SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: REACH Regulation (EC) No 1907/2006, as retained in UK law by (SI 2019/758 as amended)

BOSTIK PRO SEALANT PU91 CONSTRUCTION POLYURETHANE BROWN
Supercedes Date: 21-Nov-2023

Revision date 26-Mar-2024
Revision Number 4.02

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Name BOSTIK PRO SEALANT PU91 CONSTRUCTION POLYURETHANE BROWN

Pure substance/mixture Mixture

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use Sealant

Uses advised against None known

1.3. Details of the supplier of the safety data sheet

Company Name
Bostik Limited
Common Rd
ST16 3EH
Stafford UK
Tel: +44 (1785) 27 26 25
Fax: +44 (1785) 25 72 36

E-mail address SDS.box-EU@bostik.com

1.4. Emergency telephone number

United Kingdom Bostik: +44 (1785) 272650 (9am to 5pm Mon-Fri)
NHS: 111

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP (SI 2020/1567 as amended)

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

2.2. Label elements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

Signal word
None

Hazard statements
This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

EU Specific Hazard Statements
EUH208 - Contains Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate. May produce an allergic reaction
EUH210 - Safety data sheet available on request
EUH204 - Contains isocyanates. May produce an allergic reaction

2.3. Other hazards

Causes mild skin irritation. Harmful to aquatic life.

PBT & vPvB
This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	EC No (EU Index No)	CAS No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	REACH registration number
Limestone	215-279-6	1317-65-3	>25 - <40	[C]	-	[5]
Isocyanic acid, polymethylenepolyphenylene ester, polymer with 1,3-diisocyanatomethylbenzene, .alpha.-hydro-.omega.-hydroxypoly[oxy(methyl-1,2-ethanediyl)] and 2-methyloxirane polymer with oxirane ether with 1,2,3-propanetriol (3:1)	-	68240-05-1	20 - 25	-	-	[7]
Bis(2-propylheptyl)phthalate	258-469-4	53306-54-0	10 - <20	-	-	01-2119446694-30-XXXX
Polyvinyl chloride	618-338-8	9002-86-2	5 - <10	-	-	[7]
2,2-bis[[(1-oxopentyl)oxy]methyl]propane-1,3-diyl divalerate	239-937-7	15834-04-5	5 - <10	-	-	01-2119493810-35-xxxx
Diisononyl 1,2-cyclohexanedicarboxylate	431-890-2	166412-78-8	5 - <10	-	-	01-0000017810-74-XXXX
3-butyl-1-[4-({4-[(butylcarbamoyl)amino]phenyl}methyl)phenyl]urea	416-600-4	--	1 - <5	Aquatic Chronic 4 (H413)	-	01-0000016345-72-xxxx
Hydrocarbons, C12-C15, n-alkanes, isoalkanes, cyclics, < 2% aromatics	920-107-4	RR-100255-7	1 - <2.5	Asp. Tox. 1 (H304) (EUH066)	-	01-2119453414-43-xxxx
N,N-dibenzyliden polyoxypropylene diamine (polymer)	-	136855-71-5	1 - <2.5	Skin Irrit. 2 (H315)	-	[7]
Titanium dioxide	236-675-5 (022-006-00-2)	13463-67-7	0.1- <1	[C]	-	01-2119489379-17-XXXX
C.I. Pigment Black 26	269-056-3	68186-94-7	0.1 - <0.5	[B]	-	01-2119457599-19-XXXX

Reaction mass of 3-methylphenyl diphenyl phosphate, 4-methylphenyl diphenyl phosphate, bis(3-methylphenyl) phenyl phosphate, 3-methylphenyl 4-methylphenyl phenyl phosphate and triphenyl phosphate	945-730-9	--	0.1 - <0.5	Aquatic Acute 1 (H400) Aquatic Chronic 3 (H412)	-	01-2119511174-52-xxxx
Aromatic Polyisocyanate	500-120-8	53317-61-6	0.1 - <0.5	Eye Irrit. 2 (H319) Skin Sens. 1 (H317)	-	[7]
Octadecyl 3-(3',5'-di-tert-butyl-4'-hydroxyphenyl)propionate	218-216-0	2082-79-3	0.1 - <0.3	-	-	01-2119491195-33-XXXX
Ethyl acetate	205-500-4 (607-022-00-5)	141-78-6	0.1 - <0.3	Eye Irrit. 2 (H319) STOT SE 3 (H336) Flam. Liq. 2 (H225) (EUH066)	-	01-2119475103-46-XXXX
Iron oxide yellow	257-098-5	51274-00-1	0.1 - <0.3	-	-	01-2119457554-33-XXXX
Glycidoxypropyltrimethoxysilane	219-784-2	2530-83-8	0.01 - <0.1	Eye Dam. 1 (H318) Aquatic Chronic 3 (H412)	-	01-2119513212-58-XXXX
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	915-687-0	1065336-91-5	0.01 - <0.1	Skin Sens. 1A (H317) Repr. 2 (H361f) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-	01-2119491304-40-XXXX
Isophorone diisocyanate	223-861-6 (615-008-00-5)	4098-71-9	0.01 - <0.1	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Resp. Sens. 1 (H334) Skin Sens. 1 (H317) Acute Tox. 1 (H330) Aquatic Chronic 2 (H411)	Resp. Sens. 1 :: C>=0.5% Skin Sens. 1 :: C>=0.5%	01-2119490408-31-XXXX
Reaction product of Hexamethylene diisocyanate, oligomers with Mercaptopropyltrimethoxysilane	924-669-1	192526-20-8	0.01 - <0.1	Skin Sens. 1A (H317)	-	01-2120768758-32-XXXX
Hexamethylene	931-274-8	28182-81-2	0.01 - <0.1	STOT SE 3	-	01-2119485796-

diisocyanate homopolymer				(H335) Skin Sens. 1 (H317) Acute Tox. 4 (H332)		17-xxxx
Salicylic acid	200-712-3 (607-732-00-5)	69-72-7	0.01 - < 0.05	Eye Dam. 1 (H318) Acute Tox. 4 (H302) Repr. 2 (H361d)	-	01-2119486984-17-XXXX
Iron oxide (Fe2O3)	215-168-2	1309-37-1	0.01 <= 0.036	[C]	-	01-2119457614-35-XXXX
Dibutyltin dilaurate	201-039-8 (050-030-00-3)	77-58-7	0.01 <= 0.036	Eye Irrit. 2(H319) Skin Sens. 1 (H317) Muta. 2 (H341) Repr. 1B (H360FD) STOT RE 1 (H372) STOT SE 1 (H370) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-	01-2119496068-27-XXXX
m-tolylidene diisocyanate	247-722-4 (615-006-00-4)	26471-62-5	0.0025 - <0.01	Acute Tox. 1 (H330) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Resp. Sens. 1 (H334) Skin Sens. 1 (H317) Carc. 2 (H351) STOT SE 3 (H335) Aquatic Chronic 3 (H412)	Resp. Sens. 1 :: C>=0.1%	01-2119454791-34-XXXX
4,4'-Methylenediphenyl diisocyanate	202-966-0 (615-005-00-9)	101-68-8	<0.0015	Acute Tox. 4 (H332) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Resp. Sens. 1 (H334) Skin Sens. 1 (H317) Carc. 2 (H351) STOT SE 3 (H335) STOT RE 2 (H373)	STOT SE 3 :: C>=5% Skin Irrit. 2 :: C>=5% Eye Irrit. 2 :: C>=5% Resp. Sens. 1 :: C>=0.1%	01-2119457014-47-XXXX
Methyl alcohol	200-659-6 (603-001-00-X)	67-56-1	<0.0015	Acute Tox. 3 (H301) Acute Tox. 3 (H311)	STOT SE 1 :: C>=10% STOT SE 2 :: 3%<=C<10%	01-2119433307-44-XXXX

				Acute Tox. 3 (H331) STOT SE 1 (H370) Flam. Liq. 2 (H225)		
Titanium Dioxide[in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]	236-675-5 (022-006-00-2)	13463-67-7	<0.0015	Carc. 2 (H351i)	-	01-2119489379-17-XXXX
Orthophosphoric acid	231-633-2 (015-011-00-6)	7664-38-2	<0.0015	Acute Tox. 4 (H302) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Met. Corr. 1 (H290)	Eye Irrit. 2 :: 10%<=C<25% Skin Corr. 1B :: C>=25% Skin Irrit. 2 :: 10%<=C<25%	01-2119485924-24-xxxx
Hexamethylene diisocyanate	212-485-8 (615-011-00-1)	822-06-0	<0.0015	Acute Tox. 1 (H330) Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Resp. Sens. 1 (H334) Skin Sens. 1 (H317) STOT SE 3 (H335)	Resp. Sens. 1 :: C>=0.5% Skin Sens. 1 :: C>=0.5%	01-2119457571-37-XXXX
Water	231-791-2	7732-18-5	<0.0015	-	-	[4]
Nanoparticle - identity unknown	-	UNKNOWN	<0.0015	[K]	-	-

The substance does not require registration according to REACH - Notes
NOTE [7] - No registration number is given for this substance because it is a polymer exempted from registration according to the provisions of Article 2(9) of REACH. All monomers or other substances within the polymer are registered or exempt from registration

Classification according to Regulation (EC) No. 1272/2008 [CLP] - Notes
[B] - Substance with a Community workplace exposure limit
[C] - Components with occupational exposure limits and/or biological occupational exposure limits requiring monitoring

Full text of H- and EUH-phrases: see section 16
Substances identified by a number starting “RR-“ in the CAS-field are substances for which the CAS# is not adopted in EU and we use an internal numbering system to track within our SDS software

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

Notes
See section 16 for more information

Chemical name	Notes
Titanium dioxide - 13463-67-7	V,W,10
Isophorone diisocyanate - 4098-71-9	2
m-tolylidene diisocyanate - 26471-62-5	C

Chemical name	Notes
4,4'-Methylenediphenyl diisocyanate - 101-68-8	C,2
Titanium Dioxide[in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] - 13463-67-7	V,W,10
Orthophosphoric acid - 7664-38-2	B
Hexamethylene diisocyanate - 822-06-0	2

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice If medical advice is needed, have product container or label at hand. Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air. IF exposed or concerned: Get medical advice/attention.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a doctor.

Skin contact Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor.

Ingestion Clean mouth with water. Do NOT induce vomiting. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms Prolonged contact may cause redness and irritation.

Effects of Exposure No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical No information available.

Hazardous combustion products Carbon oxides. Carbon monoxide. Carbon dioxide (CO2). Nitrogen oxides (NOx). Hydrogen cyanide. Isocyanates. Hydrochloric Acid.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Do not scatter spilled material with high pressure water streams.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Ensure adequate ventilation.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Protect from moisture.

Recommended storage temperature Keep at temperatures between 10 and 35 °C.

7.3. Specific end use(s)

Specific use(s)
Sealant.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

Other information Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits This product contains titanium dioxide in a non-respirable form. Inhalation of titanium dioxide is unlikely to occur from exposure to this product

Chemical name	European Union	United Kingdom
Limestone 1317-65-3	-	TWA: 10 mg/m³ TWA: 4 mg/m³ STEL: 30 mg/m³ STEL: 12 mg/m³
Polyvinyl chloride	-	TWA: 10 mg/m³

9002-86-2		TWA: 4 mg/m³ STEL: 30 mg/m³ STEL: 12 mg/m³
Titanium dioxide 13463-67-7	-	TWA: 10 mg/m³ TWA: 4 mg/m³ STEL: 30 mg/m³ STEL: 12 mg/m³
C.I. Pigment Black 26 68186-94-7	TWA: 0.05 mg/m³ Mn respirable fraction	TWA: 0.2 mg/m³ TWA: 0.05 mg/m³ STEL: 0.6 mg/m³ STEL: 0.15 mg/m³
Ethyl acetate 141-78-6	TWA: 734 mg/m³ TWA: 200 ppm STEL: 1468 mg/m³ STEL: 400 ppm	TWA: 734 mg/m³ TWA: 200 ppm STEL: 1468 mg/m³ STEL: 400 ppm
Isophorone diisocyanate 4098-71-9	-	TWA: 0.02 mg/m³ STEL: 0.07 mg/m³ Sen+

Chemical name	European Union	Ireland	United Kingdom
Isophorone diisocyanate 4098-71-9	-	1 µmol/mol Creatinine (urine - urinary Diamine post task)	1 mmol isocyanate-derived diamine/mol creatinine urine

Derived No Effect Level (DNEL) No information available

Derived No Effect Level (DNEL)			
Bis(2-propylheptyl)phthalate (53306-54-0)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Long term Systemic health effects	Dermal	125 mg/kg bw/d	
worker Long term Local health effects	Inhalation	5 mg/m³	
worker Long term Systemic health effects	Inhalation	35.3 mg/m³	

3-butyl-1-[4-({ 4-[(butylcarbamoyl)amino]phenyl} methyl)phenyl]urea (--)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Long term Systemic health effects	Inhalation	49.37 mg/m³	
Long term Systemic health effects	Dermal	140 mg/kg bw/d	

Titanium dioxide (13463-67-7)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Long term Local health effects	Inhalation	10 mg/m³	

Reaction mass of 3-methylphenyl diphenyl phosphate, 4-methylphenyl diphenyl phosphate, bis(3-methylphenyl) phenyl phosphate, 3-methylphenyl 4-methylphenyl phenyl phosphate and triphenyl phosphate (--)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker	Inhalation	3.5 mg/m³	

Long term Systemic health effects			
worker Short term Systemic health effects	Inhalation	28 mg/m³	
worker Long term Systemic health effects	Dermal	0.5 mg/kg bw/d	
worker Short term Systemic health effects	Dermal	4 mg/kg bw/d	

Ethyl acetate (141-78-6)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Long term Systemic health effects	Dermal	63 mg/kg bw/d	
worker Short term Systemic health effects	Inhalation	1468 mg/m³	
worker Long term Local health effects	Inhalation	734 mg/m³	
worker Short term Local health effects	Inhalation	1468 mg/m³	
worker Long term Systemic health effects	Inhalation	734 mg/m³	

Glycidoxypropyltrimethoxysilane (2530-83-8)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Long term Systemic health effects	Inhalation	70.5 mg/m³	
worker Long term Systemic health effects	Dermal	10 mg/kg bw/d	

Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Long term Systemic health effects	Inhalation	1.27 mg/m³	
worker Systemic health effects Long term	Dermal	1.8 mg/kg	

Isophorone diisocyanate (4098-71-9)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Short term Local health effects	Inhalation	0.0453 mg/m³	
worker	Inhalation	0.0453 mg/m³	

Long term Local health effects			

Reaction product of Hexamethylene diisocyanate, oligomers with Mercaptopropyltrimethoxysilane (192526-20-8)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Long term Systemic health effects	Inhalation	1.7 mg/m³	
worker Long term Systemic health effects	Dermal	4.7 mg/kg bw/d	

Hexamethylene diisocyanate homopolymer (28182-81-2)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Short term Local health effects	Inhalation	1 mg/m³	
worker Long term Local health effects	Inhalation	0.5 mg/m³	

Dibutyltin dilaurate (77-58-7)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Long term Systemic health effects worker	Dermal	0,43 mg/kg bw/d	
Short term Systemic health effects worker	Dermal	2,05 mg/kg bw/d	
Long term Systemic health effects worker	Inhalation	0,02 mg/m³	

m-tolylidene diisocyanate (26471-62-5)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Long term Systemic health effects	Inhalation	0.035 mg/m³	
worker Short term Systemic health effects	Inhalation	0.14 mg/m³	
worker Long term Local health effects	Inhalation	0.035 mg/m³	
worker Short term Local health effects	Inhalation	0.14 mg/m³	

4,4'-Methylenediphenyl diisocyanate (101-68-8)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Short term Systemic health effects	Dermal	50 mg/kg bw/d	
worker	Inhalation	0.1 mg/m³	

Short term Systemic health effects			
worker Short term Local health effects	Dermal	28700 µg/cm²	
worker Short term Local health effects	Inhalation	0.1 mg/m³	
worker Long term Systemic health effects	Inhalation	0.05 mg/m³	
worker Long term Local health effects	Inhalation	0.05 mg/m³	

Methyl alcohol (67-56-1)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Short term Systemic health effects worker	Dermal	40 mg/kg bw/d	
Short term Systemic health effects worker	Inhalation	260 mg/m³	
Short term Local health effects worker	Inhalation	260 mg/m³	
Long term Systemic health effects worker	Dermal	40 mg/kg bw/d	
worker Long term Systemic health effects	Inhalation	260 mg/m³	
Long term Local health effects worker	Inhalation	260 mg/m³	

Titanium Dioxide[in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (13463-67-7)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Long term Local health effects	Inhalation	10 mg/m³	

Hexamethylene diisocyanate (822-06-0)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
worker Long term Local health effects	Inhalation	0.035 mg/m³	
worker Short term Local health effects	Inhalation	0.07 mg/m³	

Derived No Effect Level (DNEL)			
Bis(2-propylheptyl)phthalate (53306-54-0)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor

Consumer Long term Systemic health effects	Dermal	62.5 mg/kg	
Consumer Long term Local health effects	Inhalation	1.25 mg/m³	
Consumer Long term Systemic health effects	Inhalation	8.7 mg/m³	
Consumer Long term Systemic health effects	Oral	5 mg/kg	

3-butyl-1-[4-({ 4-[(butylcarbamoyl)amino]phenyl} methyl)phenyl]urea (--)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Long term Systemic health effects	Inhalation	7.4 mg/m³	
Long term Systemic health effects	Dermal	50 mg/kg bw/d	
Long term Systemic health effects	Oral	5 mg/kg bw/d	

Titanium dioxide (13463-67-7)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Long term Systemic health effects	Oral	700 mg/kg bw/d	

Reaction mass of 3-methylphenyl diphenyl phosphate, 4-methylphenyl diphenyl phosphate, bis(3-methylphenyl) phenyl phosphate, 3-methylphenyl 4-methylphenyl phenyl phosphate and triphenyl phosphate (--)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Long term Systemic health effects	Inhalation	0.875 mg/m³	
Consumer Short term Systemic health effects	Inhalation	7 mg/m³	
Consumer Long term Systemic health effects	Dermal	0.25 mg/kg bw/d	
Consumer Short term Systemic health effects	Dermal	2 mg/kg bw/d	
Consumer Long term Systemic health effects	Oral	0.25 mg/kg bw/d	
Consumer Short term Systemic health effects	Oral	2 mg/kg bw/d	

Ethyl acetate (141-78-6)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer	Oral	4.5 mg/kg bw/d	

Long term Systemic health effects			
Consumer Long term Systemic health effects	Dermal	37 mg/kg bw/d	
Consumer Short term Systemic health effects	Inhalation	734 mg/m³	
Consumer Long term Local health effects	Inhalation	367 mg/m³	
Consumer Short term Local health effects	Inhalation	734 mg/m³	
Consumer Long term Systemic health effects	Inhalation	367 mg/m³	

Glycidoxypropyltrimethoxysilane (2530-83-8)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Long term Systemic health effects	Inhalation	17 mg/m³	
Consumer Long term Systemic health effects	Dermal	5 mg/kg bw/d	
Consumer Long term Systemic health effects	Oral	5 mg/kg bw/d	

Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Long term Systemic health effects	Inhalation	0.31 mg/m³	
Consumer Long term Systemic health effects	Dermal	0.9 mg/kg	
Consumer Long term Systemic health effects	Oral	0.18 mg/kg	

Reaction product of Hexamethylene diisocyanate, oligomers with Mercaptopropyltrimethoxysilane (192526-20-8)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Long term Systemic health effects	Inhalation	0.3 mg/m³	
Consumer Long term Systemic health effects	Dermal	1.7 mg/kg bw/d	
Consumer Long term Systemic health effects	Oral	0.2 mg/kg bw/d	

Hexamethylene diisocyanate homopolymer (28182-81-2)

4,4'-Methylenediphenyl diisocyanate (101-68-8)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Short term Systemic health effects	Dermal	25 mg/kg bw/d	
Consumer Short term Systemic health effects	Inhalation	0.05 mg/m³	
Consumer Short term Systemic health effects	Oral	20 mg/kg bw/d	
Consumer Short term Local health effects	Dermal	17200 µg/cm²	
Consumer Short term Local health effects	Inhalation	0.05 mg/m³	
Consumer Long term Systemic health effects	Inhalation	0.025 mg/m³	
Consumer Long term Local health effects	Inhalation	0.025 mg/m³	

Methyl alcohol (67-56-1)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Short term Systemic health effects	Dermal	8 mg/kg bw/d	
Consumer Short term Systemic health effects	Oral	8 mg/kg bw/d	
Consumer Long term Local health effects	Inhalation	50 mg/m³	
Consumer Long term Systemic health effects	Oral	8 mg/kg bw/d	
Consumer Long term Systemic health effects	Inhalation	50 mg/m³	
Consumer Long term Systemic health effects	Dermal	50 mg/kg bw/d	

Titanium Dioxide[in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (13463-67-7)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Consumer Long term Systemic health effects	Oral	700 mg/kg bw/d	

Water (7732-18-5)			
Type	Exposure route	Derived No Effect Level (DNEL)	Safety factor
Long term Systemic health effects	Inhalation	5.68 mg/m³	

Long term Systemic health effects	Dermal	1.63 mg/kg bw/d	
Long term Systemic health effects	Oral	1.63 mg/kg bw/d	

Predicted No Effect Concentration (PNEC)

Predicted No Effect Concentration (PNEC)	
Bis(2-propylheptyl)phthalate (53306-54-0)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater sediment	0.939 g/kg
Marine sediment	0.0939 mg/kg
Soil	26.5 mg/kg

3-butyl-1-[4-({ 4-[(butylcarbamoyl)amino]phenyl} methyl)phenyl]urea (--)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.1 mg/l
Marine water	0.01 mg/l
Sewage treatment plant	10 mg/l
Freshwater sediment	76.36 mg/kg dry weight
Marine sediment	7.636 mg/kg dry weight
Soil	15.15 mg/kg dry weight

Titanium dioxide (13463-67-7)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Marine water	0.0184 mg/l
Freshwater sediment	1000 mg/kg
Freshwater	0.184 mg/l
Marine sediment	100 mg/kg
Soil	100 mg/kg
Microorganisms in sewage treatment	100 mg/l
Freshwater - intermittent	0.193 mg/l

Reaction mass of 3-methylphenyl diphenyl phosphate, 4-methylphenyl diphenyl phosphate, bis(3-methylphenyl) phenyl phosphate, 3-methylphenyl 4-methylphenyl phenyl phosphate and triphenyl phosphate (--)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.002 mg/l
Marine water	0 mg/l
Freshwater - intermittent	0.005 mg/l
Marine water - intermittent	0.001 mg/l
Freshwater sediment	3.43 mg/kg dry weight
Marine sediment	0.343 mg/kg dry weight
Microorganisms in sewage treatment	No hazard identified
Soil	0.68 mg/kg dry weight

Ethyl acetate (141-78-6)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.24 mg/l
Marine water	0.024 mg/l
Freshwater sediment	1.15 mg/kg
Marine sediment	0.115 mg/kg
Soil	0.148 mg/kg
Microorganisms in sewage treatment	650 mg/l

Glycidoxypropyltrimethoxysilane (2530-83-8)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.45 mg/l
Marine water	0.045 mg/l

Freshwater sediment	1.6 mg/kg dry weight
Sewage treatment plant	8.2 mg/l
Soil	0.063 mg/kg dry weight
Marine sediment	0.16 mg/kg dry weight

Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.0022 mg/l
Marine water	0.00022 mg/l
Freshwater - intermittent	0.009 mg/l
Freshwater sediment	1.05 mg/kg
Marine sediment	0.11 mg/kg
Soil	0.21 mg/kg
Sewage treatment plant	1 mg/l

Isophorone diisocyanate (4098-71-9)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	60 µg/l
Marine water	6 µg/l
Freshwater - intermittent	40 µg/l
Freshwater sediment	218.9 mg/kg dry weight
Marine sediment	21.89 mg/kg dry weight
Soil	44.01 mg/kg dry weight
Microorganisms in sewage treatment	10 mg/l

Reaction product of Hexamethylene diisocyanate, oligomers with Mercaptopropyltrimethoxysilane (192526-20-8)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.1 mg/l
Marine water	0.01 mg/l
Sewage treatment plant	100 mg/l
Freshwater sediment	0.428 mg/kg dry weight
Marine sediment	0.043 mg/kg dry weight

Hexamethylene diisocyanate homopolymer (28182-81-2)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	127 µg/l
Marine water	12.7 µg/l
Freshwater - intermittent	1270 µg/l
Freshwater sediment	266.7 g/kg
Soil	53.2 g/kg
Sewage treatment plant	38.28 mg/l

Dibutyltin dilaurate (77-58-7)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0,463 µg/l
Freshwater sediment	0,05 mg/kg dry weight
Marine water	0,0463 µg/l
Marine sediment	0,005 mg/kg dry weight
Microorganisms in sewage treatment	100 mg/l

m-tolylidene diisocyanate (26471-62-5)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	0.013 mg/l
Marine water	0.00125 mg/l
Microorganisms in sewage treatment	>1 mg/l
Soil	>1 mg/kg dry weight

4,4'-Methylenediphenyl diisocyanate (101-68-8)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Freshwater	1 mg/l
Marine water	0.1 mg/l

Soil	1 mg/kg dry weight
Sewage treatment plant	1 mg/l
Freshwater - intermittent	10 mg/l

Titanium Dioxide[in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (13463-67-7)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Marine water	0.0184 mg/l
Freshwater sediment	1000 mg/kg
Freshwater	0.184 mg/l
Marine sediment	100 mg/kg
Soil	100 mg/kg
Microorganisms in sewage treatment	100 mg/l
Freshwater - intermittent	0.193 mg/l

Hexamethylene diisocyanate (822-06-0)	
Environmental compartment	Predicted No Effect Concentration (PNEC)
Microorganisms in sewage treatment	8.42 mg/l

8.2. Exposure controls

Engineering controls Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Eye protection must conform to standard EN 166.

Hand protection Nitrile rubber. Butyl rubber. Glove thickness > 0.4 mm. The breakthrough time of the gloves depends on the material and the thickness as well as the temperature. The breakthrough time for the mentioned glove material is in general greater than 60 min. Gloves must conform to standard EN 374

Skin and body protection Suitable protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Recommended filter type: Wear a respirator conforming to EN 140 with Type A/P2 filter or better. Organic gases and vapours filter conforming to EN 14387.

Environmental exposure controls No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Solid
Appearance Paste
Colour Brown
Odour Characteristic.

Property	Values	Remarks • Method
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	Not applicable .	
Flammability	No data available	
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	> 61 °C	
Autoignition temperature	No data available	None known
Decomposition temperature		None known
pH	No data available	Not applicable.
pH (as aqueous solution)	No data available	None known
Kinematic viscosity	approx 465000 mm²/s	
Dynamic viscosity	approx 600000 mPa s	

Water solubility	No data available.	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Vapour pressure	No data available	None known
Relative density	No data available	None known
Bulk Density	No data available	
Liquid Density	1.29	
Relative vapour density	No data available	None known
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	

9.2. Other information

Solid content (%)	No information available	
VOC content		No data available

9.2.1. Information with regards to physical hazard classes
Not applicable

9.2.2. Other safety characteristics
No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid Product cures with moisture. Protect from moisture.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products None under normal use conditions. Stable under recommended storage conditions.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure

Product Information

Inhalation Based on available data, the classification criteria are not met.

Eye contact Based on available data, the classification criteria are not met.

Skin contact Specific test data for the substance or mixture is not available. Causes mild skin irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).

Ingestion Specific test data for the substance or mixture is not available. May cause additional affects as listed under "Inhalation".

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Prolonged contact may cause redness and irritation.

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) >5000 mg/kg
ATEmix (dermal) 9,084.30 mg/kg
ATEmix (inhalation-gas) >20000 ppm
ATEmix (inhalation-dust/mist) >5 mg/l
ATEmix (inhalation-vapour) >20 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Limestone	>5000 mg/kg (Rattus)	-	-
Bis(2-propylheptyl)phthalate	LD50 > 5000 mg/kg (Rattus) OECD 401	LD50 > 2000 mg/kg (Oryctolagus cuniculus) OECD 402	> 20.5 mg/L (Rat) 1 h
Polyvinyl chloride	= 500 mg/kg (Rat)	-	-
2,2-bis[[(1-oxopentyl)oxy]methyl]propane-1,3-diyl divalerate	LD0 > 2000 mg/kg (Rat) read-across from supporting substance (structural analogue)	LD0 > 2000 mg/kg (Rat) read-across from supporting substance (structural analogue)	-
Diisononyl 1,2-cyclohexanedicarboxylate	LD50 >5000 mg/kg Rat (OECD 423)	LD50 >2000 mg/Kg (Rattus) (OECD 402)	-
3-butyl-1-[4-({ 4-[(butylcarbamoyl)amino]phenyl} methyl)phenyl]urea	>2000 mg/Kg (Rattus) (OECD 401)	>2000 mg/Kg (Rattus) (OECD 402)	-
Hydrocarbons, C12-C15, n-alkanes, isoalkanes, cyclics, < 2% aromatics	LD50 >5000 mg/Kg (Rattus) (OECD 401)	LD50 >5000 mg/Kg (Oryctolagus cuniculus) (OECD 402)	LC50 >5000 mg/m³ (OECD 403)
Titanium dioxide	>10000 mg/kg (Rattus)	LD50 > 5000 mg/Kg	= 5.09 mg/L (Rattus) 4 h
C.I. Pigment Black 26	>10000 mg/kg Rat	-	-
Reaction mass of 3-methylphenyl diphenyl phosphate, 4-methylphenyl diphenyl phosphate, bis(3-methylphenyl) phenyl phosphate, 3-methylphenyl	>5000 mg/Kg (Rattus)	>2000 mg/Kg (Rattus) (OECD 402)	-

4-methylphenyl phenyl phosphate and triphenyl phosphate			
Aromatic Polyisocyanate	LD50 >2000 mg/Kg (Rattus)	-	LC50 >3.820 mg/L (Rattus) 4h dust/mist
Octadecyl 3-(3',5'-di-tert-butyl-4'-hydroxyphenyl)propionate	>5000 mg/kg (Rattus)	> 2000 mg/kg (Oryctolagus cuniculus)	>1800 mg/L (Rattus) 4 h
Ethyl acetate	=5620 mg/kg (Rattus)	> 18000 mg/kg (Oryctolagus cuniculus) > 20 mL/kg (Oryctolagus cuniculus)	LC0 29.3 mg/l air
Iron oxide yellow	>10000 mg/kg bw Rat	-	-
Glycidoxypropyltrimethoxysilane	=8025 mg/kg (Rattus)	= 4250 mg/kg (Oryctolagus cuniculus)	>5.3 mg/L (Rattus) 4 h
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	LD50 = 3230 mg/Kg (Rattus) (OECD 401)	LD50 >3170 mg/Kg (Rattus) (OECD 402)	-
Isophorone diisocyanate	=4814 mg/kg (Rattus)	LD50 > 2000 mg/kg	=0.135 mg/L (Rattus) 4 h
Reaction product of Hexamethylene diisocyanate, oligomers with Mercaptopropyltrimethoxysilane	>2000 mg/Kg (Rattus) (OECD 423)	>2000 mg/Kg (Rattus) (OECD 402)	-
Hexamethylene diisocyanate homopolymer	LD50 >5000 mg/Kg (Rattus)	LD50 >2000 mg/Kg (Rattus)	=1.5 mg/L (Rattus) 4h
Salicylic acid	=891 mg/kg (Rattus)	> 2 g/kg (Rattus)	>900 mg/m³ (Rattus) 1 h
Iron oxide (Fe2O3)	>5000 mg/kg (Rattus) EU Method B.1	-	-
Dibutyltin dilaurate	=2071 mg/Kg (Rattus) (OECD 401)	>2000 mg/kg (Rattus) (OECD 402)	-
m-tolylidene diisocyanate	=3060 mg/kg (Rattus)	= 10000 mg/kg (Oryctolagus cuniculus)	=0.107 mg/L 4h (Vapour)(Rattus) (OECD 403) =0.48 mg/L 1h (Vapour)(Rattus) (OECD 403)
4,4'-Methylenediphenyl diisocyanate	=31600 mg/kg (Rattus) = 9200 mg/kg (Rattus)	LD 50 > 9400 mg/kg (Oryctolagus cuniculus) OECD 402	1.5 mg/L (Rattus) 4 h
Methyl alcohol	=2500 mg/kg (Rattus)	200-1000 mg/kg (Oryctolagus cuniculus)	=22500 ppm (Rattus) 8 h = 64000 ppm (Rattus) 4 h
Titanium Dioxide[in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]	> 5000 mg/kg (Rattus) OECD 425	LD50 > 10000 mg/Kg	= 5.09 mg/L (Rattus) 4 h
Orthophosphoric acid	=1530 mg/kg (Rattus)	= 2740 mg/kg (Oryctolagus cuniculus)	>850 mg/m³ (Rattus) 1 h
Hexamethylene diisocyanate	=746 mg/kg (Rattus)	>7000 mg/Kg (Rattus) (OECD 402)	=0.124 mg/L (Rattus) 4 h (Vapour)
Water	> 90 mL/kg (Rat)	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Classification based on data available for ingredients. Causes mild skin irritation.

Titanium dioxide (13463-67-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 404: Acute Dermal Irritation/Corrosion	Rabbit	Dermal			Non-irritant

Hexamethylene diisocyanate homopolymer (28182-81-2)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 404: Acute Dermal Irritation/Corrosion	Rabbit	Dermal		4 hours	Non-irritant

Hexamethylene diisocyanate (822-06-0)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 404: Acute Dermal Irritation/Corrosion	Rabbit	Dermal			Irritant

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Titanium dioxide (13463-67-7)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	Eye			Non-irritant

Glycidoxypropyltrimethoxysilane (2530-83-8)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	Eye			Eye Damage

Hexamethylene diisocyanate homopolymer (28182-81-2)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	eye		4 hours	Non-irritant

4,4'-Methylenediphenyl diisocyanate (101-68-8)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	Eye	0.1 mL	24 hours	Non-irritant

Hexamethylene diisocyanate (822-06-0)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 405: Acute Eye Irritation/Corrosion	Rabbit	eye			Irritant

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Component Information
Ethyl acetate (141-78-6)

Method	Species	Results
OECD Test No. 474: Mammalian Erythrocyte	in vivo Hamster	Negative

Micronucleus Test		
OECD Test No. 471: Bacterial Reverse Mutation Test	in vitro Salmonella typhimurium	Negative
OECD Test No. 473: In vitro Mammalian Chromosome Aberration Test	in vitro Hamster Ovary	Negative

Titanium Dioxide[in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (13463-67-7)

Method	Species	Results
OECD Test No. 471: Bacterial Reverse Mutation Test	in vitro	Not mutagenic in AMES Test
OECD Test No. 476: In vitro Mammalian Cell Gene Mutation Test	Mammalian cells, in vitro	Negative
OECD Test No. 473: In vitro Mammalian Chromosome Aberration Test	in vitro	Negative
OECD Test No. 474: Mammalian Erythrocyte Micronucleus Test	Mouse, in vivo: Inhalation	Negative
OECD Test No. 474: Mammalian Erythrocyte Micronucleus Test	Rat, in vivo: Oral	Negative

Chemical name	European Union
Dibutyltin dilaurate	Muta. 2

Carcinogenicity Based on available data, the classification criteria are not met.

Component Information
4,4'-Methylenediphenyl diisocyanate (101-68-8)

Method	Species	Results
OECD Test No. 453: Combined Chronic Toxicity/Carcinogenicity Studies	Rat	Limited evidence of a carcinogenic effect

Chemical name	European Union
m-tolylidene diisocyanate	Carc. 2
4,4'-Methylenediphenyl diisocyanate	Carc. 2
Titanium Dioxide[in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]	Carc. 2

Reproductive toxicity Based on available data, the classification criteria are not met.

Chemical name	European Union
Salicylic acid	Repr. 2
Dibutyltin dilaurate	Repr. 1B

Titanium Dioxide[in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (13463-67-7)

Method	Species	Results
OECD Test No. 414: Pre-natal Development Toxicity Study	Rat	Based on available data, the classification criteria are not met NOAEL 1000 mg/kg bw/d

STOT - single exposure Based on available data, the classification criteria are not met.

Hexamethylene diisocyanate homopolymer (28182-81-2)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 403: Acute Inhalation Toxicity	Rat	Inhalation vapour	3 mg/m³	6 hours	NOAEL

STOT - repeated exposure Based on available data, the classification criteria are not met.

Hexamethylene diisocyanate homopolymer (28182-81-2)

Method	Species	Exposure route	Effective dose	Exposure time	Results
OECD Test No. 413: Sub-chronic Inhalation Toxicity: 90-day Study	Rat	Inhalation	3.3 mg/l/6h/d	90 days	NOAEL

Aspiration hazard Based on available data, the classification criteria are not met.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Harmful to aquatic life.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea	M-Factor	M-Factor (long-term)
Limestone 1317-65-3	CE50 (72h) >200mg/L Algae (Desmondesmus subspicatus)	CL50 (96h)>10000mg/L (Oncorhynchus mykiss)	-	CE50 (48h) >1000 mg/L Daphnia Magna		
Bis(2-propylheptyl)phthalate 53306-54-0	EC50 (72h) > 100 mg/l (Desmodesmus subspicatus) EU Method C.3	LC50 (96h) > 10000 mg/l (Danio rerio) OECD 203	-	EC50 (48h) > 100 mg/l (Daphnia magna) EU Method C.2		
2,2-bis[[(1-oxopentyl)oxy]methyl]propane-1,3-diyl divalerate 15834-04-5	LC0 (72h) > 100 mg/l (Scenedesmus subspicatus), OECD Test No. 201, read-across from supporting substance (structural analogue)	LC0 (96h) > 150 mg / l (Brachydanio rerio) OECD Test No. 203 , read-across from supporting substance (structural analogue)	-	LC50 (48h) > 100 mg/l (Daphnia magna), OECD Test No. 202, read-across from supporting substance (structural analogue)		
Diisononyl 1,2-cyclohexanedicarboxylate 166412-78-8	EC50 >100mg/L (Scenedesmus subspicatus) Static (OECD 201)	LC50 (96h) >100mg/L (Brachydanio rerio) Static (OECD 203)	-	EC50 (48h) >100 mg/L (Daphnia magna) Static (OECD 202)		
3-butyl-1-[4-({4-[(butylcarbamoyl)amino]phenyl}methyl)phenyl]urea	-	LC50 (96h) >120 mg/L Danio rerio (OECD 203)	-	EC50 (48h) >100 mg/L Daphnia magna (OECD 202)		

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Hydrocarbons, C12-C15, n-alkanes, isoalkanes, cyclics, < 2% aromatics RR-100255-7	ErL50 (72h) > 10000 mg/l (Skeletonema costatum -ISO 10253)	LL50 (96h) > 1028 mg/l (Scophthalmus maximus -OECD 203)	-	LL50 (48h) > 3193 mg/l (Acartia tonsa - ISO 14669)		
Titanium dioxide 13463-67-7	LC50 (96h) >10000 mg/l (Cyprinodon variegatus) OECD 203	-	-	-		
C.I. Pigment Black 26 68186-94-7	-	96H >100000 mg/l	-	-		
Octadecyl 3-(3',5'-di-tert-butyl-4'-hydroxyphenyl)propionate 2082-79-3	EC50: >30mg/L (72h, Desmodesmus subspicatus)	LC50: >100mg/L (96h, Lepomis macrochirus)	-	EC50: >100mg/L (24h, Daphnia magna)		
Ethyl acetate 141-78-6	EC50: =3300mg/L (48h, Desmodesmus subspicatus)	LC50: =484mg/L (96h, Oncorhynchus mykiss) LC50: 352 - 500mg/L (96h, Oncorhynchus mykiss) LC50: 220 - 250mg/L (96h, Pimephales promelas)	EC50 = 1180 mg/L 5 min EC50 = 1500 mg/L 15 min EC50 = 5870 mg/L 15 min EC50 = 7400 mg/L 2 h	EC50: =560mg/L (48h, Daphnia magna)		
Iron oxide yellow 51274-00-1	-	96H >100000 mg/L	-	48H >100 mg/L Daphnia		
Glycidoxypropyltrimethoxysilane 2530-83-8	EC50 (96hr): 350 mg/l Pseudokirchneriella subcapitata	LC50 (96h) = 55 mg/L (Cyprinus carpio) OECD 203	-	EC50 (48h) =473 mg/L Daphnia magna		
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate 1065336-91-5	EC50 (72h): 1.68 mg/l (Desmodesmus subspicatus) OECD 201	LC50 (96h): 0.9 mg/L (Brachydanio rerio) OECD 203	EC20 (3h)>= 100 mg/l OECD 209	-	1	1
Isophorone diisocyanate 4098-71-9	EC50: =118.7mg/L (72h, Desmodesmus subspicatus)	LC50: =1.8mg/L (48h, Leuciscus idus)	-	EC50: =83.7mg/L (24h, Daphnia magna)		
Reaction product of Hexamethylene diisocyanate, oligomers with Mercaptopropyltrimethoxysilane 192526-20-8	EC50 (72h) >100 mg/L Algae (Raphidocelis subcapitata) (OECD 201)	LC50 (96h)>100 mg/L Fish (Brachydanio rerio) (OECD 203)	-	EC50 (48h) >100 mg/L Daphnia magna (OECD 202)		
Hexamethylene diisocyanate homopolymer 28182-81-2	ErC50 > 1000 mg/l (0-72 h static / Desmodesmus	LC50 8,9 mg/l (Brachydanio rerio)	-	EC50 127 mg/l (48 h static / EU C.2) Daphnia magna		

	subspicatus / EU C.3)					
Salicylic acid 69-72-7	EC50 (72 h) > 100 mg/L (Scenedesmus subspicatus) OECD 201	LC50 (96)> 100 mg/L (Pimephales promelas)	-	EC50 48 h = 870 mg/L (Daphnia magna Static)		
Iron oxide (Fe2O3) 1309-37-1	-	LC0 (96h) > 50000 mg/L (Danio rerio)	-	EC50 (48h) > 100 mg/L (Daphnia Magna) OECD 202		
Dibutyltin dilaurate 77-58-7	EC50 (72h) >= 1 mg/l (Desmodesmus subspicatus)	LC50 (96h) = 3.1 mg/l (Danio rerio)	-	EC50 (48h) = 0.463 mg/l (Daphnia magna)		
4,4'-Methylenediphenyl diisocyanate 101-68-8	ErC50 (72h) >1640 mg/L Algae (scenedesmus subspicatus) (OECD 201)	>1000 mg/l Danio rerio	-	EC50 (24H) >1000 mg/L Daphnia magna		
Methyl alcohol 67-56-1	-	LC50 96 h > 100 mg/L (Pimephales promelas static)	EC50 = 39000 mg/L 25 min EC50 = 40000 mg/L 15 min EC50 = 43000 mg/L 5 min	-		
Titanium Dioxide[in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] 13463-67-7	LC50 (96h) >10000 mg/l (Cyprinodon variegatus) OECD 203	-	-	-		
Orthophosphoric acid 7664-38-2	-	LC50: 3 - 3.5mg/L (96h, Gambusia affinis)	-	EC50: =4.6mg/L (12h, Daphnia magna)		
Hexamethylene diisocyanate 822-06-0	-	LC50: =26.1mg/L (96h, Brachydanio rerio)	EC50 = 15.7 mg/L 30 min EC50 = 25.5 mg/L 15 min EC50 = 53.2 mg/L 5 min	-		

12.2. Persistence and degradability

Persistence and degradability No information available.

3-butyl-1-[4-({ 4-[(butylcarbamoyl)amino]phenyl} methyl)phenyl]urea (--
)

Method	Exposure time	Value	Results
OECD Guideline 310	28 days	0.4%	Not readily biodegradable
OECD Test No. 301B: Ready Biodegradability: CO2 Evolution Test (TG 301 B)	28 days	11%	Not readily biodegradable

Reaction mass of 3-methylphenyl diphenyl phosphate, 4-methylphenyl diphenyl phosphate, bis(3-methylphenyl) phenyl phosphate, 3-methylphenyl 4-methylphenyl phenyl phosphate and triphenyl phosphate (--
)

Method	Exposure time	Value	Results
OECD Test No. 301C: Ready Biodegradability: Modified MITI Test (I) (TG 301 C)	28 days	75%	Readily biodegradable

Aromatic Polyisocyanate (53317-61-6)

Method	Exposure time	Value	Results
OECD Test No. 301F: Ready Biodegradability: Manometric Respirometry Test (TG 301 F)		biodegradation	34 % Not readily biodegradable

Isophorone diisocyanate (4098-71-9)

Method	Exposure time	Value	Results
EU C.4-D	28 days	0%	Not readily biodegradable

Reaction product of Hexamethylene diisocyanate, oligomers with Mercaptopropyltrimethoxysilane (192526-20-8)

Method	Exposure time	Value	Results
OECD Test No. 301C: Ready Biodegradability: Modified MITI Test (I) (TG 301 C)	28 days	3.85%	Not readily biodegradable

Salicylic acid (69-72-7)

Method	Exposure time	Value	Results
OECD Test No. 301C: Ready Biodegradability: Modified MITI Test (I) (TG 301 C)	14 days	Biodegradation 88%	Readily biodegradable

4,4'-Methylenediphenyl diisocyanate (101-68-8)

Method	Exposure time	Value	Results
OECD Test No. 302C: Inherent Biodegradability: Modified MITI Test (II)	28 days	0% biodegradation	Not readily biodegradable

Titanium Dioxide[in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] (13463-67-7)

Method	Exposure time	Value	Results
			The methods for determining biodegradability are not applicable to inorganic substances

12.3. Bioaccumulative potential

Bioaccumulation

Component Information

Chemical name	Partition coefficient
Limestone	0.9
Bis(2-propylheptyl)phthalate	>6
Diisononyl 1,2-cyclohexanedicarboxylate	10
3-butyl-1-[4-({ 4-[(butylcarbamoyl)amino]phenyl} methyl)phenyl]urea	5.5
Reaction mass of 3-methylphenyl diphenyl phosphate, 4-methylphenyl diphenyl phosphate, bis(3-methylphenyl) phenyl phosphate, 3-methylphenyl 4-methylphenyl phenyl phosphate and triphenyl phosphate	4.5
Octadecyl 3-(3',5'-di-tert-butyl-4'-hydroxyphenyl)propionate	13.5
Ethyl acetate	0.73
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl	2.77

sebacate	
Hexamethylene diisocyanate homopolymer	9.81
Salicylic acid	2.25
Dibutyltin dilaurate	4.44
m-tolylidene diisocyanate	3.43
4,4'-Methylenediphenyl diisocyanate	4.51
Methyl alcohol	-0.77
Orthophosphoric acid	-0.9

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB above the threshold of declaration.

Chemical name	PBT and vPvB assessment
Bis(2-propylheptyl)phthalate	The substance is not PBT / vPvB
2,2-bis[[(1-oxopentyl)oxy]methyl]propane-1,3-diyl divalerate	The substance is not PBT / vPvB
Diisononyl 1,2-cyclohexanedicarboxylate	The substance is not PBT / vPvB
Hydrocarbons, C12-C15, n-alkanes, isoalkanes, cyclics, < 2% aromatics	The substance is not PBT / vPvB
Titanium dioxide	The substance is not PBT / vPvB
C.I. Pigment Black 26	The substance is not PBT / vPvB
Octadecyl 3-(3',5'-di-tert-butyl-4'-hydroxyphenyl)propionate	The substance is not PBT / vPvB
Ethyl acetate	The substance is not PBT / vPvB
Iron oxide yellow	The substance is not PBT / vPvB
Glycidoxypropyltrimethoxysilane	The substance is not PBT / vPvB
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	The substance is not PBT / vPvB
Isophorone diisocyanate	The substance is not PBT / vPvB
Hexamethylene diisocyanate homopolymer	The substance is not PBT / vPvB
Salicylic acid	The substance is not PBT / vPvB
Iron oxide (Fe2O3)	The substance is not PBT / vPvB
Dibutyltin dilaurate	The substance is not PBT / vPvB
m-tolylidene diisocyanate	The substance is not PBT / vPvB
4,4'-Methylenediphenyl diisocyanate	The substance is not PBT / vPvB
Methyl alcohol	The substance is not PBT / vPvB
Titanium Dioxide[in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]	The substance is not PBT / vPvB
Orthophosphoric acid	The substance is not PBT / vPvB
Hexamethylene diisocyanate	The substance is not PBT / vPvB

12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.
European Waste Catalogue	08 04 10 waste adhesives and sealants other than those mentioned in 08 04 09
Other information	Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	-
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

IMDG

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Marine pollutant	NP
14.6 Special precautions for user	
Special Provisions	None
14.7 Maritime transport in bulk according to IMO instruments	
Transport in bulk according to Annex II of MARPOL and the IBC Code	Not applicable

Air transport (ICAO-TI / IATA-DGR)

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

Section 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

European Union

Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACh) Regulation (EC 1907/2006)

SVHC: Substances of Very High Concern for Authorisation:
This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

EU-REACH (1907/2006) - Annex XVII - Substances subject to Restriction
This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

Substance subject to authorisation per REACH Annex XIV
This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)

Chemical name	European Export/Import Restrictions per (EC) 649/2012 - Annex Number
Dibutyltin dilaurate	I.1

Chemical name	Lower-tier requirements (tons)	Upper-tier requirements (tons)
Methyl alcohol - 67-56-1	500	5000

Ozone-depleting substances (ODS) regulation (EC) 1005/2009
Not applicable

Persistent Organic Pollutants
Not applicable

REGULATION (EU) 2019/1148 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 June 2019 on the marketing and use of explosives precursors
Not applicable

National regulations

15.2. Chemical safety assessment

Chemical Safety Assessments have been carried out by the Reach registrants for substances registered at >10 tpa. No Chemical Safety Assessment has been carried out for this mixture

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3
EUH066 - Repeated exposure may cause skin dryness or cracking
H225 - Highly flammable liquid and vapour
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H330 - Fatal if inhaled
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335 - May cause respiratory irritation
H336 - May cause drowsiness or dizziness
H361f - Suspected of damaging fertility
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
H411 - Toxic to aquatic life with long lasting effects
H412 - Harmful to aquatic life with long lasting effects
H413 - May cause long lasting harmful effects to aquatic life

Notes relating to the identification, classification and labelling of substances
Note V: If the substance is to be placed on the market as fibres (with diameter < 3 µm, length > 5 µm and aspect ratio ≥ 3:1) or particles of the substance fulfilling the WHO fibre criteria or as particles with modified surface chemistry, their hazardous properties must be evaluated in accordance with Title II of this Regulation, to assess whether a higher category (Carc. 1B or 1A) and/or additional routes of exposure (oral or dermal) should be applied
Note W: It has been observed that the carcinogenic hazard of this substance arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung

Notes relating to the classification and labelling of mixtures

Note 2 : The concentration of isocyanate stated is the percentage by weight of the free monomer calculated with reference to the total weight of the mixture

Note 10: The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter ≤ 10 µm

Legend

TWA	TWA (time-weighted average)
STEL	STEL (Short Term Exposure Limit)
Ceiling	Ceiling Limit Value
Sk*	Skin designation
SVHC	Substance(s) of Very High Concern
PBT	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
vPvB	Very Persistent and very Bioaccumulative (vPvB) Chemicals
STOT RE	Specific target organ toxicity - Repeated exposure
STOT SE	Specific target organ toxicity - Single exposure
EWC	European Waste Catalogue
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG	International Maritime Dangerous Goods (IMDG)
IATA	International Air Transport Association (IATA)
RID	Regulations concerning the International Transport of Dangerous Goods by Rail

Key literature references and sources for data

No information available

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Indication of changes

Revision note	SDS sections updated, 1, 3, 9, 16.
Training Advice	AS FROM 24 AUGUST 2023 ADEQUATE TRAINING IS REQUIRED BEFORE INDUSTRIAL OR PROFESSIONAL USE For further information, please contact: https://www.safeusediisocyanates.eu/
Further information	No information available

This SDS complies with the requirements of UK REACH Regulations SI 2019/758 (as amended)

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet