



## REACH Declaration

### Candidate List of Substances of Very High Concern (SVHC)

Product Name : Carbon Black Masterbatch  
Grade : CB5091H  
Issued Date : July 17, 2021

We declare that above grade manufactured by Muil chemical does not contain any of the substances in the Candidate List of Substances of Very High Concern (SVHC) for authorization published by European Chemicals Agency (ECHA) regarding Regulation (EC) No 1907/2006 concerning the REACH.

The 163 substances restricted per Regulation was last updated on March 2, 2015 published by the European Chemicals Agency at:  
<https://echa.europa.eu/candidate-list-table>

The substances on the REACH SVHC candidate list in concentrations greater than 0.1% by weight per article are listed below.

Based on the reports from our 3rd party provider, we hereby certify that below mentioned substances are never used in the manufacturing process as intended

※ This document is intended to inform users of the product for purpose of health safety and environmental requirements only.

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Candidate List of Substances of Very High Concern

No.	Substance Name	CAS number	EC number	Reporting Limit (%)	Concentration(%)	*Remark
1	Alkanes, C10-13, chloro (Short ChainChlorinated Paraffins)	85535-84-8	287-476-5	0.05	N.D.	DOC A
2	Anthracene	120-12-7	204-371-1	0.05	N.D.	
3	Benzyl butyl phthalate (BBP)	85-68-7	201-622-7	0.05	N.D.	
4	Bis(2-ethylhexyl)phthalate (DEHP)	117-81-7	204-211-0	0.05	N.D.	
5	Bis(tributyltin)oxide	56-35-9	200-268-0	0.05	N.D.	
6	Cobalt dichloride*	7646-79-9	231-589-4	0.005	N.D.	
7	4,4-Diaminodiphenylmethane	101-77-9	202-974-4	0.05	N.D.	
8	Diarsenic pentaoxide*	1303-28-2	215-116-9	0.005	N.D.	
9	Diarsenic trioxide*	1327-53-3	215-481-4	0.005	N.D.	
10	Dibutyl phthalate (DBP)	84-74-2	201-557-4	0.05	N.D.	
11	Hexabromocyclododecane (HBCDD)and all major diastereoisomers identified ( $\alpha$ -HBCDD, $\beta$ -HBCDD, $\gamma$ -HBCDD)	25637-99-4 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8)	247-148-4 221-695-9	0.05	N.D.	
12	Lead hydrogen arsenate*	7784-40-9	232-064-2	0.005	N.D.	
13	Sodium dichromate* (Sodium dichromate, dehydrate)	10588-01-9 (7789-12-0)	234-190-3	0.005	N.D.	
14	5-tert-butyl-2,4,6-trinitro-m-xylene(musk xylene)	81-15-2	201-329-4	0.05	N.D.	
15	Triethyl arsenate*	15606-95-8	427-700-2	0.005	N.D.	
16	Di-isobutyl phthalate(DIBP)	84-69-5	201-553-2	0.05	N.D.	
17	2,4-Dinitrotoluene	121-14-2	204-450-0	0.05	N.D.	
18	Tris(2-chloroethyl) phosphate	115-96-8	204-118-5	0.05	N.D.	
19	Anthracene oil	90640-80-5	292-602-7	0.05	N.D.	
20	Anthracene oil, anthracene paste;distn. Lights	91995-17-4	295-278-5	0.05	N.D.	
21	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	295-275-9	0.05	N.D.	

22	Anthracene oil,anthracene-low	90640-82-7	292-604-8	0.05	N.D.	DOC A
23	Anthracene oil, anthracene paste	90640-81-6	292-603-2	0.05	N.D.	
24	Coal tar pitch, high temperature	65996-93-2	266-028-2	0.05	N.D.	
25	Lead sulfochromate yellow (C.I.Pigment Yellow 34)*	1344-37-2	215-693-7	0.005	N.D.	
26	Lead chromate molybdate sulfate red(C.I. Pigment Red 104)*	12656-85-8	235-759-9	0.005	N.D.	
27	Lead chromate*	7758-97-6	231-846-0	0.005	N.D.	
28	Acrylamide	79-06-01	201-173-7	0.05	N.D.	
29	Boric acid*	10043-35-3 11113-50-1	233-139-2 234-343-4	0.005	N.D.	
30	Disodium tetraborate, anhydrous*	1330-43-4 12179-04-3 1303-96-4	215-540-4	0.005	N.D.	
31	Tetraboron disodium heptaoxide,hydrate*	12267-73-1	235-541-3	0.005	N.D.	
32	Trichloroethylene	79-01-6	201-167-4	0.05	N.D.	
33	Sodium chromate*	7775-11-3	231-889-5	0.005	N.D.	
34	Ammonium dichromate*	7789-09-5	232-143-1	0.005	N.D.	
35	Potassium dichromate*	7778-50-9	231-906-6	0.005	N.D.	
36	Potassium chromate*	7789-00-6	232-140-5	0.005	N.D.	
37	Cobalt(II) sulphate*	10124-43-3	233-334-2	0.005	N.D.	
38	Cobalt(II) dinitrate*	10141-05-6	233-402-1	0.005	N.D.	
39	Cobalt(II) carbonate*	513-79-1	208-169-4	0.005	N.D.	
40	Cobalt(II) diacetate*	71-48-7	200-755-8	0.005	N.D.	
41	2-Methoxyethanol	109-86-4	203-713-7	0.05	N.D.	
42	2-Ethoxyethanol	110-80-5	203-804-1	0.05	N.D.	
43	Chromium trioxide*	1333-82-0	215-607-8	0.005	N.D.	
44	Acids generated from chromium trioxide andtheir oligomers: Chromic acid Dichromic acid Oligomers of chromicacid and dichromic acid*	7738-94-5 13530-68-2 -	231-801-5 236-881-5 -	0.005	N.D.	

45	1-methyl-2-pyrrolidone	872-50-4	212-828-1	0.05	N.D.	DOC A
46	2-ethoxyethyl acetate	111-15-9	203-839-2	0.05	N.D.	
47	1,2-benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	276-158-1	0.05	N.D.	
48	1,2-benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	271-084-6	0.05	N.D.	
49	1,2,3-trichloropropane	96-18-4	202-486-1	0.05	N.D.	
50	Hydrazine	7803-57-8 302-01-2	206-114-9	0.05	N.D.	
51	Strontium chromate*	7789-06-2	232-142-6	0.005	N.D.	
52	1,2-Dichloroethane	107-06-2	203-458-1	0.05	N.D.	
53	2,2'-dichloro-4,4'-methylenedianiline(MOCA)	101-14-4	202-918-9	0.05	N.D.	
54	2-Methoxyanilineo-Anisidine	90-04-0	201-963-1	0.05	N.D.	
55	4-(1,1,3,3-tetramethylbutyl) phenol,(4-tert-Octylphenol)	140-66-9	205-426-2	0.05	N.D.	
56	Aluminosilicate Refractory CeramicFibres* (RCF)	650-017-00-8 (Index no.)	-	0.005	N.D.	
57	Arsenic acid*	7778-39-4	231-901-9	0.005	N.D.	
58	Bis(2-methoxyethyl) ether	111-96-6	203-924-4	0.05	N.D.	
59	Bis(2-methoxyethyl) phthalate	117-82-8	204-212-6-	0.05	N.D.	
60	Calcium arsenate*	7778-44-1	231-904-5	0.005	N.D.	
61	Dichromium tris(chromate)*	24613-89-6	246-356-2	0.005	N.D.	
62	Formaldehyde, oligomeric reaction products with aniline (technical MDA)	25214-70-4	500-036-1	0.05	N.D.	
63	Lead diazide*	13424-46-9	236-542-1	0.005	N.D.	
64	Lead dipicrate*	6477-64-1	229-335-2	0.005	N.D.	
65	Lead styphnate*	15245-44-0	239-290-2	0.005	N.D.	
66	N,N-dimethylacetamide (DMAC)	127-19-5	204-826-4	0.05	N.D.	
67	Pentazinc chromate octahydroxide*	49663-84-5	256-418-0	0.005	N.D.	

68	Phenolphthalein	77-09-8	201-004-7	0.05	N.D.	DOC A
69	Potassium hydroxyocta-oxodizincatedichromate*	11103-86-9	234-329-8	0.005	N.D.	
70	Trilead diarsenate*	3687-31-8	222-979-5	0.005	N.D.	
71	Zirconia Aluminosilicate Refractory Ceramic Fibres (Zr-RCF)*	650-017-00-8 (Index no.)	-	0.005	N.D.	
72	1,2-bis(2-methoxyethoxy) ethane(TEGDME; triglyme)	112-49-2	203-977-3	0.05	N.D.	
73	1,2-dimethoxyethane; ethylene glycoldimethyl ether (EGDME)	110-71-4	203-794-9	0.05	N.D.	
74	Diboron trioxide*	1303-86-2	215-125-8	0.005	N.D.	
75	Formamide	75-12-7	200-842-0	0.05	N.D.	
76	Lead(II) bis(methanesulfonate)*	17570-76-2	401-750-5	0.005	N.D.	
77	TGIC(1,3,5-tris (oxiranyl methyl)- 1,3,5-triazine- 2,4,6(1H,3H,5H)-trione)	2451-62-9	219-514-3	0.05	N.D.	
78	$\beta$ -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	0.05	N.D.	
79	4,4'-bis(dimethylamino) benzophenone (Michler's ketone)	90-94-8	202-027-5	0.05	N.D.	
80	N,N,N',N'-tetramethyl-4,4'- methylenedianiline (Michler's base)	101-61-1	202-959-2	0.05	N.D.	
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	0.05	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	219-943-6	0.05	N.D.	
83	$\alpha,\alpha$ -Bis[4-(dimethylamino) phenyl]-4(phenylamino) naphthalene-1- methanol (C.I. Solvent Blue 4)	6786-83-0	229-851-8	0.05	N.D.	
84	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	561-41-1	209-218-2	0.05	N.D.	
85	Bis(pentabromophenyl) ether(DecaBDE)	1163-19-5	214-604-9	0.05	N.D.	
86	Pentacosafuorotridecanoic acid	72629-94-8	276-745-2	0.05	N.D.	
87	Tricosafuorododecanoic acid	307-55-1	206-203-2	0.05	N.D.	

88	Henicosaflluoroundecanoic acid	2058-94-8	218-165-4	0.05	N.D.	DOC A
89	Heptacosaflluorotetradecanoic acid	376-06-7	206-803-4	0.05	N.D.	
90	4-(1,1,3,3-tetramethylbutyl) phenol,ethoxylated - covering well-defined substances and UVCB substances, polymers and homologues	-	-	0.05	N.D.	
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	-	-	0.05	N.D.	
92	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	204-650-8	0.05	N.D.	
93	Cyclohexane-1,2-dicarboxylic anhydride (Hexahydrophthalic anhydride - HHPA)	85-42-7 13149-00-3 14166-21-3	201-604-9, 236-086-3, 238-009-9	0.05	N.D.	
94	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	0.05	N.D.	
95	Methoxy acetic acid	625-45-6	210-894-6	0.05	N.D.	
96	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	284-032-2	0.05	N.D.	
97	Diisopentylphthalate (DIPP)	605-50-5	210-088-4	0.05	N.D.	
98	N-pentyl-isopentylphthalate	-	-	0.05	N.D.	
99	1,2-Diethoxyethane	629-14-1	211-076-1	0.05	N.D.	
100	N,N-dimethylformamide; dimethylformamide	68-12-2	200-679-5	0.05	N.D.	
101	Dibutyltin dichloride (DBT)	683-18-1	211-670-0	0.05	N.D.	
102	Acetic acid, lead salt, basic*	51404-69-4	257-175-3	0.005	N.D.	
103	Basic lead carbonate (trileadbis(carbonate)dihydroxide)*	1319-46-6	215-290-6	0.005	N.D.	
104	Lead oxide sulfate (basic leadsulfate)*	12036-76-9	234-853-7	0.005	N.D.	
105	[Phthalato(2-)]dioxotrilead (dibasiclead phthalate)*	69011-06-9	273-688-5	0.005	N.D.	
106	Dioxobis(stearato)trilead*	12578-12-0	235-702-8	0.005	N.D.	
107	Fatty acids, C16-18, lead salts*	91031-62-8	292-966-7	0.005	N.D.	

108	Lead bis(tetrafluoroborate)*	13814-96-5	237-486-0	0.005	N.D.	DOC A
109	Lead cyanamidate*	20837-86-9	244-073-9	0.005	N.D.	
110	Lead dinitrate*	10099-74-8	233-245-9	0.005	N.D.	
111	Lead oxide (lead monoxide)*	1317-36-8	215-267-0	0.005	N.D.	
112	Lead tetroxide (orange lead)*	1314-41-6	215-235-6	0.005	N.D.	
113	Lead titanium trioxide*	12060-00-3	235-038-9	0.005	N.D.	
114	Lead Titanium Zirconium Oxide*	12626-81-2	235-727-4	0.005	N.D.	
115	Pentalead tetraoxide sulphate*	12065-90-6	235-067-7	0.005	N.D.	
116	Pyrochlore, antimony lead yellow*	8012-00-8	232-382-1	0.005	N.D.	
117	Silicic acid, barium salt, lead-doped*	68784-75-8	272-271-5	0.005	N.D.	
118	Silicic acid, lead salt*	11120-22-2	234-363-3	0.005	N.D.	
119	Sulfurous acid, lead salt, dibasic*	62229-08-7	263-467-1	0.005	N.D.	
120	Tetraethyllead*	78-00-2	201-075-4	0.005	N.D.	
121	Tetralead trioxide sulphate*	12202-17-4	235-380-9	0.005	N.D.	
122	Trilead dioxide phosphonate*	12141-20-7	235-252-2	0.005	N.D.	
123	Furan	110-00-9	203-727-3	0.05	N.D.	
124	Propylene oxide; 1,2-epoxypropane;methyloxirane	75-56-9	200-879-2	0.05	N.D.	
125	Diethyl sulphate	64-67-5	200-589-6	0.05	N.D.	
126	Dimethyl sulphate	77-78-1	201-058-1	0.05	N.D.	
127	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	421-150-7	0.05	N.D.	
128	Dinoseb	88-85-7	201-861-7	0.05	N.D.	
129	4,4'-methylenedi-o-toluidine	838-88-0	212-658-8	0.05	N.D.	
130	4,4'-oxydianiline and its salts	101-80-4	202-977-0	0.05	N.D.	
131	4-Aminoazobenzene;4-Phenylazoaniline	60-09-3	200-453-6	0.05	N.D.	
132	4-methyl-m-phenylenediamine (2,4-toluene-diamine)	95-80-7	202-453-1	0.05	N.D.	
133	6-methoxy-m-toluidine(p-cresidine)	120-71-8	204-419-1	0.05	N.D.	
134	Biphenyl-4-ylamine	92-67-1	202-177-1	0.05	N.D.	
135	o-aminoazotoluene	97-56-3	202-591-2	0.05	N.D.	

136	o-Toluidine; 2-Aminotoluene	95-53-4	202-429-0	0.05	N.D.
137	N-methylacetamide	79-16-3	201-182-6	0.05	N.D.
138	1-bromopropane;n-propyl bromide	106-94-5	203-445-0	0.05	N.D.
139	Cadmium	7440-43-9	231-152-8	0.005	N.D.
140	Cadmium oxide*	1306-19-0	215-146-2	0.005	N.D.
141	Dipentyl phthalate (DPP)	131-18-0	205-017-9	0.05	N.D.
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]	-	-	0.05	N.D.
143	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	223-320-4	0.05	N.D.
144	Pentadecafluorooctanoic acid (PFOA)	335-67-1	206-397-9	0.05	N.D.
145	Diethyl phthalate	84-75-3	201-559-5	0.05	N.D.
146	Triethyl phosphate	25155-23-1	246-677-8	0.05	N.D.
147	Imidazolidine-2-thione; 2-imidazoline-2-thiol	96-45-7	202-506-9	0.05	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	217-710-3	0.05	N.D.
149	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	0.05	N.D.
150	Cadmium sulphide*	1306-23-6	215-147-8	0.005	N.D.
151	Lead diacetate*	301-04-2	206-104-4	0.005	N.D.
152	1,2-Benzenedicarboxylic acid, diethyl ester, branched and linear	68515-50-4	271-093-5	0.05	N.D.
153	Cadmium chloride*	10108-64-2	233-296-7	0.005	N.D.
154	Sodium perborate*; perboric acid, sodium salt*	-	239-172-9 234-390-0	0.005	N.D.

DOC A



155	Sodium peroxometaborate*	7632-04-4	231-556-4	0.005	N.D.	DOC A
156	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	223-346-6	0.05	N.D.	
157	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	247-384-8	0.05	N.D.	
158	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	239-622-4	0.05	N.D.	
159	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)	-	-	0.05	N.D.	
160	Cadmium fluoride*	7790-79-6	232-222-0	0.005	N.D.	
161	Cadmium sulphate*	10124-36-4; 31119-53-6	233-331-6	0.005	N.D.	
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	0.05	N.D.	
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]	-	-	0.05	N.D.	

\*Remark refers to the source documents containing the details of the product test results issued by SGS Korea Co., Ltd. We therefore guarantee that our products are compliant with the regulations.

DOC A : SGS File Number AYAA15-48448

**Note:**

1. RL = Reporting Limit, 0.1% (w/w) = 1,000 ppm = 1,000 mg/kg
2. N.D. = Not detected (< RL)  
N.A. = Not applicable for respective material type.

The submitted sample was found to contain significant amount of specific element(s) of SVHC. Upon further test verification and also information provided from client, the possibility that the element(s) content originate from SVHC is very unlikely, even though their presence cannot be exclude entirely. It may be assumed that the detectedelement(s) have a non-SVHC source.

3. \*.The test result is based on the calculation of selected element(s) / marker(s) and to the worst-case scenario. For detail information, please refer to the SGS REACH website: [www.reach.sgs.com/substance-of-very-high-concern-analysis-information-page.htm](http://www.reach.sgs.com/substance-of-very-high-concern-analysis-information-page.htm)  
The client is advised to review the chemical formulation to ascertain above metal substances present in the article. RL = 0.005% is evaluated for element (i.e. cobalt, arsenic, lead, sodium, chromium, chromium(VI), silicon,aluminum, zirconium, boron, and potassium respectively), except molybdenum RL=0.0005%
4. \*\*. -TGIC is one of the isomers for TGIC compounds and hence, tested together. The reported test result is basedthe proposed ratio as according to ECHA dossier.
5. \*\*\*.The sample was diluted with solvent because of matrix effect, so there could be slight increase in MDL and itmay have an effect on RL.
6. The results shown in this test report refer only to the sample(s) tested unless otherwise stated.
7. This test report is not related to Korea Laboratory Accreditation Scheme.