

# **Safety Data Sheet**

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This Safety Data Sheet has been prepared in accordance with the South African National Standard SANS 10234:2008.

# **SECTION 1: Identification**

### 1.1. Product identifier

3M Polyurethane Sealant 540 (Various Colours)

 Product Identification
 Numbers

 DS-2729-9143-3
 DS-2729-9147-4
 DS-2729-9151-6

#### 1.2. Recommended use and restrictions on use

#### **Recommended use**

Adhesive, General purpose adhesive sealant

#### 1.3. Supplier's details

Address:	3M South Africa (Pty) Ltd, Private Bag X926, Rivonia 2128
Telephone:	011 806 2000
E Mail:	Not available.
Website:	www.3m.co.za

#### 1.4. Emergency telephone number

011 806 2000

# **SECTION 2: Hazard identification**

### 2.1. Classification of the substance or mixture

Skin Corrosion/Irritation: Category 3.Carcinogenicity: Category 2.Specific Target Organ Toxicity (single exposure): Category 1.Specific Target Organ Toxicity (repeated exposure): Category 1.Acute Aquatic Toxicity: Category 3.

### 2.2. Label elements

Signal word DANGER!

**Symbols** Health Hazard |

## Pictograms



HAZARD STATEMENTS:	
H316	Causes mild skin irritation.
H351	Suspected of causing cancer.
H370	Causes damage to organs: sensory organs
H372	Causes damage to organs through prolonged or repeated exposure: nervous system
Н373	May cause damage to organs through prolonged or repeated exposure: sensory organs
H402	Harmful to aquatic life.

## PRECAUTIONARY STATEMENTS

Prevention: P260 P280E	Do not breathe dust/fume/gas/mist/vapours/spray. Wear protective gloves.		
<b>Response:</b> P308 + P311	IF exposed or concerned: Call a POISON CENTER or doctor/physician.		
<b>Disposal:</b> P501	Dispose of contents/container in accordance with applicable local/regional/national/international regulations.		
2.3 Other hazards			

## 2.3. Other hazards

None known.

# **SECTION 3: Composition/information on ingredients**

This material is a mixture.

Ingredient	CAS Nbr	% by Wt
Urethane Polymer	Trade Secret	15 - 40
Poly(Vinyl Chloride)	9002-86-2	20 - 35
Plasticizer	Trade Secret	10 - 30
Calcium Oxide	1305-78-8	< 5
Titanium dioxide	13463-67-7	< 5
Xylene	1330-20-7	< 5
29H,31H-Phthalocyaninato(2-)-	Trade Secret	< 5
N29,N30,N31,N32 copper		
diiron trioxide	1309-37-1	< 5
Triiron tetraoxide	1317-61-9	< 5
Distillates (petroleum), hydrotreated light	64742-47-8	< 5

Diisononyl Phthalate	28553-12-0	< 5
Ethylbenzene	100-41-4	< 5
Chromium oxide (Cr2O3)	1308-38-9	< 1
Iron hydroxide oxide	20344-49-4	<= 1.99
Carbon black	1333-86-4	< 0.3
cobalt chromite blue green spinel	68187-11-1	<= 0.13
Reaction mass of Bis(1,2,2,6,6-pentamethyl-	915-687-0	< 0.1
4-piperidyl) sebacate and Methyl 1,2,2,6,6-		
pentamethyl-4-piperidyl sebacate		
4,4'-methylenediphenyl diisocyanate	101-68-8	< 0.1

## **SECTION 4: First aid measures**

## 4.1. Description of first aid measures

#### Inhalation

Remove person to fresh air. If you feel unwell, get medical attention.

#### Skin contact

Wash with soap and water. If signs/symptoms develop, get medical attention.

#### Eye contact

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

#### If swallowed

Rinse mouth. If you feel unwell, get medical attention.

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

See Section 11.1 Information on toxicological effects

### **4.3. Indication of any immediate medical attention and special treatment required** Not applicable

## **SECTION 5: Fire-fighting measures**

## 5.1. Suitable extinguishing media

In case of fire: Use a carbon dioxide or dry chemical extinguisher to extinguish.

# 5.2. Special hazards arising from the substance or mixture

None inherent in this product.

# Hazardous Decomposition or By-Products

Substance Carbon monoxide. Carbon dioxide. Hydrogen Chloride Hydrogen cyanide. Oxides of nitrogen. Oxides of sulphur.

## Condition

During combustion. During combustion. During combustion. During combustion. During combustion. During combustion.

#### 5.3. Special protective actions for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus,

bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

## **SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

## **6.2.** Environmental precautions

Avoid release to the environment.

## 6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

# **SECTION 7: Handling and storage**

## 7.1. Precautions for safe handling

Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Use personal protective equipment (eg. gloves, respirators...) as required.

## 7.2. Conditions for safe storage including any incompatibilities

Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from heat. Store away from amines.

## **SECTION 8: Exposure controls/personal protection**

## 8.1 Control parameters

#### **Occupational exposure limits**

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Ethylbenzene	100-41-4	ACGIH	TWA:20 ppm	A3: Confirmed animal
				carcin.
Ethylbenzene	100-41-4	South Africa	TWA(8 hours):435	
		RELs	mg/m3(100 ppm);STEL(15	
			minutes):545 mg/m3(125 ppm)	
Free isocyanates	101-68-8	South Africa	TWA(as NCO)(8 hours):0.02	
		CLs	mg/m3;STEL(as NCO)(15	
			minutes):0.07 mg/m3	
4,4'-methylenediphenyl	101-68-8	ACGIH	TWA:0.005 ppm	
diisocyanate				
4,4'-methylenediphenyl	101-68-8	South Africa	TWA(8 hours):0.02	
diisocyanate		RELs	mg/m3;STEL(15	
			minutes):0.07 mg/m3	
Calcium Oxide	1305-78-8	ACGIH	TWA:2 mg/m3	
Calcium Oxide	1305-78-8	South Africa	TWA(8 hours):2 mg/m3	
		RELs		
Chromium (III) oxide	1308-38-9	ACGIH	TWA(as Cr(III), inhalable	A4: Not class. as human

			fraction):0.003 mg/m3;TWA(as Cr):0.5 mg/m3	carcin
Chromium (III) oxide	1308-38-9	South Africa RELs	TWA(as Cr)(8 hours):0.5 mg/m3	
Silicon Carbide	1309-37-1	South Africa RELs	TWA(as total dust)(8 hours):10 mg/m3	
diiron trioxide	1309-37-1	ACGIH	TWA(respirable fraction):5 mg/m3	A4: Not class. as human carcin
diiron trioxide	1309-37-1	South Africa RELs	TWA(as respirable dust)(8 hours):5 mg/m3;TWA(Total inhalable dust)(8 hours):10 mg/m3	
Iron oxides	1309-37-1	South Africa RELs	TWA(as Fe, fume)(8 hours):5 mg/m3;STEL(as Fe, fume)(15 minutes):10 mg/m3	
Iron oxides	1317-61-9	South Africa RELs	TWA(as Fe, fume)(8 hours):5 mg/m3;STEL(as Fe, fume)(15 minutes):10 mg/m3	
Xylene	1330-20-7	ACGIH	TWA:100 ppm;STEL:150 ppm	A4: Not class. as human carcin
Xylene	1330-20-7	South Africa RELs	TWA(8 hours):435 mg/m3(100 ppm);STEL(15 minutes):650 mg/m3(150 ppm)	SKIN
Carbon black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m3	A3: Confirmed animal carcin.
Carbon black	1333-86-4	South Africa RELs	TWA(8 hours):3.5 mg/m3;STEL(15 minutes):7 mg/m3	
Titanium dioxide	13463-67-7	ACGIH	TWA:10 mg/m <sup>3</sup>	A4: Not class. as human carcin
Titanium dioxide	13463-67-7	South Africa RELs	TWA(as respirable dust)(8 hours):5 mg/m3;TWA(Total inhalable dust)(8 hours):10 mg/m3	
Diisononyl Phthalate	28553-12-0	South Africa RELs	TWA(8 hours):5 mg/m3	
Kerosine (petroleum)	64742-47-8		TWA(as total hydrocarbon vapor, non-aerosol):200 mg/m3	A3: Confirmed animal carcin., SKIN
Chromium (III) oxide	68187-11-1	ACGIH	TWA(as Cr(III), inhalable fraction):0.003 mg/m3;TWA(as Cr):0.5 mg/m3	A4: Not class. as human carcin
Chromium (III) oxide	68187-11-1	South Africa RELs	TWA(as Cr)(8 hours):0.5 mg/m3	
Cobalt compounds	68187-11-1	South Africa RELs	TWA(as Co)(8 hours):0.1 mg/m3	
Cobalt, inorganic compounds	68187-11-1	ACGIH	TWA(as Co):0.02 mg/m3	A3: Confirmed animal carcin.
Silicon Carbide	9002-86-2	South Africa RELs	TWA(as total dust)(8 hours):10 mg/m3	
Poly(Vinyl Chloride)	9002-86-2	ACGIH	TWA(respirable fraction):1 mg/m3	A4: Not class. as human carcin

Poly(Vinyl Chloride)	9002-86-2	South Africa RELs	TWA(as respirable dust)(8 hours):5 mg/m3;TWA(Total inhalable dust)(8 hours):10 mg/m3	
29H,31H-Phthalocyaninato(2-)- N29,N30,N31,N32 copper	Trade Secret	ACGIH	TWA(as Cu dust or mist):1 mg/m3;TWA(as Cu, fume):0.2 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

South Africa CLs : South Africa. Control Limits. Regulations for Hazardous Chemical Substances, Table 1

South Africa RELs : South Africa. Recommended Exposure Limits (RELs) Regulations for Hazardous Chemical Substances, Table 2

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

#### **8.2.** Exposure controls

#### **8.2.1.** Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

#### 8.2.2. Personal protective equipment (PPE)

## **Eye/face protection**

None required.

#### Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity. Gloves made from the following material(s) are recommended: Polymer laminate

#### **Respiratory protection**

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

# **SECTION 9: Physical and chemical properties**

#### 9.1. Information on basic physical and chemical properties

Physical state	Solid.
Specific Physical Form:	Paste
Appearance/Odour	Mild xylene odour
Odour threshold	No data available.
рН	Not applicable.
Melting point/Freezing point	No data available.
Boiling point/Initial boiling point/Boiling range	>=136 °C
Flash point	No flash point
Evaporation rate	No data available.
Flammability (solid, gas)	Not classified

Flammable Limits(LEL)	Not applicable.
Flammable Limits(UEL)	Not applicable.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Density	1,17 g/ml
Relative density	1,17 [ <i>Ref Std</i> :WATER=1]
Water solubility	Nil
Solubility- non-water	No data available.
Partition coefficient: n-octanol/water	No data available.
Autoignition temperature	>=200 °C
Decomposition temperature	No data available.
Viscosity	>=300 000 mPa-s [@ 23 °C ]
Molecular weight	No data available.
VOC less H2O & exempt solvents	54 g/l [ <i>Test Method</i> :tested per EPA method 24]

# **SECTION 10: Stability and reactivity**

#### **10.1 Reactivity**

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

**10.2 Chemical stability** Stable.

**10.3 Possibility of hazardous reactions** Hazardous polymerisation will not occur.

**10.4 Conditions to avoid** Heat.

<b>10.5 Incompatible materials</b>	
Amines.	
Alcohols.	
Water	

10.6 Hazardous decomposition products

<u>Substance</u>

None known.

**Condition** 

Refer to section 5.2 for hazardous decomposition products during combustion.

## **SECTION 11: Toxicological information**

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

**11.1 Information on Toxicological effects** 

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

## Inhalation

Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May cause additional health effects (see below).

#### Skin contact

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

#### Eye contact

Contact with the eyes during product use is not expected to result in significant irritation.

#### Ingestion

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

#### **Additional Health Effects:**

### Single exposure may cause target organ effects:

Auditory effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

## Prolonged or repeated exposure may cause target organ effects:

Auditory effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears. Neurological effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and changes in blood pressure and heart rate.

## Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

#### **Toxicological Data**

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

## **Acute Toxicity**

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5 000 mg/kg
Overall product	Inhalation- Vapor(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5 000 mg/kg
Poly(Vinyl Chloride)	Dermal		LD50 estimated to be > 5 000 mg/kg
Poly(Vinyl Chloride)	Ingestion		LD50 estimated to be > 5 000 mg/kg
Plasticizer	Dermal	Rat	LD50 > 1 000 mg/kg
Plasticizer	Ingestion	Rat	LD50 > 5 000 mg/kg
Xylene	Dermal	Rabbit	LD50 > 4 200 mg/kg
Xylene	Inhalation- Vapor (4 hours)	Rat	LC50 29 mg/l
Xylene	Ingestion	Rat	LD50 3 523 mg/kg
diiron trioxide	Dermal	Not available	LD50 3 100 mg/kg
diiron trioxide	Ingestion	Not available	LD50 3 700 mg/kg
Titanium dioxide	Dermal	Rabbit	LD50 > 10 000 mg/kg
Titanium dioxide	Inhalation- Dust/Mist (4 hours)	Rat	LC50 > 6,82 mg/l
Titanium dioxide	Ingestion	Rat	LD50 > 10 000 mg/kg
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	Dermal		LD50 estimated to be > 5 000 mg/kg
Triiron tetraoxide	Dermal	Not available	LD50 3 100 mg/kg

29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper Calcium Oxide Distillates (petroleum), hydrotreated light Distillates (petroleum), hydrotreated light Distillates (petroleum), hydrotreated light	Ingestion Ingestion Dermal Inhalation- Dust/Mist (4 hours) Ingestion	availableRatRatRabbitRat	LD50 10 000 mg/kg LD50 > 2 500 mg/kg LD50 > 3 160 mg/kg LC50 > 3 mg/l
Calcium Oxide Distillates (petroleum), hydrotreated light Distillates (petroleum), hydrotreated light Distillates (petroleum), hydrotreated light	Ingestion Dermal Inhalation- Dust/Mist (4 hours) Ingestion	Rabbit	LD50 > 2 500 mg/kg LD50 > 3 160 mg/kg
Distillates (petroleum), hydrotreated light Distillates (petroleum), hydrotreated light	Dermal Inhalation- Dust/Mist (4 hours) Ingestion	Rabbit	LD50 > 3 160 mg/kg
Distillates (petroleum), hydrotreated light Distillates (petroleum), hydrotreated light	Inhalation- Dust/Mist (4 hours) Ingestion		
Distillates (petroleum), hydrotreated light	(4 hours) Ingestion		8
	Ingestion		
		Rat	LD50 > 5 000 mg/kg
Diisononyl Phthalate	Dermal	Rabbit	LD50 > 3 160 mg/kg
Diisononyl Phthalate	Inhalation-	Rat	LC50 > 1,7 mg/l
	Dust/Mist		
	(4 hours)		
Diisononyl Phthalate	Ingestion	Rat	LD50 > 10 000 mg/kg
Ethylbenzene	Dermal	Rabbit	LD50 15 433 mg/kg
Ethylbenzene	Inhalation-	Rat	LC50 17,4 mg/l
	Vapor (4		
	hours)		
Ethylbenzene	Ingestion	Rat	LD50 4 769 mg/kg
Chromium oxide (Cr2O3)	Dermal	Professio	LD50 estimated to be $> 5\ 000\ mg/kg$
		nal	
		judgeme nt	
Chromium oxide (Cr2O3)	Inhalation-	Rat	LC50 > 5,41 mg/l
Infollium Oxide (C12O3)	Dust/Mist	Kat	LC30 > 5,41  mg/r
	(4 hours)		
Chromium oxide (Cr2O3)	Ingestion	Rat	LD50 > 5 000 mg/kg
ron hydroxide oxide	Dermal		LD50 estimated to be $> 5000 \text{ mg/kg}$
ron hydroxide oxide	Ingestion	Rat	LD50 > 10 000 mg/kg
Carbon black	Dermal	Rabbit	$LD50 > 3\ 000\ mg/kg$
Carbon black	Ingestion	Rat	$LD50 > 8\ 000\ mg/kg$
cobalt chromite blue green spinel	Dermal		LD50 estimated to be $> 5000 \text{ mg/kg}$
cobalt chromite blue green spinel	Ingestion	Rabbit	LD50 > 5 000 mg/kg
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate			LD50 estimated to be 2 000 - 5 000 mg/kg
and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate			
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	Ingestion	Rat	LD50 3 125 mg/kg
and Methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate			
4,4'-methylenediphenyl diisocyanate	Dermal	Rabbit	LD50 > 5 000 mg/kg
4,4'-methylenediphenyl diisocyanate	Inhalation-	Rat	LC50 0,368 mg/l
	Dust/Mist		-
	(4 hours)		
4,4'-methylenediphenyl diisocyanate	Ingestion	Rat	LD50 31 600 mg/kg

ATE = acute toxicity estimate

## Skin Corrosion/Irritation

Name	Species	Value		
Poly(Vinyl Chloride)	Professio	No significant irritation		
	nal			
	judgemen			
	t			
Xylene	Rabbit	Mild irritant		
diiron trioxide	Rabbit	No significant irritation		
Titanium dioxide	Rabbit	No significant irritation		
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	Rabbit	No significant irritation		
Triiron tetraoxide	Rabbit	No significant irritation		
Calcium Oxide	Human	Corrosive		
Distillates (petroleum), hydrotreated light	Rabbit	Mild irritant		
Diisononyl Phthalate	Rabbit	No significant irritation		
Ethylbenzene	Rabbit	Mild irritant		
Chromium oxide (Cr2O3)	Rabbit	No significant irritation		
Iron hydroxide oxide	Rabbit	No significant irritation		
Carbon black	Rabbit	No significant irritation		
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl	Rabbit	No significant irritation		
1,2,2,6,6-pentamethyl-4-piperidyl sebacate		-		

4,4'-methylenediphenyl diisocyanate	official	Irritant
	classificat	
	ion	

## Serious Eye Damage/Irritation

Name	Species	Value
Overall product	Rabbit	Mild irritant
Xylene	Rabbit	Mild irritant
diiron trioxide	Rabbit	No significant irritation
Titanium dioxide	Rabbit	No significant irritation
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	Rabbit	No significant irritation
Triiron tetraoxide	Rabbit	No significant irritation
Calcium Oxide	Rabbit	Corrosive
Distillates (petroleum), hydrotreated light	Rabbit	Mild irritant
Diisononyl Phthalate	Rabbit	Mild irritant
Ethylbenzene	Rabbit	Moderate irritant
Chromium oxide (Cr2O3)	Rabbit	No significant irritation
Iron hydroxide oxide	Rabbit	No significant irritation
Carbon black	Rabbit	No significant irritation
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl	Rabbit	No significant irritation
1,2,2,6,6-pentamethyl-4-piperidyl sebacate		-
4,4'-methylenediphenyl diisocyanate	official	Severe irritant
	classificat	
	ion	

## **Skin Sensitisation**

Name	Species	Value
diiron trioxide	Human	Not classified
Titanium dioxide	Human	Not classified
	and	
	animal	
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	Human	Not classified
Triiron tetraoxide	Human	Not classified
Distillates (petroleum), hydrotreated light	Guinea	Not classified
	pig	
Diisononyl Phthalate	Human	Not classified
	and	
	animal	
Ethylbenzene	Human	Not classified
Chromium oxide (Cr2O3)	similar	Not classified
	compoun	
	ds	
Iron hydroxide oxide	Human	Not classified
	and	
	animal	
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl	Guinea	Sensitising
1,2,2,6,6-pentamethyl-4-piperidyl sebacate	pig	
4,4'-methylenediphenyl diisocyanate	official	Sensitising
	classificat	
	ion	

# **Respiratory Sensitisation**

Name	Species	Value
4,4'-methylenediphenyl diisocyanate	Human	Sensitising

# Germ Cell Mutagenicity

Name	Route	Value
Poly(Vinyl Chloride)	In Vitro	Not mutagenic
Xylene	In Vitro	Not mutagenic
Xylene	In vivo	Not mutagenic

diiron trioxide	In Vitro	Not mutagenic
Titanium dioxide	In Vitro	Not mutagenic Not mutagenic
Titanium dioxide	In vivo	
		Not mutagenic
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	In Vitro	Not mutagenic
Triiron tetraoxide	In Vitro	Not mutagenic
Calcium Oxide	In Vitro	Not mutagenic
Distillates (petroleum), hydrotreated light	In Vitro	Not mutagenic
Diisononyl Phthalate	In Vitro	Not mutagenic
Ethylbenzene	In vivo	Not mutagenic
Ethylbenzene	In Vitro	Some positive data exist, but the data are not
•		sufficient for classification
Chromium oxide (Cr2O3)	In vivo	Not mutagenic
Chromium oxide (Cr2O3)	In Vitro	Some positive data exist, but the data are not
		sufficient for classification
Carbon black	In Vitro	Not mutagenic
Carbon black	In vivo	Some positive data exist, but the data are not
		sufficient for classification
Reaction mass of Bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and Methyl	In Vitro	Not mutagenic
1,2,2,6,6-pentamethyl-4-piperidyl sebacate		
4,4'-methylenediphenyl diisocyanate	In Vitro	Some positive data exist, but the data are not
		sufficient for classification

## Carcinogenicity

Name	Route	Species	Value
Poly(Vinyl Chloride)	Not	Rat	Some positive data exist, but the data are not
• • •	specified.		sufficient for classification
Xylene	Dermal	Rat	Not carcinogenic
Xylene	Ingestion	Multiple	Not carcinogenic
	_	animal	
		species	
Xylene	Inhalation	Human	Some positive data exist, but the data are not
			sufficient for classification
diiron trioxide	Inhalation	Human	Some positive data exist, but the data are not
			sufficient for classification
Titanium dioxide	Ingestion	Multiple	Not carcinogenic
		animal	
		species	
Titanium dioxide	Inhalation	Rat	Carcinogenic.
29H,31H-Phthalocyaninato(2-)-N29,N30,N31,N32 copper	Ingestion	Mouse	Not carcinogenic
Triiron tetraoxide	Inhalation	Human	Some positive data exist, but the data are not
			sufficient for classification
Distillates (petroleum), hydrotreated light	Dermal	Mouse	Some positive data exist, but the data are not
			sufficient for classification
Diisononyl Phthalate	Ingestion	Multiple	Some positive data exist, but the data are not
		animal	sufficient for classification
		species	
Ethylbenzene	Inhalation	Multiple	Carcinogenic.
		animal	
		species	
Chromium oxide (Cr2O3)	Ingestion	Rat	Not carcinogenic
Iron hydroxide oxide	Inhalation	Rat	Not carcinogenic
Carbon black	Dermal	Mouse	Not carcinogenic
Carbon black	Ingestion	Mouse	Not carcinogenic
Carbon black	Inhalation	Rat	Carcinogenic.
4,4'-methylenediphenyl diisocyanate	Inhalation	Rat	Some positive data exist, but the data are not
			sufficient for classification

# **Reproductive Toxicity**

## **Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test result	Exposure Duration
Poly(Vinyl Chloride)	Not specified.	Not classified for development	Mouse	NOAEL Not available	during gestation
Xylene	Inhalation	Not classified for female reproduction	Human	NOAEL Not	occupational

				available	exposure
Xylene	Ingestion	Not classified for development	Mouse	NOAEL Not available	during organogenesis
Xylene	Inhalation	Not classified for development	Multiple animal species	NOAEL Not available	during gestation
29H,31H-Phthalocyaninato(2-)- N29,N30,N31,N32 copper	Ingestion	Not classified for female reproduction	Rat	NOAEL 1 000 mg/kg/day	premating into lactation
29H,31H-Phthalocyaninato(2-)- N29,N30,N31,N32 copper	Ingestion	Not classified for male reproduction	Rat	NOAEL 1 000 mg/kg/day	42 days
29H,31H-Phthalocyaninato(2-)- N29,N30,N31,N32 copper	Ingestion	Not classified for development	Rat	NOAEL 1 000 mg/kg/day	premating into lactation
Diisononyl Phthalate	Ingestion	Not classified for female reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
Diisononyl Phthalate	Ingestion	Not classified for male reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
Diisononyl Phthalate	Ingestion	Not classified for development	Rat	NOAEL 1 000 mg/kg/day	during organogenesis
Ethylbenzene	Inhalation	Not classified for development	Rat	NOAEL 4,3 mg/l	premating & during gestation
Chromium oxide (Cr2O3)	Ingestion	Not classified for female reproduction	Rat	NOAEL 2 000 mg/kg/day	90 days
Chromium oxide (Cr2O3)	Ingestion	Not classified for male reproduction	Rat	NOAEL 2 000 mg/kg/day	90 days
Chromium oxide (Cr2O3)	Ingestion	Not classified for development	Rat	NOAEL 2 000 mg/kg/day	90 days
4,4'-methylenediphenyl diisocyanate	Inhalation	Not classified for development	Rat	NOAEL 0,004 mg/l	during organogenesis

## Lactation

Name	Route	Species	Value
Xylene	Ingestion	Mouse	Not classified for effects on or via lactation

# Target Organ(s)

# Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Xylene	Inhalation	auditory system	Causes damage to organs	Rat	LOAEL 6,3 mg/l	8 hours
Xylene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Xylene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Xylene	Inhalation	eyes	Not classified	Rat	NOAEL 3,5 mg/l	not available
Xylene	Inhalation	liver	Not classified	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	eyes	Not classified	Rat	NOAEL 250 mg/kg	not applicable
Calcium Oxide	Inhalation	respiratory irritation	May cause respiratory irritation	Not available	NOAEL Not available	occupational exposure

Distillates (petroleum), hydrotreated light	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available
Distillates (petroleum), hydrotreated light	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available
Distillates (petroleum), hydrotreated light	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professio nal judgeme nt	NOAEL Notavailable
Ethylbenzene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available
Ethylbenzene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human and animal	NOAEL Not available
Ethylbenzene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professio nal judgeme nt	NOAEL Not available
Chromium oxide (Cr2O3)	Inhalation	respiratory system	Not classified	Rat	NOAEL 40 mg
4,4'-methylenediphenyl diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classifica tion	NOAEL Not available

## Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Poly(Vinyl Chloride)	Inhalation	respiratory system	Not classified	Multiple animal species	NOAEL 0,013 mg/l	22 months
Xylene	Inhalation	nervous system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0,4 mg/l	4 weeks
Xylene	Inhalation	auditory system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 7,8 mg/l	5 days
Xylene	Inhalation	liver	Not classified	Multiple animal species	NOAEL Not available	
Xylene	Inhalation	heart   endocrine system   gastrointestinal tract   hematopoietic system   muscles   kidney and/or bladder   respiratory system	Not classified	Multiple animal species	NOAEL 3,5 mg/l	13 weeks
Xylene	Ingestion	auditory system	Not classified	Rat	NOAEL 900 mg/kg/day	2 weeks
Xylene	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 1 500 mg/kg/day	90 days
Xylene	Ingestion	liver	Not classified	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	heart   skin   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   immune system   nervous system   respiratory system	Not classified	Mouse	NOAEL 1 000 mg/kg/day	103 weeks
diiron trioxide	Inhalation	pulmonary fibrosis   pneumoconiosis	Not classified	Human	NOAEL Not available	occupationa exposure
Titanium dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for	Rat	LOAEL 0,01 mg/l	2 years

			classification			
Titanium dioxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure
29H,31H- Phthalocyaninato(2-)- N29,N30,N31,N32 copper	Ingestion	endocrine system   hematopoietic system   respiratory system	Not classified	Rat	NOAEL 1 000 mg/kg/day	28 days
29H,31H- Phthalocyaninato(2-)- N29,N30,N31,N32 copper	Ingestion	kidney and/or bladder	Not classified	Multiple animal species	NOAEL Not available	not available
Triiron tetraoxide	Inhalation	pulmonary fibrosis   pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure
Diisononyl Phthalate	Dermal	blood   liver   kidney and/or bladder	Not classified	Rabbit	NOAEL 2 425 mg/kg/day	6 weeks
Diisononyl Phthalate	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL not available	13 weeks
Ethylbenzene	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,1 mg/l	2 years
Ethylbenzene	Inhalation	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 1,1 mg/l	103 weeks
Ethylbenzene	Inhalation	hematopoietic system	Not classified	Rat	NOAEL 3,4 mg/l	28 days
Ethylbenzene	Inhalation	auditory system	Not classified	Rat	NOAEL 2,4 mg/l	5 days
Ethylbenzene	Inhalation	endocrine system	Not classified	Mouse	NOAEL 3,3 mg/l	103 weeks
Ethylbenzene	Inhalation	gastrointestinal tract	Not classified	Rat	NOAEL 3,3 mg/l	2 years
Ethylbenzene	Inhalation	bone, teeth, nails, and/or hair   muscles	Not classified	Multiple animal species	NOAEL 4,2 mg/l	90 days
Ethylbenzene	Inhalation	heart   immune system   respiratory system	Not classified	Multiple animal species	NOAEL 3,3 mg/l	2 years
Ethylbenzene	Ingestion	liver   kidney and/or bladder	Not classified	Rat	NOAEL 680 mg/kg/day	6 months
Chromium oxide (Cr2O3)	Inhalation	immune system   respiratory system   hematopoietic system   liver   kidney and/or bladder	Not classified	Rat	NOAEL 44 mg/m3	90 days
Iron hydroxide oxide	Inhalation	respiratory system   liver   kidney and/or bladder	Not classified	Rat	NOAEL 0,2 mg/l	14 days
Carbon black	Inhalation	pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure
4,4'-methylenediphenyl diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0,004 mg/l	13 weeks

### **Aspiration Hazard**

Name	Value
Xylene	Aspiration hazard
Distillates (petroleum), hydrotreated light	Aspiration hazard
Ethylbenzene	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

# **SECTION 12: Ecological information**

The information below may not be consistent with the material classification in Section 2 if specific ingredient

classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

Acute aquatic hazard:

GHS Acute 3: Harmful to aquatic life.

### Chronic aquatic hazard:

Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

Material	CAS Nbr	Organism	Туре	Exposure	Test endpoint	Test result
Urethane	Trade Secret		Data not			
Polymer			available or			
			insufficient for			
			classification			
Poly(Vinyl	9002-86-2		Data not			
Chloride)			available or			
			insufficient for			
			classification			
Plasticizer	Trade Secret	Zebra Fish	Estimated	96 hours	LC50	>100 mg/l
Plasticizer	Trade Secret	Water flea	Estimated	48 hours	EC50	>100 mg/l
Plasticizer	Trade Secret	Green algae	Estimated	72 hours	Effect	>100 mg/l
					Concentraion	
					0%	
Calcium Oxide	1305-78-8	Common Carp	Experimental	96 hours	LC50	1 070 mg/l
Titanium	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
dioxide						
Titanium	13463-67-7	Fathead	Experimental	96 hours	LC50	>100 mg/l
dioxide		minnow				
Titanium	13463-67-7	Diatom	Experimental	72 hours	EC50	>10 000 mg/l
dioxide						
Titanium	13463-67-7	Diatom	Experimental	72 hours	NOEC	5 600 mg/l
dioxide						
Xylene	1330-20-7		Data not			
			available or			
			insufficient for			
			classification	-		
29H,31H-	Trade Secret	Water flea	Estimated	48 hours	EC50	>500 mg/l
Phthalocyanina						
to(2-)-						
N29,N30,N31,						
N32 copper	T 1 0 /			70.1	E050	> 100 /1
29H,31H-	Trade Secret	Green algae	Estimated	72 hours	EC50	>100 mg/l
Phthalocyanina						
to(2-)- N29,N30,N31,						
N32 copper						
29H,31H-	Trade Secret	Rainbow trout	Experimental	96 hours	LC50	355,6 mg/l
Phthalocyanina			Experimental	Jonouis		555,0 mg/1
to $(2-)$ -						
10(2-)-			1	1	1	1

rade Secret	Green algae	Estimated	72 hours	Effect	>100 mg/l
				1070	
rade Secret	Water flea	Estimated	21 days	NOEC	>=1 mg/l
lude Secret	water neu	Estimated	21 duys	NOLC	- 1 mg/1
309-37-1	Golden Orfe	Experimental	48 hours	1.050	>1 000 mg/l
					>50 000 mg/l
517-01-9	water nea	Experimental	40 110013	100	> 50 000 mg/1
317 61 0	Green Algee	Experimental	72 hours	EC50	>50 000 mg/l
517-01-9	Gleen Algae	Experimental	/2 110015	LC30	- 50 000 mg/1
217 61 0	Graan Algaa	Exporimental	72 hours	Effort	>50 000 mg/l
51/-01-9	Green Algae	Experimental	12 hours		-50 000 mg/1
1712 17 0	Dainhan trant	Estimated	06 hours		2 mg/l
4/42-4/-8	Kalndow trout	Estimated	96 nours		2 mg/1
				30%	
4742 47 9	Water flee	Estimated	40 h a	Effect Level	1.4 m c/l
4/42-4/-8	water nea	Estimated	48 nours		1,4 mg/l
				50%	
4742 47.9	Current Allerer	Fatimate 1	72.1.	E 050	1
4/42-4/-8	Green Algae	Estimated	/2 nours	EC50	1 mg/l
4742 47.0	C 41	E (* 1	70.1		1 /1
4/42-4/-8	Green Algae	Estimated	/2 hours		1 mg/l
				Level	
1712 17 0	<b>XX</b> ( <b>0</b>	<b>D</b> (1)	01.1		0.40 //
4/42-4/-8	Water flea	Estimated	21 days		0,48 mg/l
				Level	
0552 12 0	<b>X</b> <i>T</i> ( <b>C</b>	г. · / 1	40.1	F.070	> 100 /1
8553-12-0	Water flea	Experimental	48 hours	EC50	>100 mg/l
0552.12.0	<u>a</u> :	<b>D</b>	70.1		. 100 /1
8553-12-0	Green algae	Experimental	/2 hours	EC50	>100 mg/l
0.5.5.0.1.0.0			0.61		100 //
8553-12-0	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
0.5.5.0.10.0	a :		50.1		100 //
8553-12-0	Green algae	Experimental	/2 hours	INOEC	>100 mg/l
8553-12-0	Water flea	Experimental	21 days	NOEC	>100 mg/l
					3,6 mg/l
					4,2 mg/l
00-41-4	Atlantic	Experimental	96 hours	LC50	5,1 mg/l
	Silverside	1	1	1	1
	rade Secret rade Secret 309-37-1 317-61-9 317-61-9 317-61-9 4742-47-8 4742-47-8 4742-47-8 4742-47-8 4742-47-8 8553-12-0 8553-12-0 8553-12-0 8553-12-0 00-41-4 00-41-4 00-41-4	rade SecretWater flea309-37-1Golden Orfe317-61-9Water flea317-61-9Green Algae317-61-9Green Algae4742-47-8Rainbow trout4742-47-8Green Algae4742-47-8Green Algae4742-47-8Green Algae4742-47-8Green Algae4742-47-8Green Algae4742-47-8Green Algae8553-12-0Water flea8553-12-0Green algae8553-12-0Green algae8553-12-0Green algae8553-12-0Water flea8553-12-0Green algae8553-12-0Green algae8553-12-0Green algae8553-12-0Water flea00-41-4Green Algae00-41-4Green Algae00-41-4Atlantic	rade SecretWater fleaEstimated309-37-1Golden OrfeExperimental317-61-9Water fleaExperimental317-61-9Green AlgaeExperimental317-61-9Green AlgaeExperimental4742-47-8Rainbow troutEstimated4742-47-8Green AlgaeEstimated4742-47-8Green AlgaeEstimated4742-47-8Green AlgaeEstimated4742-47-8Green AlgaeEstimated4742-47-8Green AlgaeEstimated4742-47-8Green AlgaeEstimated4742-47-8Green AlgaeEstimated8553-12-0Water fleaExperimental8553-12-0Green algaeExperimental8553-12-0Green algaeExperimental8553-12-0Green algaeExperimental8553-12-0Water fleaExperimental8553-12-0Green algaeExperimental8553-12-0Green algaeExperimental8553-12-0Water fleaExperimental8553-12-0Green algaeExperimental8553-12-0Water fleaExperimental00-41-4Green AlgaeExperimental00-41-4Green AlgaeExperimental00-41-4AtlanticExperimental	rade SecretWater fleaEstimated21 days309-37-1Golden OrfeExperimental48 hours317-61-9Water fleaExperimental48 hours317-61-9Green AlgaeExperimental72 hours317-61-9Green AlgaeExperimental72 hours317-61-9Green AlgaeExperimental96 hours4742-47-8Rainbow troutEstimated96 hours4742-47-8Green AlgaeEstimated72 hours4753-12-0Water fleaExperimental48 hours8553-12-0Green algaeExperimental96 hours8553-12-0Green algaeExperimental72 hours8553-12-0Green algaeExperimental96 hours8553-12-0Water fleaExperimental96 hours8553-12-0Water fleaExperimental96 hours8553-12-0Green algaeExperimental96 hours90-41-4Green AlgaeExperimental96 hours90-41-4AtlanticExperimental96 hours	Tade SecretWater fleaEstimated21 daysNOEC309-37-1Golden OrfeExperimental48 hoursLC50317-61-9Water fleaExperimental48 hoursEC50317-61-9Green AlgaeExperimental72 hoursEC50317-61-9Green AlgaeExperimental72 hoursEffect Concentration 0%317-61-9Green AlgaeExperimental72 hoursEffect Concentration 0%4742-47-8Rainbow troutEstimated96 hoursLethal Level 50%4742-47-8Green AlgaeEstimated72 hoursEffect Level 50%4742-47-8Green AlgaeEstimated72 hoursEffect Level 50%4742-47-8Green AlgaeEstimated72 hoursEC504742-47-8Green AlgaeEstimated72 hoursEC504742-47-8Green AlgaeEstimated72 hoursNo obs Effect Level4742-47-8Green AlgaeEstimated72 hoursNo obs Effect Level4742-47-8Water fleaExperimental72 hoursEC508553-12-0Green algaeExperimental72 hoursEC508553-12-0Green algaeExperimental72 hoursNOEC8553-12-0Green algaeExperimental72 hoursNOEC8553-12-0Green algaeExperimental72 hoursNOEC8553-12-0Water fleaExperimental72 hoursNOEC8553-12-0Water fleaExperimental

Ethylbenzene	100-41-4	Water flea	Experimental	48 hours	EC50	1,8 mg/l
Ethylbenzene	100-41-4	Mysid Shrimp	Experimental	96 hours	LC50	2,6 mg/l
Ethylbenzene	100-41-4	Water flea	Experimental	7 days	NOEC	0,96 mg/l
Chromium	1308-38-9	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
oxide (Cr2O3)			I · · · ·			0
Iron hydroxide	20344-49-4		Data not			
oxide			available or			
			insufficient for			
			classification			
Carbon black	1333-86-4		Data not			
			available or			
			insufficient for			
			classification			
cobalt chromite	68187-11-1		Data not			
blue green			available or			
spinel			insufficient for			
			classification			
Reaction mass	915-687-0	Zebra Fish	Experimental	96 hours	LC50	0,9 mg/l
of						
Bis(1,2,2,6,6-						
pentamethyl-4-						
piperidyl)						
sebacate and						
Methyl						
1,2,2,6,6-						
pentamethyl-4-						
piperidyl						
sebacate	015 (07.0	Care a la ca	<b>F</b>	72 1	EC50	1 (0
Reaction mass of	915-687-0	Green algae	Experimental	72 hours	EC30	1,68 mg/l
Bis(1,2,2,6,6- pentamethyl-4-						
piperidyl)						
sebacate and						
Methyl						
1,2,2,6,6-						
pentamethyl-4-						
piperidyl						
sebacate						
Reaction mass	915-687-0	Green algae	Experimental	72 hours	NOEC	0,22 mg/l
of			P			•,==8
Bis(1,2,2,6,6-						
pentamethyl-4-						
piperidyl)						
sebacate and						
Methyl						
1,2,2,6,6-						
pentamethyl-4-						
piperidyl						
sebacate						
Reaction mass	915-687-0	Water flea	Experimental	21 days	NOEC	1 mg/l
of						
Bis(1,2,2,6,6-						
pentamethyl-4-						
piperidyl)						

sebacate and						
Methyl						
1,2,2,6,6-						
pentamethyl-4-						
piperidyl						
sebacate						
4,4'-	101-68-8	Green algae	Estimated	72 hours	EC50	>1 640 mg/l
methylenediph						
enyl						
diisocyanate						
4,4'-	101-68-8	Water flea	Estimated	24 hours	EC50	>1 000 mg/l
methylenediph						C C
enyl						
diisocyanate						
4,4'-	101-68-8	Zebra Fish	Estimated	96 hours	LC50	>1 000 mg/l
methylenediph						- C
enyl						
diisocyanate						
4,4'-	101-68-8	Green algae	Estimated	72 hours	NOEC	1 640 mg/l
methylenediph		C C				e
enyl						
diisocyanate						
4,4'-	101-68-8	Water flea	Estimated	21 days	NOEC	10 mg/l
methylenediph				5		
enyl						
diisocyanate						
	·					

# 12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Urethane Polymer	Trade Secret	Data not availbl- insufficient			N/A	
Poly(Vinyl Chloride)	9002-86-2	Data not availbl- insufficient			N/A	
Plasticizer	Trade Secret	Experimental Biodegradation	28 days	BOD	49 % weight	
Calcium Oxide	1305-78-8	Data not availbl- insufficient			N/A	
Titanium dioxide	13463-67-7	Data not availbl- insufficient			N/A	
Xylene	1330-20-7	Data not availbl- insufficient			N/A	
29H,31H- Phthalocyanina to(2-)- N29,N30,N31, N32 copper	Trade Secret	Experimental Biodegradation	28 days	BOD	<1 % weight	OECD 301F - Manometric respirometry
diiron trioxide	1309-37-1	Data not availbl- insufficient			N/A	

Triiron	1317-61-9	Data not			N/A	
tetraoxide		availbl-				
		insufficient				
Distillates	64742-47-8	Data not			N/A	
(petroleum),		availbl-				
hydrotreated		insufficient				
light						
Diisononyl	28553-12-0	Experimental	28 days	CO2 evolution	81 % weight	Other methods
Phthalate		Biodegradation				
Ethylbenzene	100-41-4	Experimental		Photolytic half-		Other methods
		Photolysis		life (in air)	1/2)	
Ethylbenzene	100-41-4	Experimental	28 days	CO2 evolution	70-80 %	Other methods
		Biodegradation			weight	
Chromium	1308-38-9	Data not			N/A	
oxide (Cr2O3)		availbl-				
		insufficient				
Iron hydroxide	20344-49-4	Data not			N/A	
oxide		availbl-				
		insufficient				
Carbon black	1333-86-4	Data not			N/A	
		availbl-				
		insufficient			/ -	
cobalt chromite	68187-11-1	Data not			N/A	
blue green		availbl-				
spinel		insufficient				
Reaction mass	915-687-0	Estimated	28 days	Dissolv.	38 % weight	OECD 301E - Modified
of		Biodegradation		Organic		OECD Scre
Bis(1,2,2,6,6-				Carbon Deplet		
pentamethyl-4-						
piperidyl)						
sebacate and						
Methyl						
1,2,2,6,6-						
pentamethyl-4-						
piperidyl sebacate						
4,4'-	101-68-8	Estimated		Undralistia	$20 \text{ have } (\pm 1/2)$	Other methods
4,4 <sup>-</sup> methylenediph	101-08-8	Hydrolysis		Hydrolytic half-life	20 hours (t 1/2)	Other methods
enyl						
diisocyanate						
unsucyallate	L	1		1		I]

# 12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Urethane	Trade Secret	Data not	N/A	N/A	N/A	N/A
Polymer		available or				
-		insufficient for				
		classification				
Poly(Vinyl	9002-86-2	Data not	N/A	N/A	N/A	N/A
Chloride)		available or				
		insufficient for				
		classification				
Plasticizer	Trade Secret	Experimental	36 days	Bioaccumulatio	212	
		BCF-Carp	-	n factor		
Calcium Oxide	1305-78-8	Data not	N/A	N/A	N/A	N/A

	1	available or	1			1
		insufficient for classification				
Titanium dioxide	13463-67-7	Experimental BCF-Carp	42 days	Bioaccumulatio n factor	9.6	Other methods
Xylene	1330-20-7	Experimental BCF - Rainbow Tr	56 days	Bioaccumulatio n factor	14	Other methods
29H,31H- Phthalocyanina to(2-)- N29,N30,N31, N32 copper	Trade Secret	Experimental BCF-Carp	42 days	Bioaccumulatio n factor	<3.6	OECD 305E - Bioaccumulation flow- through fish test
diiron trioxide	1309-37-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Triiron tetraoxide	1317-61-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Distillates (petroleum), hydrotreated light	64742-47-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Diisononyl Phthalate	28553-12-0	Estimated BCF - Rainbow Tr	14 days	Bioaccumulatio n factor	<3	Other methods
Ethylbenzene	100-41-4	Experimental BCF - Other	42 days	Bioaccumulatio n factor	1	Other methods
Chromium oxide (Cr2O3)	1308-38-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Iron hydroxide oxide	20344-49-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Carbon black	1333-86-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
cobalt chromite blue green spinel		Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Reaction mass of Bis(1,2,2,6,6- pentamethyl-4- piperidyl) sebacate and Methyl 1,2,2,6,6- pentamethyl-4- piperidyl	915-687-0	Estimated BCF-Carp	56 days	Bioaccumulatio n factor	31.4	

sebacate				
4,4'- methylenediph enyl diisocyanate	Experimental BCF-Carp	2	Bioaccumulatio n factor	OECD 305E - Bioaccumulation flow- through fish test

### 12.4. Mobility in soil

Please contact manufacturer for more details

## 12.5 Other adverse effects

No information available.

# **SECTION 13: Disposal considerations**

## 13.1. Disposal methods

Product must only be disposed of by an authorized/permitted waste disposal contractor or incinerated in an industrial or commercial facility in the presence of a combustible material.

# **SECTION 14: Transport Information**

Compliance is required to South African Transport Information Road Traffic Act & Regulations and Railroad regulations, IATA Standards for airfreight and Maritime standards for ocean freight.

## **SECTION 15: Regulatory information**

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

#### **Global inventory status**

Contact manufacturer for more information The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. The components of this product are in compliance with the chemical notification requirements of TSCA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

# **SECTION 16: Other information**

## **Revision information:**

Section 2: Hazard - Other information was modified.

Label: GHS Classification information was modified.

Label: GHS Environmental Hazard Statements information was modified.

Label: GHS Precautionary - Prevention information was modified.

Label: GHS Precautionary - Response information was modified.

Section 2: Ingredient table information was modified.

Section 4: First aid for skin contact information information was modified.

Section 5: Hazardous combustion products table information was modified.

Section 7: Precautions safe handling information information was modified.

Section 8: Occupational exposure limit table information was modified.

Section 11: Acute Toxicity table information was modified.

Section 11: Carcinogenicity Table information was modified.

Section 11: Germ Cell Mutagenicity Table information was modified.

Section 11: Health Effects - Additional Information information was deleted.

Section 11: Health Effects - Inhalation information information was modified.

Section 11: Health Effects - Skin information information was modified.

Section 11: Reproductive Toxicity Table information was modified.

Section 11: Respiratory Sensitization Table information was modified.

Section 11: Serious Eye Damage/Irritation Table information was modified.

Section 11: Skin Corrosion/Irritation Table information was modified.

Section 11: Skin Sensitization Table information was modified.

Section 11: Target Organs - Repeated Table information was modified.

Section 11: Target Organs - Single Table information was modified.

Section 12: Chronic aquatic hazard information information was modified.

Section 12: Component ecotoxicity information information was modified.

Section 12: Persistence and Degradability information information was modified.

Section 12:Bioccumulative potential information information was modified.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

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