octahydroxide (*4)	49663-84-5	0.01%
32	Anthracene	120-12-7	0.01%

(*2) The reporting limit for each individual SVHC in Candidate List by ECHA:

Substance

33	Bis(tributyltin)oxide (TBTO) (3*)(*5)	56-35-9	0.01%
34	Triethyl arsenate (*3)	15606-95-8	0.01%
35	Lead hydrogen arsenate (*3)	7784-40-9	0.01%
36	Cobalt (II) dichloride (*3)	7646-79-9	0.01%
37	Acrylamide	79-06-1	0.01%
38	Anthracene oil (*7)	90640-80-5	0.01%
39	Anthracene oil, anthracene paste, distn. Lights (*7)	91995-17-4	0.01% (*8)

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40	Anthracene oil, anthracene paste, anthracene fraction (*7)	91995-15-2	
41	Anthracene oil, anthracene-low (*7)	90640-82-7	
42	Anthracene oil, anthracene paste (*7)	90640-81-6	
43	Pitch, coal tar, high temp. (*7)	65996-93-2	
44	Boric acid (*3)	10043-35-3, 11113-50-1	0.01%
45	Disodium tetraborate, anhydrous (*3)(*6)	1303-96-4, 1330-43-4, 12179-04-3	0.01%
46	Tetraboron disodium heptaoxide, hydrate (*3)(*6)	12267-73-1	0.01%
47	2-Methoxyethanol	109-86-4	0.01%
48	2-Ethoxyethanol	110-80-5	0.01%
49	Cobalt(II) sulphate (*3)	10124-43-3	0.01%
50	Cobalt(II) dinitrate (*3)	10141-05-6	0.01%
51	Cobalt(II) carbonate (*3)	513-79-1	0.01%
52	Cobalt(II) diacetate (*3)	71-48-7	0.01%
53	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	0.01%
54	2-Ethoxyethyl acetate	111-15-9	0.01%
55	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	0.01%
56	Hydrazine	302-01-2, 7803-57-8	0.01%
57	1-Methyl-2-pyrrolidone	872-50-4	0.01%
58	1,2,3-Trichloropropane	96-18-4	0.01%
59	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	0.01%
60	Aluminosilicate Refractory Ceramic Fibres (*9)	-	0.01%
61	Zirconia Aluminosilicate Refractory Ceramic Fibres (*9)	-	0.01%
62	Bis(2-methoxyethyl) phthalate	117-82-8	0.01%
63	2-Methoxyaniline; o-Anisidine	90-04-0	0.01%
64	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	0.01%
65	Calcium arsenate (*3)	7778-44-1	0.01%
66	Trilead diarsenate (*3)	3687-31-8	0.01%
67	N,N-dimethylacetamide (DMAC)	127-19-5	0.01%

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68	Phenolphthalein	77-09-8	0.01%
69	Lead dipicrate (*3)	6477-64-1	0.01%
70	Lead diazide, Lead azide (*3)	13424-46-9	0.01%
71	Lead styphnate (*3)	15245-44-0	0.01%
72	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	0.01%
73	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	0.01%
74	Diboron trioxide	1303-86-2	0.01%
75	Formamide	75-12-7	0.01%
76	Lead(II) bis(methanesulfonate) (*3)	17570-76-2	0.01%
77	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	0.01%
78	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (TGIC)	59653-74-6	
79	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	0.01%
80	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base), RMK	101-61-1	0.01%
81	[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)] (*10)	2580-56-5	0.01%
82	[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)](*10)	548-62-9	0.01%
83	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)] (*10)	561-41-1	0.01%
84	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)] (*10)	6786-83-0	0.01%
85	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	0.01%
86	Pentacosaflluorotridecanoic acid	72629-94-8	0.01%
87	Tricosaflluorododecanoic acid	307-55-1	0.01%
88	Henicosaflluoroundecanoic acid	2058-94-8	0.01%
89	Heptacosaflluorotetradecanoic acid	376-06-7	0.01%
90	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated (OPEO)	-	0.01%
91	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) (*12)	123-77-3	0.05%

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92	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>	-	0.01%
93	Cyclohexane-1,2-dicarboxylic anhydride [1], cis-cyclohexane-1,2-dicarboxylic anhydride [2], trans-cyclohexane-1,2-dicarboxylic anhydride [3]	85-42-7 13149-00-3 14166-21-3	0.01% 0.01% 0.01%
94	Hexahydromethylphthalic anhydride (MHHPA) [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%
95	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	0.01%
96	Diisopentylphthalate	605-50-5	0.01%
97	N-pentyl-isopentylphthalate	776297-69-9	0.01%
98	N,N-dimethylformamide	68-12-2	0.01%
99	Methoxyacetic acid (MAA)	625-45-6	0.01%
100	1,2-Diethoxyethane	629-14-1	0.01%
101	Diethyl sulphate	64-67-5	0.01%
102	Dimethyl sulphate	77-78-1	0.01%
103	N-methylacetamide	79-16-3	0.01%
104	1-bromopropane (n-propyl bromide)	106-94-5	0.01%
105	Furan	110-00-9	0.01%
106	Methyloxirane (Propylene oxide)	75-56-9	0.01%
107	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	0.01%
108	Dibutyltin dichloride (DBT) (*3)	683-18-1	0.01%
109	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	0.01%
110	4,4'-methylenedi-o-toluidine	838-88-0	0.01%
111	4,4'-oxydianiline and its salts	101-80-4	0.01%
112	4-Aminoazobenzene	60-09-3	0.01%
113	4-methyl-m-phenylenediamine (2,4-toluene-diamine)	95-80-7	0.01%
114	6-methoxy-m-toluidine (p-cresidine)	120-71-8	0.01%

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115	Biphenyl-4-ylamine	92-67-1	0.01%
116	o-aminoazotoluene	97-56-3	0.01%
117	o-Toluidine	95-53-4	0.01%
118	Acetic acid, lead salt, basic (*3)	51404-69-4	0.01%
119	Trilead bis(carbonate)dihydroxide (*3)	1319-46-6	0.01%
120	Lead oxide sulfate (*3)	12036-76-9	0.01%
121	[Phthalato(2-)]dioxotrilead (*3)	69011-06-9	0.01%
122	Dioxobis(stearato)trilead (*3)	12578-12-0	0.01%
123	Fatty acids, C16-18, lead salts (*3)	91031-62-8	0.01%
124	Lead bis(tetrafluoroborate) (*3)	13814-96-5	0.01%
125	Lead cyanamidate (*3)	20837-86-9	0.01%
126	Lead dinitrate (*3)	10099-74-8	0.01%
127	Lead monoxide (lead oxide) (*3)	1317-36-8	0.01%
128	Orange lead (lead tetroxide) (*3)	1314-41-6	0.01%
129	Lead titanium trioxide (*3)	12060-00-3	0.01%
130	Lead titanium Zirconium oxide (*3)	12626-81-2	0.01%
131	Pyrochlore, antimony lead yellow (*3)	8012-00-8	0.01%
132	Pentalead tetraoxide sulphate (*3)	12065-90-6	0.01%
133	Silicic acid (H ₂ Si ₂ O ₅), barium salt (1:1), lead-doped (*3) <i>[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]</i>	68784-75-8	0.01%
134	Silicic acid, lead salt (*3)	11120-22-2	0.01%
135	Sulfurous acid, lead salt, dibasic (*3)	62229-08-7	0.01%
136	Tetraethyllead (*3)	78-00-2	0.01%
137	Tetralead trioxide sulphate (*3)	12202-17-4	0.01%
138	Trilead dioxide phosphonate (*3)	12141-20-7	0.01%
139	Dipentyl phthalate (DPP)	131-18-0	0.01%
140	Ammonium pentadecafluorooctanoate (APFO) (*13)	3825-26-1	0.01%
141	Pentadecafluorooctanoic acid (PFOA)	335-67-1	0.01%

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142	Cadmium	7440-43-9	0.01%
143	Cadmium oxide (*3)	1306-19-0	0.01%
144	4-Nonylphenol, branched and linear, ethoxylated (NPEO)	-	0.01%
	[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]	-	0.01%
145	Dihexyl phthalate	84-75-3	0.01%
146	Trixylyl phosphate	25155-23-1	0.01%
147	Imidazolidine-2-thione; 2-imidazoline-2thiol (Ethylenethiourea)	96-45-7	0.01%
148	Disodium 3,3[[1,1 biphenyl]4,4 diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate)(C.I.Direct Red 28)	573-58-0	0.01%
149	Disodium 4-amino-3-[[4-[(2,4-diaminophenyl)azo][1,1-biphenyl]-4-yl]azo]-5hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38)	1937-37-7	0.01%
150	Lead di(acetate) (*3)	301-04-2	0.01%
151	Cadmium Sulphide (*3)	1306-23-6	0.01%
152	1,2-Benzenedicarboxylic acid, 1,2-dihexyl ester, branched and linear	68515-50-4	0.01%
153	Cadmium chloride (*3)	10108-64-2	0.01%
154	Sodium perborate; perboric, sodium salt (*3)	---	0.01%
155	Sodium peroxometaborate (*3)	7632-04-4	0.01%
156	Cadmium fluoride (*3)	7790-79-6	0.01%
157	Cadmium sulphate (*3)	1012436-4; 31119-53-6	0.01%
158	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	0.01%
159	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	0.01%
160	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE) (*14)	15571-58-1	0.01%
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)(*15)	---	0.01%

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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	0.01%
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%
164	1,3-propanesultone	1120-71-4	0.01%
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	0.01%
166	2-(2H-benzotriazol-2-yl)-4-(ter-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	0.01%
167	Nitrobenzene	98-95-3	0.01%
168	Perfluorononan-1-oic-acid and its sodium and ammonium salts/propanesultone	375-95-1 21049-39-8 4149-60-4	0.01%
169	Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8	0.01%
170	4,4'-isopropylidenediphenol (bisphenol A)	80-05-7	0.01%
171	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	335-76-2 3830-45-3 3108-42-7	0.01%
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]	-	0.01%
173	<i>p</i> -(1,1-dimethylpropyl)phenol	80-46-6	0.01%

Remarks:

- (*3) The substances are tested in terms of its respective elements (e.g. As, Pb, Co, B, Cd, Sn)
- (*4) The substances are tested in terms of Cr(VI)
- (*5) The substance is tested and calculated in terms of Tributyl tin.
- (*6) The substances are confirmed and tested in terms of Boric Acid when Boron is detected in the sample.
- (*7) The substances are UVCB (substance of unknown or variable composition, complex reaction products or biological materials), which are identified by its main constituents.
- (*8) Individual concentrations to the constituent of UVCB with an amount of <0.01% were not considered by the calculation of the sum.
- (*9) The test result is based on microscopic and chemical evaluation.
- (*10) The substance is quantified in terms of Michler's Ketone and Michler's Base by LC-MS, as Michler's Ketone or Michler's Base was found exceeds 0.01%
- (*11) The oligomer content is determined by Py-GC/MS.
- (*12) The content of diazene-1,2-dicarboxamide is analysed in term of its breakdown product.
- (*13) The substance is tested in terms of pentadecafluorooctanoate.
- (*14) The substance is tested and calculated in term of Dioctyl tin.
- (*15) The substance is tested and calculated in term of Monoctyl tin and Dioctyl tin.
- (*16) The material whose weight is <0.1% of the total weight in an article is neglected for testing.
- (*17) The tested material(s) was screened only for selected SVHCs. Selection of tests refers to the material type and application and the possibility of contamination during production & material specific contamination of the product

5. Summary of methods

Screening of substances of very high concern (SVHC) subject to authorization, according to (EU) No 143/2011, (EU) No 125/2012, (EU) No 348/2013 and (EU) No 895/2014 (Annex XIV of EC No 1907/2006) and candidate list by European Chemical Agency (ECHA), according to the EU Court of Justice rules on SVHCs in articles.

Method description:

- 1) Test portion is digested with acid and assisted with microwave, the elements are analyzed by ICP-OES.
- 2) Test portion is extracted by organic solvent, semi quantitative analysis by GC-MS / UV-Vis.
- 3) Test portion is extracted by organic solvent, the extraction solution is analysed by Headspace-GC-MS/ LC-DAD-MS/ LC-MS/MS