according to Regulation (EC) No. 1907/2006



## **DOWSIL™ 781 Acetoxy Sealant White**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 28.04.2017

 1.7
 17.10.2017
 687299-00008
 Date of first issue: 29.10.2014

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

1.1 Product identifier

Trade name : DOWSIL™ 781 Acetoxy Sealant White

Product code : 03295231

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

Use of the Sub- : Adhesive, binding agents

stance/Mixture

1.3 Details of the supplier of the safety data sheet

Company : DOW CHEMICAL COMPANY LIMITED

STATION ROAD, BIRCH VALE, HIGH PEAK

DERBYSHIRE England SK22 1BR

UNITED KINGDOM

Telephone : +44 (0) 1663 746518

Telefax : +44 (0) 1663 746605

E-mail address of person

responsible for the SDS

: SDSQuestion@dow.com

1.4 Emergency telephone number

24-Hour Emergency Contact : 0031 115 694 982

Local Emergency Contact : 00 31 115 69 4982

#### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

## Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

## 2.2 Label elements

### Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

## **Additional Labelling**

EUH210 Safety data sheet available on request.

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#### 2.3 Other hazards

None known.

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

#### 3.2 Mixtures

Chemical nature : Silicone elastomer

#### **Hazardous components**

Chemical name	CAS-No.	Classification	Concentration
	EC-No.		(% w/w)
	Index-No.		
	Registration number		
Octamethylcyclotetrasiloxane	556-67-2	Flam. Liq. 3; H226	>= 0.25 - < 1
	209-136-7	Repr. 2; H361f	
	014-018-00-1	Aquatic Chronic 4;	
	01-2119529238-36	H413	

For explanation of abbreviations see section 16.

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

### 4.1 Description of first aid measures

General advice : In the case of accident or if you feel unwell, seek medical ad-

vice immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

Protection of first-aiders : First Aid responders should pay attention to self-protection,

and use the recommended personal protective equipment

when the potential for exposure exists.

If inhaled : If inhaled, remove to fresh air.

Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with soap and plenty

of water.

Remove contaminated clothing and shoes.

Get medical attention. Wash clothing before reuse.

Thoroughly clean shoes before reuse.

In case of eye contact : Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.

Get medical attention.

Rinse mouth thoroughly with water.

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

None known.

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

Treatment : Treat symptomatically and supportively.

## **SECTION 5: Firefighting measures**

## 5.1 Extinguishing media

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

None known.

#### 5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-

fighting

Exposure to combustion products may be a hazard to health.

Hazardous combustion prod: :

ucts

Carbon oxides Silicon oxides Formaldehyde

> Metal oxides Chlorine compounds Nitrogen oxides (NOx)

#### 5.3 Advice for firefighters

Special protective equipment:

for firefighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

Specific extinguishing me-

thods

Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment. Use water spray to cool unopened containers.

Remove undamaged containers from fire area if it is safe to do

SO.

Evacuate area.

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

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

Personal precautions : Use personal protective equipment.

Follow safe handling advice and personal protective equip-

ment recommendations.

#### 6.2 Environmental precautions

Environmental precautions : Discharge into the environment must be avoided.

Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages

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cannot be contained.

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

Methods for cleaning up : Soak up with inert absorbent material.

For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absor-

bent.

Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to deter-

mine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

#### 6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

## **SECTION 7: Handling and storage**

### 7.1 Precautions for safe handling

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Do not swallow.

Avoid contact with eyes.

Avoid prolonged or repeated contact with skin.

Handle in accordance with good industrial hygiene and safety

practice.

Take care to prevent spills, waste and minimize release to the

environment.

Hygiene measures : Ensure that eye flushing systems and safety showers are

located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

## 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Keep in properly labelled containers. Store in accordance with

the particular national regulations.

Advice on common storage : Do not store with the following product types:

Strong oxidizing agents

### 7.3 Specific end use(s)

Specific use(s) : These precautions are for room temperature handling. Use at

elevated temperature or aerosol/spray applications may re-

quire added precautions.

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

## 8.1 Control parameters

## **Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis	
Amorphous fumed	112945-52-	TWA (inhalable	6 mg/m3	GB EH40	
silica	5	dust)	(Silica)		
Further information	For the purposes of these limits, respirable dust and inhalable dust are those				
	fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for				
	sampling and gravimetric analysis of respirable and inhalable dust, The COSHH definition of a substance hazardous to health includes dust of any				
		kind when present at a concentration in air equal to or greater than 10 mg.m-3			
			mg.m-3 8-hour TWA of resp		
			ubject to COSHH if people a		
			ave been assigned specific V		
			the appropriate limit., Most in		
			of sizes. The behaviour, depo y into the human respiratory :		
			nd on the nature and size of t		
			ns for limit-setting purposes		
			ble dust approximates to the		
		borne material that enters the nose and mouth during breathing and is there-			
			respiratory tract. Respirable		
		imates to the fraction that penetrates to the gas exchange region of the lung.			
		Fuller definitions and explanatory material are given in MDHS14/3., Where			
		dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is			
	listed, a figure three times the long-term exposure should be used				
	, ,	TWA (Respirable	2.4 mg/m3	GB EH40	
		dust)	(Silica)		
Further information			espirable dust and inhalable		
			Il be collected when sampling		
			escribed in MDHS14/3 Gene of respirable and inhalable o		
			hazardous to health includes		
			ion in air equal to or greater	•	
	8-hour TWA of inhalable dust or 4 mg.m-3 8-hour TWA of respirable dust.				
	This means that any dust will be subject to COSHH if people are exposed				
	above these levels. Some dusts have been assigned specific WELs and ex-				
	posure to these must comply with the appropriate limit., Most industrial dusts				
	contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the				
	body response that it elicits, depend on the nature and size of the particle.				
	HSE distinguishes two size fractions for limit-setting purposes termed				
	'inhalable' and 'respirable'., Inhalable dust approximates to the fraction of air-				
	borne material that enters the nose and mouth during breathing and is there-				
	fore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung.				
	imates to the	traction that penetral	tes to the gas exchange region	on of the lung.	

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		Fuller definitions and explanatory material are given in MDHS14/3., Where				
		dusts contain components that have their own assigned WEL, all the relevant				
		limits should be complied with., Where no specific short-term exposure limit is				
-		listed, a figure three times the long-term exposure should be used				
	Titanium dioxide	13463-67-7	TWA (inhalable	10 mg/m3	GB EH40	
			dust)			
	Further information	For the purposes of these limits, respirable dust and inhalable dust are those				
		fractions of airborne dust which will be collected when sampling is undertaken				
		in accordance with the methods described in MDHS14/3 General methods for				
		sampling and gravimetric analysis of respirable and inhalable dust, The COSHH definition of a substance hazardous to health includes dust of any				
			kind when present at a concentration in air equal to or greater than 10 mg.m-3 8-hour TWA of inhalable dust or 4 mg.m-3 8-hour TWA of respirable dust.			
				ubject to COSHH if people a		
				ave been assigned specific \		
				the appropriate limit., Most i		
				f sizes. The behaviour, depo		
				into the human respiratory		
				nd on the nature and size of		
			HSE distinguishes two size fractions for limit-setting purposes termed			
		'inhalable' and 'respirable'., Inhalable dust approximates to the fraction of air-				
		borne material that enters the nose and mouth during breathing and is there- fore available for deposition in the respiratory tract. Respirable dust approx-				
		imates to the fraction that penetrates to the gas exchange region of the lung.				
		Fuller definitions and explanatory material are given in MDHS14/3., Where				
			dusts contain components that have their own assigned WEL, all the relevant			
		limits should be complied with., Where no specific short-term exposure limit is				
		listed, a figure three times the long-term exposure should be used				
			TWA (Respirable	4 mg/m3	GB EH40	
Ŀ	<del>-</del>		dust)		<u> </u>	
	Further information			espirable dust and inhalable		
		fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for				
				of respirable and inhalable		
				nazardous to health includes		
				on in air equal to or greater		
				mg.m-3 8-hour TWA of resp		
		This means that any dust will be subject to COSHH if people are exposed				
				ave been assigned specific \		
		posure to these must comply with the appropriate limit., Most industrial dusts				
		contain particles of a wide range of sizes. The behaviour, deposition and fate				
		of any particular particle after entry into the human respiratory system and the				
		body response that it elicits, depend on the nature and size of the particle.  HSE distinguishes two size fractions for limit-setting purposes termed				
		'inhalable' and 'respirable'., Inhalable dust approximates to the fraction of air-				
		borne material that enters the nose and mouth during breathing and is there-				
		fore available for deposition in the respiratory tract. Respirable dust approx-				
		imates to the fraction that penetrates to the gas exchange region of the lung.				
		Fuller definitions and explanatory material are given in MDHS14/3., Where				
		dusts contain components that have their own assigned WEL, all the relevant				
		limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used				
}	Iron(III) Oxide	1309-37-1	TWA (inhalable	10 mg/m3	GB EH40	
	non(iii) Oxide	1303-37-1	dust)	ro mg/mo	GD L1140	
L			-301/			

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Further information	For the purposes of these limits, respirable dust and inhalable of fractions of airborne dust which will be collected when sampling in accordance with the methods described in MDHS14/3 Gener sampling and gravimetric analysis of respirable and inhalable of COSHH definition of a substance hazardous to health includes kind when present at a concentration in air equal to or greater to 8-hour TWA of inhalable dust or 4 mg.m-3 8-hour TWA of respirations means that any dust will be subject to COSHH if people are above these levels. Some dusts have been assigned specific W posure to these must comply with the appropriate limit., Most in contain particles of a wide range of sizes. The behaviour, depond of any particular particle after entry into the human respiratory shody response that it elicits, depend on the nature and size of the HSE distinguishes two size fractions for limit-setting purposes the borne material that enters the nose and mouth during breathing for available for deposition in the respiratory tract. Respirable imates to the fraction that penetrates to the gas exchange region Fuller definitions and explanatory material are given in MDHS1 dusts contain components that have their own assigned WEL, a limits should be complied with., Where no specific short-term explicitly a figure three times the long-term exposure should be use.	g is undertaken ral methods for ust, The dust of any han 10 mg.m-3 irable dust. The exposed VELs and exposed vels and the he particle. The exposed fraction of airand is theredust approximately and is theredust approximately approximately and is the lung. 4/3., Where all the relevant exposure limit is
	TWA (Respirable 4 mg/m3	GB EH40
	dust)	
Further information	For the purposes of these limits, respirable dust and inhalable of fractions of airborne dust which will be collected when sampling in accordance with the methods described in MDHS14/3 Gener sampling and gravimetric analysis of respirable and inhalable of COSHH definition of a substance hazardous to health includes kind when present at a concentration in air equal to or greater to 8-hour TWA of inhalable dust or 4 mg.m-3 8-hour TWA of respirations means that any dust will be subject to COSHH if people are above these levels. Some dusts have been assigned specific W posure to these must comply with the appropriate limit., Most in contain particles of a wide range of sizes. The behaviour, depond of any particular particle after entry into the human respiratory shody response that it elicits, depend on the nature and size of the HSE distinguishes two size fractions for limit-setting purposes to 'inhalable' and 'respirable'., Inhalable dust approximates to the borne material that enters the nose and mouth during breathing fore available for deposition in the respiratory tract. Respirable imates to the fraction that penetrates to the gas exchange region Fuller definitions and explanatory material are given in MDHS1 dusts contain components that have their own assigned WEL, a limits should be complied with., Where no specific short-term explicitly affects and incomponents that have their own specific short-term explicitly.	g is undertaken ral methods for lust, The dust of any han 10 mg.m-3 trable dust. The exposed WELs and exposed with the particle. The particle ermed fraction of airgand is theredust approxion of the lung. 4/3., Where all the relevant exposure limit is sed
Cobalt aluminate	1345-16-0 TWA 0.1 mg/m3	GB EH40
blue spinel	(Cobalt)	thus
Further information	Substances that can cause occupational asthma (also known a and respiratory sensitisers) can induce a state of specific airwa responsiveness via an immunological, irritant or other mechanical airways have become hyper-responsive, further exposure to the sometimes even to tiny quantities, may cause respiratory symplesymptoms can range in severity from a runny nose to asthma.	y hyper- sm. Once the e substance, toms. These

7

oxide

Iron hydroxide

trasiloxane

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who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance those who are likely to become hyperresponsive. 54 Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing airway hyper-responsiveness, but which do not include the disease themselves. The latter substances are not classified asthmagens or respiratory sensitisers., Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible, the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. For substances that can cause occupational asthma, COSHH requires that exposure be reduced as low as is reasonably practicable. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance., Capable of causing occupational asthma. The identified substances are those which: - are assigned the risk phrase 'R42: May cause sensitisation by inhalation'; or 'R42/43: May cause sensitisation by inhalation and skin contact' or - are listed in section C of HSE publication 'Asthmagen? Critical assessments of the evidence for agents implicated in occupational asthma' as updated from time to time, or any other substance which the risk assessment has shown to be a potential cause of occupational asthma., Capable of causing cancer and/or heritable genetic damage. The identified substances include those which: - are assigned the risk phrases 'R45: May cause cancer'; 'R46: may cause heritable genetic damage'; 'R49: May cause cancer by inhalation' or - a substance or process listed in Schedule 1 of COSHH., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used, Carcinogenic applies for cobalt dichloride and sulphate., The 'Sen' notation in the list of WELs has been assigned only to those substances which may cause occupational asthma. C.I. Pigment Green 1328-53-6 TWA (Dusts and GB EH40 1 mg/m3 (Copper) mists) STEL (Dusts and 2 mg/m3 GB EH40 mists) (Copper) TWA (Fumes) 20344-49-4 5 mg/m3 GB EH40 (Iron) The word 'fume' is often used to include gases and vapours. This is not the Further information case for exposure limits where 'fume' should normally be applied to solid particles generated by chemical reactions or condensed from the gaseous state, usually after volatilisation from melted substances. The generation of fume is often accompanied by a chemical reaction such as oxidation or thermal breakdown. STEL (Fumes) 10 mg/m3 GB EH40 (Iron) The word 'fume' is often used to include gases and vapours. This is not the Further information case for exposure limits where 'fume' should normally be applied to solid particles generated by chemical reactions or condensed from the gaseous state. usually after volatilisation from melted substances. The generation of fume is often accompanied by a chemical reaction such as oxidation or thermal breakdown. 556-67-2 US WEEL Octamethylcyclote-TWA 10 ppm

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These substance(s) are inextricably bound in the product and therefore do not contribute to a dust inhalation hazard.

Amorphous fumed silica

Titanium dioxide

Cobalt aluminate blue spinel

## Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Titanium dioxide	Workers	Inhalation	Long-term local ef- fects	10 mg/m3
	Consumers	Ingestion	Long-term systemic effects	700 mg/kg bw/day
Iron(III) Oxide	Workers	Inhalation	Long-term local ef- fects	10 mg/m3
	Workers	Inhalation	Long-term systemic effects	10 mg/m3
C.I. Pigment Green 7	Workers	Inhalation	Long-term systemic effects	4 mg/m3
	Workers	Skin contact	Long-term systemic effects	450 mg/kg bw/day
	Consumers	Skin contact	Long-term systemic effects	225 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	45 mg/kg bw/day
Iron hydroxide oxide	Workers	Inhalation	Long-term systemic effects	10 mg/m3
	Workers	Inhalation	Long-term local ef- fects	10 mg/m3
Octamethylcyclotetra- siloxane	Workers	Inhalation	Acute systemic effects	73 mg/m3
	Workers	Inhalation	Acute local effects	73 mg/m3
	Workers	Inhalation	Long-term systemic effects	73 mg/m3
	Workers	Inhalation	Long-term local effects	73 mg/m3
	Consumers	Inhalation	Acute systemic effects	13 mg/m3
	Consumers	Inhalation	Acute local effects	13 mg/m3
	Consumers	Inhalation	Long-term systemic effects	13 mg/m3
	Consumers	Inhalation	Long-term local effects	13 mg/m3
	Consumers	Ingestion	Acute systemic ef- fects	3.7 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	3.7 mg/kg bw/day

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## Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Titanium dioxide	Fresh water	0.184 mg/l
	Marine water	0.0184 mg/l
	Intermittent use/release	0.193 mg/l
	Sewage treatment plant	100 mg/l
	Fresh water sediment	1000 mg/kg
	Marine sediment	100 mg/kg
	Soil	100 mg/kg
C.I. Pigment Green 7	Fresh water sediment	10 mg/kg
	Marine sediment	1 mg/kg
	Soil	1 mg/kg
Octamethylcyclotetrasiloxane	Fresh water	0.00044 mg/l
	Marine water	0.000044 mg/l
	Fresh water sediment	0.64 mg/kg
	Marine sediment	0.064 mg/kg
	Soil	0.13 mg/kg
	Sewage treatment plant	> 10 mg/l

#### 8.2 Exposure controls

## **Engineering measures**

Processing may form hazardous compounds (see section 10). Ensure adequate ventilation, especially in confined areas. Minimize workplace exposure concentrations.

### Personal protective equipment

Eye protection : Wear the following personal protective equipment:

Safety glasses

Hand protection

Material : Chemical-resistant gloves

Remarks : Choose gloves to protect hands against chemicals depending

on the concentration and quantity of the hazardous substance and specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the

end of workday.

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Skin and body protection : Select appropriate protective clothing based on chemical

resistance data and an assessment of the local exposure

potential.

Skin contact must be avoided by using impervious protective

clothing (gloves, aprons, boots, etc).

Respiratory protection : Use respiratory protection unless adequate local exhaust

ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Filter type : Combined particulates and organic vapour type (A-P)

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

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

Appearance : paste

Colour : in accordance with the product description

Odour : Acetic acid

Odour Threshold : No data available

pH : Not applicable

Melting point/freezing point : No data available

Initial boiling point and boiling

range

Not applicable

Flash point :  $> 100 \, ^{\circ}\text{C}$ 

Method: closed cup

Evaporation rate : Not applicable

Flammability (solid, gas) : Not classified as a flammability hazard

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapour pressure : Not applicable

Relative vapour density : No data available

Relative density : 1.02

Solubility(ies)

Water solubility : No data available

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Partition coefficient: n-

octanol/water

: No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : Not applicable

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

9.2 Other information

Molecular weight : No data available

Self-ignition : The substance or mixture is not classified as pyrophoric. The

substance or mixture is not classified as self heating.

## **SECTION 10: Stability and reactivity**

### 10.1 Reactivity

Not classified as a reactivity hazard.

#### 10.2 Chemical stability

Stable under normal conditions.

## 10.3 Possibility of hazardous reactions

Hazardous reactions : Use at elevated temperatures may form highly hazardous

compounds.

Can react with strong oxidizing agents.

Hazardous decomposition products will be formed at elevated

temperatures.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : Oxidizing agents

## 10.6 Hazardous decomposition products

Thermal decomposition : Formaldehyde

## **SECTION 11: Toxicological information**

#### 11.1 Information on toxicological effects

according to Regulation (EC) No. 1907/2006



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Information on likely routes of : Skin contact

exposure Ingestion

Eye contact

**Acute toxicity** 

Not classified based on available information.

**Components:** 

Octamethylcyclotetrasiloxane:

Acute oral toxicity : LD50 (Rat): > 4,800 mg/kg

Assessment: The substance or mixture has no acute oral tox-

icity

Remarks: On basis of test data.

Acute inhalation toxicity : LC50 (Rat): 2975 ppm

Exposure time: 4 h
Test atmosphere: vapour

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Remarks: On basis of test data.

Acute dermal toxicity : LD50 (Rabbit): > 2.5 ml/kg

Assessment: The substance or mixture has no acute dermal

toxicity

Remarks: On basis of test data.

Skin corrosion/irritation

Not classified based on available information.

**Product:** 

Result: No skin irritation

Remarks: Based on data from similar materials

**Components:** 

Octamethylcyclotetrasiloxane:

Species: Rabbit

Result: No skin irritation Remarks: On basis of test data.

Serious eye damage/eye irritation

Not classified based on available information.

**Product:** 

Result: No eye irritation

Remarks: Based on data from similar materials

**Components:** 

Octamethylcyclotetrasiloxane:

Species: Rabbit

according to Regulation (EC) No. 1907/2006



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Result: No eye irritation

Remarks: On basis of test data.

## Respiratory or skin sensitisation

#### Skin sensitisation

Not classified based on available information.

#### Respiratory sensitisation

Not classified based on available information.

#### **Components:**

#### Octamethylcyclotetrasiloxane:

Assessment: Does not cause skin sensitisation.

Test Type: Maximisation Test

Species: Guinea pig Result: negative

Remarks: On basis of test data.

#### Germ cell mutagenicity

Not classified based on available information.

#### Components:

#### Octamethylcyclotetrasiloxane:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Remarks: On basis of test data.

Test Type: Mutagenicity (in vitro mammalian cytogenetic test)

Result: negative

Remarks: On basis of test data.

Test Type: Chromosome aberration test in vitro

Result: negative

Remarks: On basis of test data.

Test Type: In vitro sister chromatid exchange assay in mam-

malian cells Result: negative

Remarks: On basis of test data.

Test Type: DNA damage and repair, unscheduled DNA syn-

thesis in mammalian cells (in vitro)

Result: negative

Remarks: On basis of test data.

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Species: Rat

Application Route: inhalation (vapour)

Result: negative

according to Regulation (EC) No. 1907/2006



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Remarks: On basis of test data.

Test Type: Rodent dominant lethal test (germ cell) (in vivo)

Species: Rat

Application Route: Ingestion

Result: negative

Remarks: On basis of test data.

Germ cell mutagenicity- As-

sessment

: Animal testing did not show any mutagenic effects.

## Carcinogenicity

Not classified based on available information.

#### Reproductive toxicity

Not classified based on available information.

#### **Components:**

## Octamethylcyclotetrasiloxane:

Effects on fertility : Test Type: Two-generation reproduction toxicity study

Species: Rat, male and female Application Route: inhalation (vapour) Symptoms: Effects on fertility Remarks: On basis of test data.

Effects on foetal develop-

ment

Test Type: Prenatal development toxicity study (teratogenicity)

Species: Rabbit

Application Route: inhalation (vapour) Symptoms: No effects on foetal development

Remarks: On basis of test data.

Reproductive toxicity - As-

sessment

Some evidence of adverse effects on sexual function and

fertility, based on animal experiments.

#### STOT - single exposure

Not classified based on available information.

### STOT - repeated exposure

Not classified based on available information.

### **Components:**

### Octamethylcyclotetrasiloxane:

Exposure routes: Ingestion

Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg

bw or less.

Exposure routes: inhalation (vapour)

Assessment: No significant health effects observed in animals at concentrations of 1 mg/l/6h/d or

less.

Exposure routes: Skin contact

Assessment: No significant health effects observed in animals at concentrations of 200 mg/kg

according to Regulation (EC) No. 1907/2006



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bw or less.

## Repeated dose toxicity

#### **Components:**

#### Octamethylcyclotetrasiloxane:

Species: Rat

Application Route: Ingestion Remarks: On basis of test data.

Species: Rat

Application Route: inhalation (vapour) Remarks: On basis of test data.

Species: Rabbit

Application Route: Skin contact Remarks: On basis of test data.

#### **Aspiration toxicity**

Not classified based on available information.

#### **Further information**

### **Components:**

#### Octamethylcyclotetrasiloxane:

Remarks: Results from a 2 year repeated vapour inhalation exposure study to rats of octame-thylcyclotetrasiloxane (D4) indicate effects (benign uterine adenomas) in the uterus of female animals. This finding occurred at the highest exposure dose (700 ppm) only. Studies to date have not demonstrated if these effects occur through pathways that are relevant to humans. Repeated exposure in rats to D4 resulted in protoporphyrin accumulation in the liver. Without knowledge of the specific mechanism leading to the protoporphyrin accumulation the relevance of this finding to humans is unknown.

## **SECTION 12: Ecological information**

## 12.1 Toxicity

#### **Components:**

#### Octamethylcyclotetrasiloxane:

Toxicity to fish : LC50 (Cyprinodon variegatus (sheepshead minnow)): >

0.0063 mg/l

Exposure time: 336 h

Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Mysidopsis bahia (opossum shrimp)): > 0.0091 mg/l

Exposure time: 96 h

Remarks: No toxicity at the limit of solubility

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): >

according to Regulation (EC) No. 1907/2006



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0.022 mg/l

Exposure time: 72 h

Remarks: No toxicity at the limit of solubility

Toxicity to fish (Chronic toxic-:

ity)

NOEC: >= 0.0044 mg/l

Species: Oncorhynchus mykiss (rainbow trout)

Remarks: On basis of test data. No toxicity at the limit of solubility

Toxicity to daphnia and other :

aquatic invertebrates (Chron-

ic toxicity)

NOEC: >= 0.0079 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea) Remarks: On basis of test data. No toxicity at the limit of solubility

**Ecotoxicology Assessment** 

Chronic aquatic toxicity : May cause long lasting harmful effects to aquatic life.

#### 12.2 Persistence and degradability

## **Components:**

### Octamethylcyclotetrasiloxane:

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 3.7 % Exposure time: 28 d

Method: OECD Test Guideline 310

Stability in water : Degradation half life: 69.3 - 144 h (24.6 °C)

pH: 7

Method: OECD Test Guideline 111

#### 12.3 Bioaccumulative potential

#### Components:

## Octamethylcyclotetrasiloxane:

Bioaccumulation : Species: Pimephales promelas (fathead minnow)

Bioconcentration factor (BCF): 12,400

Partition coefficient: n-

octanol/water

log Pow: 6.48 (25.1 °C)

## 12.4 Mobility in soil

No data available

#### 12.5 Results of PBT and vPvB assessment

#### Components:

## Octamethylcyclotetrasiloxane:

Assessment : Remarks: Octamethylcyclotetrasiloxane (D4) meets the cur-

rent REACh Annex XIII criteria for PBT and vPvB. In Canada,

according to Regulation (EC) No. 1907/2006



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D4 has been assessed and deemed to meet the PiT criteria. However, D4 does not behave similarly to known PBT/vPvB substances. The weight of scientific evidence from field studies shows that D4 is not biomagnifying in aquatic and terrestrial food webs. D4 in air will degrade by reaction with naturally occurring hydroxyl radicals in the atmosphere. Any D4 in air that does not degrade by reaction with hydroxyl radicals is not expected to deposit from the air to water, to land, or to living organisms.

#### 12.6 Other adverse effects

No data available

## **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.

According to the European Waste Catalogue, Waste Codes

are not product specific, but application specific.

Waste codes should be assigned by the user, preferably in

discussion with the waste disposal authorities.

Contaminated packaging : Empty containers should be taken to an approved waste han-

dling site for recycling or disposal.

If not otherwise specified: Dispose of as unused product.

## **SECTION 14: Transport information**

## 14.1 UN number

Not regulated as a dangerous good

## 14.2 UN proper shipping name

Not regulated as a dangerous good

#### 14.3 Transport hazard class(es)

Not regulated as a dangerous good

#### 14.4 Packing group

Not regulated as a dangerous good

### 14.5 Environmental hazards

Not regulated as a dangerous good

## 14.6 Special precautions for user

Not applicable

## 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Remarks : Not applicable for product as supplied.

according to Regulation (EC) No. 1907/2006



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## **SECTION 15: Regulatory information**

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

REACH - Candidate List of Substances of Very High :

: Not applicable

Concern for Authorisation (Article 59).

Regulation (EC) No 1005/2009 on substances that dep-

Not applicable

lete the ozone layer

Regulation (EC) No 850/2004 on persistent organic pol-

lutants

Not applicable

Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import

of dangerous chemicals

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of

major-accident hazards involving dangerous substances.

Not applicable

#### The components of this product are reported in the following inventories:

REACH : All ingredients (pre-)registered or exempt.

AICS : All ingredients listed or exempt.

IECSC : All ingredients listed or exempt.

PICCS : All ingredients listed or exempt.

DSL : All chemical substances in this product comply with the CEPA

1999 and NSNR and are on or exempt from listing on the Ca-

nadian Domestic Substances List (DSL).

TSCA : All chemical substances in this product are either listed on the

TSCA Inventory or are in compliance with a TSCA Inventory

exemption.

## 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

#### **SECTION 16: Other information**

### **Full text of H-Statements**

H226 : Flammable liquid and vapour. H361f : Suspected of damaging fertility.

H413 : May cause long lasting harmful effects to aquatic life.

#### Full text of other abbreviations

Aquatic Chronic : Chronic aquatic toxicity

according to Regulation (EC) No. 1907/2006



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Flam. Liq. Flammable liquids Repr. Reproductive toxicity

UK. EH40 WEL - Workplace Exposure Limits GB EH40

**US WEEL** USA. Workplace Environmental Exposure Levels (WEEL) Long-term exposure limit (8-hour TWA reference period) GB EH40 / TWA Short-term exposure limit (15-minute reference period) GB EH40 / STEL

US WEEL / TWA Time weighted average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road: AICS - Australian Inventory of Chemical Substances: ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx -Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx -Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

### **Further information**

Sheet

compile the Safety Data

Sources of key data used to : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen-

cy, http://echa.europa.eu/

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only

according to Regulation (EC) No. 1907/2006



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to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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