



Date: June 10, 2022

RE: REACH 224 SVHC's Compliance

The REACH Regulation, EC 1907/2006, of the European Parliament went into effect June 1, 2007. REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) is a system for controlling chemicals in Europe. The regulation places the responsibility on industry to manage the risks from chemicals and to provide safety information on the substances.

An integral part of REACH is the Candidate List of "Substances of Very High Concern" (SVHC). The process is to target these SVHCs for replacement by less dangerous substances or technologies where feasible alternatives are available. The latest list was published on **June 10, 2022** and currently has 224 **SVHC's**. This list can be found on the ECHA website, www.echa.europa.eu/candidate-list-table and is included at the end of this document for reference.

Backer Hotwatt has thoroughly evaluated all our raw materials, process materials and products. To the best of our knowledge, they do not contain any substances included on the **REACH 224 SVHC** list in a concentration in excess of the specified threshold limits. We continue to work with our suppliers of raw materials to ensure they have also evaluated and communicated information regarding changes and the presence of SVHC's in their products.

Backer Hotwatt monitors the ECHA website to obtain the latest information regarding any changes or additions to the REACH regulation and/or SVHC list. We will take necessary action to provide notification to our customer base if any relevant changes occur that would require further action.

If you have any questions regarding this information, please do not hesitate to contact us.

Sincerely,

A handwritten signature in black ink, appearing to read 'Michael Parisi', written in a cursive style.

Michael Parisi
Director of Operations

REACH SVHC Table 224 Substances - Updated June 10, 2022 Source: ECHA Website www.echa.europa.eu/candidate-list-table	
Substance Name	CAS Number
REACH 224 SVHC Update 10-06-2022	
N-(hydroxymethyl)acrylamide	924-42-5
REACH 223 SVHC Update 17-01-2022	
6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	119-47-1
tris(2-methoxyethoxy)vinylsilane	1067-53-4
(±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC)	
S-(tricyclo(5.2.1.0 ^{2,6})deca-3-en-8(or 9)-yl O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate	255881-94-8
REACH 219 SVHC Update 07-08-2021	
2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers	
Orthoboric acid, sodium salt	13840-56-7
2,2-bis(bromomethyl)propane1,3-diol (BMP);	3296-90-0,
2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA);	36483-57-5,
2,3-dibromo-1-propanol (2,3-DBPA)	1522-92-5, 96-13-9
Glutaral	111-30-8
Medium-chain chlorinated paraffins (MCCP) (UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17)	
Phenol, alkylation products (mainly in para position) with C12-rich branched alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP)	
1,4-dioxane	123-91-1
4,4'-(1-methylpropylidene)bisphenol	77-40-7
REACH 211 SVHC Update 01-19-2021	
Bis(2-(2-methoxyethoxy)ethyl)ether	143-24-8
Diocetyl tin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety	-
REACH 209 SVHC Update 01-16-2020	
Dibutylbis(pentane-2,4-dionato-O,O')tin	22673-19-4
Butyl 4-hydroxybenzoate	94-26-8
2-methylimidazole	693-98-1
1-vinylimidazole	1072-63-5
REACH 205 SVHC Update 01-16-2020	
Diisohexyl phthalate	71850-09-4
2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1
2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5
Perfluoro butane sulfonic acid (PFBS) and its salts	-
REACH 201 SVHC Update 07-16-2019	
2-methoxyethyl acetate	110-49-6
Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≥ 0.1% w/w of 4-nonylphenol, branched and	-

linear (4-NP)	
2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)	-
4-tert-butylphenol	95-54-4
REACH 197 SVHC Update 01-15-2019	
,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one 3-benzylidene camphor; 3-BC	239-139-9
2,2-bis(4'-hydroxyphenyl)-4-methylpentane	401-720-1
Benzo[k]fluoranthene	205-916-6
Fluoranthene	205-912-4
Phenanthrene	201-581-5
Pyrene	204-927-3
REACH 191 SVHC Update 06-27-2018	
Benzene-1,2,4-tricarboxylic acid 1,2 anhydride	552-30-7
Benzo[ghi]perylene	191-24-2
Decamethylcyclopentasiloxane	541-02-6
Dicyclohexyl phthalate	84-61-7
Disodium octaborate	12008-41-2
Dodecamethylcyclohexasiloxane	540-97-6
Ethylenediamine	107-15-3
Lead	7439-92-1
Octamethylcyclotetrasiloxane	556-67-2
Terphenyl, hydrogenated	61788-32-7
REACH 181 SVHC Update 01-15-2018	
Benz[a]anthracene	56-55-3, 1718-53-2
Cadmium carbonate	513-78-0
Cadmium hydroxide	21041-95-2
Cadmium nitrate	10022-68-1, 10325-94-7
Chrysene	218-01-9, 1719-03-5
Dodecachloropentacyclo[12.2.1.16,9.02,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"™)	-
Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP)	-
REACH 174 SVHC Update 07-07-2017	
Perfluorohexane-1-sulphonic acid and its salts (PFHxS)	-
REACH 173 SVHC Update 01-12-2017	
4,4'-isopropylidenediphenol (bisphenol A)	80-05-7
4-heptylphenol, branched and linear (4-HPbl)	-
nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	
Nonadecafluorodecanoic acid	335-76-2
Decanoic acid, nonadecafluoro-, sodium salt	3830-45-3
Ammonium nonadecafluorodecanoate	3108-42-7
p-(1,1-dimethylpropyl)phenol (PTAP)	80-46-6
REACH 169 SVHC Update 06-20-2016	
Benzo[def]chrysene	50-32-8
REACH 168 SVHC Update 12-17-2015	
1,3-propanesultone	1120-71-4

REACH SVHC Table 219 Substances - Updated July 8, 2021 Source: ECHA Website www.echa.europa.eu/candidate-list-table	
Substance Name	CAS Number
2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1
2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3
Nitrobenzene	98-95-3
Perfluorononan-1-oic-acid and its sodium and ammonium salts	
Ammonium salts of perfluorononan-1-oic-acid	4149-60-4
Perfluorononan-1-oic-acid	375-95-1
Sodium salts of perfluorononan-1-oic-acid	21049-39-8
REACH 163 SVHC Update 06-15-2015	
1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters	
1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters	68648-93-1
1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters	68515-51-5
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	
5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane	
5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane	
REACH 161 SVHC Update 12-17-2014	
2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1
2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7
2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1
Cadmium fluoride	7790-79-6
Cadmium sulphate	10124-36-4, 31119-53-6
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)	
REACH 155 SVHC Update 06-16-2014	
1,2-Benzenedicarboxylic acid, dihexylester, branched and linear	68515-50-4
Cadmium chloride	10108-64-2
Sodium perborate, perboric acid, sodium salt	
Perboric acid, sodium salt	11138-47-9
Sodium perborate	15120-21-5
Sodium peroxometaborate	7632-4-4,
REACH SVHC Update 12-16-2013	
Cadmium sulphide	1306-23-6
Dihexyl phthalate	84-75-3
Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0
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
Imidazolidine-2-thione (2-imidazoline-2-thiol)	96-45-7
Lead di(acetate)	301-04-2
Triethyl phosphate	25155-23-1

REACH SVHC Table 219 Substances - Updated July 8, 2021 Source: ECHA Website www.echa.europa.eu/candidate-list-table	
Substance Name	CAS Number
REACH SVHC Update 06-20-2013	
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	
Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
Cadmium	7440-43-9
Cadmium oxide	1306-19-0
Dipentyl phthalate (DPP)	131-18-0
Pentadecafluorooctanoic acid (PFOA)	335-67-1
REACH SVHC Update 12-19-2012	
1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0
1,2-Diethoxyethane	629-14-1
1-bromopropane (n-propyl bromide)	106-94-5
3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2
4,4'-methylenedi-o-toluidine	838-88-0
4,4'-oxydianiline and its salts	
4,4'-oxydianiline	101-80-4
4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	
4-Aminoazobenzene	60-09-3
4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7
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]	
6-methoxy-m-toluidine (p-cresidine)	120-71-8
[Phthalato(2-)]dioxotrilead	69011-06-9
Acetic acid, lead salt, basic	51404-69-4
Biphenyl-4-ylamine	92-67-1
Bis(pentabromophenyl) ether (decabromodiphenyl ether) (DecaBDE)	1163-19-5
Cyclohexane-1,2-dicarboxylic anhydride all possible combinations of the cis- and trans-isomers	
Cyclohexane-1,2-dicarboxylic anhydride	85-42-7
trans-cyclohexane-1,2-dicarboxylic anhydride	14166-21-3
cis-cyclohexane-1,2-dicarboxylic anhydride	13149-00-3
Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) (ADCA)	123-77-3
Dibutyltin dichloride (DBTC)	683-18-1
Diethyl sulphate	64-67-5
Diisopentyl phthalate	605-50-5
Dimethyl sulphate	77-78-1
Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7
Dioxobis(stearato)trilead	12578-12-0
Fatty acids, C16-18, lead salts	91031-62-8
Furan	110-00-9
Henicosaflluoroundecanoic acid	2058-94-8

REACH SVHC Table 219 Substances - Updated July 8, 2021 Source: ECHA Website www.echa.europa.eu/candidate-list-table	
Substance Name	CAS Number
Heptacosafuorotetradecanoic acid	376-06-7
Hexahydromethylphthalic anhydride including cis- and trans- stereo isomeric forms and all possible combinations of the isomers	
Hexahydro-4-methylphthalic anhydride	19438-60-9
Hexahydro-3-methylphthalic anhydride	57110-29-9
Hexahydro-1-methylphthalic anhydride	48122-14-1
Hexahydromethylphthalic anhydride	25550-51-0
Lead bis(tetrafluoroborate)	13814-96-5
Lead cyanamidate	20837-86-9
Lead dinitrate	10099-74-8
Lead monoxide (lead oxide)	1317-36-8
Lead oxide sulfate	12036-76-9
Lead titanium trioxide	12060-00-3
Lead titanium zirconium oxide	12626-81-2
Methoxyacetic acid	625-45-6
Methyloxirane (Propylene oxide)	75-56-9
N,N-dimethylformamide	68-12-2
N-methylacetamide	79-16-3
N-pentyl-isopentylphthalate	776297-69-9
o-aminoazotoluene	97-56-3
o-Toluidine	95-53-4
Orange lead (lead tetroxide)	1314-41-6
Pentacosafuorotridecanoic acid	72629-94-8
Pentalead tetraoxide sulphate	12065-90-6
Pyrochlore, antimony lead yellow	8012-00-8
Silicic acid (H ₂ SiO 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
Silicic acid, lead salt	11120-22-2
Sulfurous acid, lead salt, dibasic	62229-08-7
Tetraethyllead	78-00-2
Tetralead trioxide sulphate	12202-17-4
Tricosafuorododecanoic acid	307-55-1
Trilead bis(carbonate) dihydroxide	1319-46-6
Trilead dioxide phosphonate	12141-20-7
REACH SVHC Update 06-18-2012	
1,2-bis(2-methoxyethoxy)ethane (TEGDME, triglyme)	112-49-2
1,2-dimethoxyethane, ethylene glycol dimethyl ether (EGDME)	110-71-4
1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9
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
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

REACH SVHC Table 219 Substances - Updated July 8, 2021 Source: ECHA Website www.echa.europa.eu/candidate-list-table	
Substance Name	CAS Number
4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8
[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
[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
Diboron trioxide	1303-86-2
Formamide	75-12-7
Lead(II) bis(methanesulfonate)	17570-76-2
N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1
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)]	6786-83-0
REACH SVHC Update 12-19-2011	
1,2-Dichloroethane	107-06-2
2,2'-dichloro-4,4'-methylenedianiline	101-14-4
2-Methoxyaniline,o-Anisidine	90-04-0
4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9
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	
Arsenic acid	7778-39-4
Bis(2-methoxyethyl) ether	111-96-6
Bis(2-methoxyethyl) phthalate	117-82-8
Calcium arsenate	7778-44-1
Dichromium tris(chromate)	24613-89-6
Formaldehyde, oligomeric reaction products with aniline	25214-70-4
Lead diazide, Lead azide	13424-46-9
Lead dipicrate	6477-64-1
Lead styphnate	15245-44-0
N,N-dimethylacetamide	127-19-5
Pentazinc chromate octahydroxide	49663-84-5
Phenolphthalein	77-09-8
Potassium hydroxyoctaoxodizincatedichromate	11103-86-9
Trilead diarsenate	3687-31-8
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	

REACH SVHC Table 219 Substances - Updated July 8, 2021 Source: ECHA Website www.echa.europa.eu/candidate-list-table	
Substance Name	CAS Number
REACH SVHC Update 06-20-2011	
1,2,3-trichloropropane	96-18-4
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4
1-Methyl-2-pyrrolidone (NMP)	872-50-4
2-Ethoxyethyl acetate	111-15-9
Hydrazine	302-01-2, 7803-57-8
Strontium chromate	7789-6-2,
REACH SVHC Update 12-15-2010	
2-Ethoxyethanol	110-80-5
2-Methoxyethanol	109-86-4
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
Chromic acid	13530-68-2
Dichromic acid	7738-94-5
Oligomers of chromic acid and dichromic acid	
Chromium trioxide	1333-82-0
Cobalt(II) carbonate	513-79-1
Cobalt(II) diacetate	71-48-7
Cobalt(II) dinitrate	10141-05-6
Cobalt(II) sulphate	10124-43-3
REACH SVHC Update 06-18-2010	
Ammonium dichromate	7789-9-5,
Boric acid	
Boric acid, crude natural	11113-50-1
Boric acid	10043-35-3
Disodium tetraborate, anhydrous	1303-96-4, 1330-43-4, 12179-04-3
Potassium chromate	7789-00-6
Potassium dichromate	7778-50-9
Sodium chromate	7775-11-3,
Tetraboron disodium heptaoxide, hydrate	12267-73-1
Trichloroethylene	79-01-6
Acrylamide	79-06-1
REACH SVHC Update 01-13-2010	
2,4-Dinitrotoluene	121-14-2
Anthracene oil	90640-80-5
Anthracene oil, anthracene paste	90640-81-6
Anthracene oil, anthracene paste, anthracene fraction	91995-15-2
Anthracene oil, anthracene paste, distn. lights	91995-17-4
Anthracene oil, anthracene-low	90640-82-7
Diisobutyl phthalate	84-69-5

REACH SVHC Table 219 Substances - Updated July 8, 2021 Source: ECHA Website www.echa.europa.eu/candidate-list-table	
Substance Name	CAS Number
Lead chromate	7758-97-6
Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8
Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2
Pitch, coal tar, high temp.	65996-93-2
Tris(2-chloroethyl)phosphate	115-96-8
REACH SVHC 10-28-2008	
4,4'- Diaminodiphenylmethane (MDA)	101-77-9
5-tert-butyl-2,4,6-trinitro-m-xylene (Musk xylene)	81-15-2
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8
Anthracene	120-12-7
Benzyl butyl phthalate (BBP)	85-68-7
Bis (2-ethylhexyl)phthalate (DEHP)	117-81-7
Bis(tributyltin) oxide (TBTO)	56-35-9
Cobalt dichloride	7646-79-9
Diarsenic pentaoxide	1303-28-2
Diarsenic trioxide	1327-53-3
Dibutyl phthalate (DBP)	84-74-2
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified	
gamma-hexabromocyclododecane	134237-52-8
beta-hexabromocyclododecane	134237-51-7
1,2,5,6,9,10-hexabromocyclododecane	3194-55-6
Hexabromocyclododecane	25637-99-4
alpha-hexabromocyclododecane	134237-50-6
Lead hydrogen arsenate	7784-40-9
Sodium dichromate	7789-12-0, 10588-01-9
Triethyl arsenate	15606-95-8