



# Johnson Matthey

## SAFETY DATA SHEET

Karstedt Catalyst in Pentasiloxane

Product code : 189124

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

#### 1.1 Product identifier

**Product name** : Karstedt Catalyst in Pentasiloxane  
**Product code** : 189124  
**Product description** : Not available.  
**Product type** : Liquid.  
**Other means of identification** : Not available.

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

Not applicable.

#### 1.3 Details of the supplier of the safety data sheet

Johnson Matthey Plc,  
Orchard Road,  
Royston,  
Herts SG8 5HE

**e-mail address of person responsible for this SDS** : EHS\_CCR@matthey.com

#### 1.4 Emergency telephone number

##### Supplier

**Telephone number** : +44(0)1763253000  
**Hours of operation** : 24 hours

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 3, H226  
Skin Irrit. 2, H315  
Eye Irrit. 2, H319  
Aquatic Chronic 4, H413

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

##### Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

**Classification** : R10  
Xi; R36

**Physical/chemical hazards** : Flammable.

**Human health hazards** : Irritating to eyes.

See Section 16 for the full text of the R phrases or H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

## SECTION 2: Hazards identification

### 2.2 Label elements

Hazard pictograms :



Signal word :

Warning

Hazard statements :

Flammable liquid and vapour.  
Causes serious eye irritation.  
Causes skin irritation.  
May cause long lasting harmful effects to aquatic life.

### Precautionary statements

Prevention :

Wear protective gloves and eye or face protection. Keep away from heat, sparks and hot surfaces. - No smoking.

Response :

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

Storage :

Keep cool.

Disposal :

Not applicable.

Hazardous ingredients :

decamethylcyclopentasiloxane  
1,1,3,3-tetramethyl-1,3-divinyldisiloxane

Supplemental label elements :

Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

### Special packaging requirements

Containers to be fitted with child-resistant fastenings :

Not applicable.

Tactile warning of danger :

Not applicable.

### 2.3 Other hazards

Other hazards which do not result in classification

Prolonged or repeated contact may dry skin and cause irritation.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Mixture

Product/ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
decamethylcyclopentasiloxane	EC: 208-764-9 CAS: 541-02-6	>=75 - <90	Not classified.	Eye Irrit. 2, H319 Aquatic Chronic 4, H413	[1]
1,1,3,3-tetramethyl-1,3-divinyldisiloxane	EC: 220-099-6 CAS: 2627-95-4	>=10 - <20	R10 Xi; R38	Flam. Liq. 3, H226 Skin Irrit. 2, H315	[1]
Platinum, 1,3-diethenyl-1,1,3,3-tetramethyldisiloxane complexes	EC: 270-844-4 CAS: 68478-92-2	<25	R10 R53	Flam. Liq. 2, H225 Aquatic Chronic 4, H413	[1] [2]
propan-2-ol	EC: 200-661-7 CAS: 67-63-0 Index: 603-117-00-0	>=1 - <5	F; R11 Xi; R36 R67	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	[1] [2]

### SECTION 3: Composition/information on ingredients

			See Section 16 for the full text of the R-phrases declared above.	(Narcotic effects) See Section 16 for the full text of the H statements declared above.	
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There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

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

##### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation. Defatting to the skin.
- Ingestion** : Irritating to mouth, throat and stomach.

##### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : No specific data.

## SECTION 4: First aid measures

- Skin contact** : Adverse symptoms may include the following:  
 irritation  
 redness  
 dryness  
 cracking
- Ingestion** : No specific data.

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

- Notes to physician** :
- Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

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

- Hazards from the substance or mixture** : Flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. This material may cause long lasting harmful effects to aquatic life. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
 carbon dioxide  
 carbon monoxide  
 halogenated compounds  
 metal oxide/oxides

### 5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
- Remark** : The residue, ash or char left after a fire may have catalytic properties and may promote the re-ignition of flammable materials and vapours.

## SECTION 6: Accidental release measures

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

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

## SECTION 6: Accidental release measures

**6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

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

**Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

#### Seveso II Directive - Reporting thresholds (in tonnes)

##### Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P5c: Flammable liquids 2 and 3 not falling under P5a or P5b C6: Flammable (R10)	5000 5000	50000 50000

**SECTION 7: Handling and storage****7.3 Specific end use(s)****Recommendations** : Not available.**Industrial sector specific solutions** : Not available.**SECTION 8: Exposure controls/personal protection**

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker or exposure or environmental releases.

**8.1 Control parameters****Occupational exposure limits**

Product/ingredient name	Exposure limit values
Platinum, 1,3-diethenyl-1,1,3,3-tetramethyldisiloxane complexes propan-2-ol	<b>EH40/2005 WELs (United Kingdom (UK)).</b> TWA: 0.002 mg/m <sup>3</sup> 8 hours. Form: Platinum compounds, soluble <b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> STEL: 1250 mg/m <sup>3</sup> 15 minutes. STEL: 500 ppm 15 minutes. TWA: 999 mg/m <sup>3</sup> 8 hours. TWA: 400 ppm 8 hours.

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**DNELs/DMELs**

No DNELs/DMELs available.

**PNECs**

No PNECs available

**8.2 Exposure controls**

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Individual protection measures**

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.



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

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****Appearance**

<b>Physical state</b>	: Liquid.
<b>Colour</b>	: Yellow.
<b>Odour</b>	: Not available.
<b>Odour threshold</b>	: Not available.
<b>pH</b>	: Not available.
<b>Melting point/freezing point</b>	: Not available.
<b>Initial boiling point and boiling range</b>	: Not available.
<b>Flash point</b>	: Not available.
<b>Evaporation rate</b>	: Not available.
<b>Flammability (solid, gas)</b>	: Not available.
<b>Upper/lower flammability or explosive limits</b>	: Not available.
<b>Vapour pressure</b>	: Not available.
<b>Vapour density</b>	: Not available.
<b>Relative density</b>	: Not available.
<b>Solubility(ies)</b>	: Not available.
<b>Partition coefficient: n-octanol/water</b>	: Not available.
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Not available.
<b>Explosive properties</b>	: Not available.
<b>Oxidising properties</b>	: Not available.

Karstedt Catalyst in Pentasiloxane

## SECTION 9: Physical and chemical properties

Minimum ignition energy (mJ) : Not available.

### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The catalytic properties of this material may give it a low ignition temperature (except when supplied as a paste). The catalytic properties will also promote the oxidation and possible ignition of flammable liquids and vapours. A used, filtered catalyst should, therefore, be kept wet and out of contact with combustible vapours and liquids. The material is supplied in a stable condition and other than the previously mentioned catalytic hazards of this material, no specific reactive hazards are known.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

**10.5 Incompatible materials** : Reactive or incompatible with the following materials:  
oxidizing materials

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
decamethylcyclopentasiloxane	LD50 Oral	Rat	>24134 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
1,1,3,3-tetramethyl-1,3-divinylidisiloxane	LD50 Dermal	Rabbit	12800 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
propan-2-ol				

**Conclusion/Summary** : Not available.

#### Acute toxicity estimates

Not available.

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
decamethylcyclopentasiloxane	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
1,1,3,3-tetramethyl-1,3-divinylidisiloxane	Skin - Oedema	Rabbit	0	4 hours 0.5 mL	48 hours
	Skin - Erythema/Eschar	Rabbit	0	4 hours 0.5 mL	48 hours
propan-2-ol	Eyes - Mild irritant	Rabbit	-	-	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	10 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100	-



## SECTION 11: Toxicological information

	Skin - Mild irritant	Rabbit	-	milligrams 500 milligrams	-
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**Conclusion/Summary** : Not available.

### Sensitisation

Product/ingredient name	Route of exposure	Species	Result
propan-2-ol	skin	Guinea pig	Not sensitizing

**Conclusion/Summary** : Not available.

### Mutagenicity

Product/ingredient name	Test	Experiment	Result
propan-2-ol	EPA 40 CFR 792 and 340 CFR 160	Experiment: In vitro Subject: Bacteria Metabolic activation: with and without	Negative
	476 In vitro Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic Metabolic activation: with and without	Negative
	474 Mammalian Erythrocyte Micronucleus Test	Experiment: In vivo Subject: Mammalian-Animal	Negative
	471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria Metabolic activation: with and without	Negative
	476 In vitro Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal Cell: Germ Metabolic activation: with and without	Negative
	474 Mammalian Erythrocyte Micronucleus Test	Experiment: In vivo Subject: Mammalian-Animal	Negative

**Conclusion/Summary** : Not available.

### Carcinogenicity

**Conclusion/Summary** : Not available.

### Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
1,1,3,3-tetramethyl-1,3-divinylidisiloxane	-	Negative	-	Rat - Male, Female	Oral: >600 mg/kg	-

**Conclusion/Summary** : Not available.

### Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
1,1,3,3-tetramethyl-1,3-divinylidisiloxane	Positive - Oral	Rat - Female	600 mg/kg per day	up to 52 doses

**Conclusion/Summary** : Not available.

### Specific target organ toxicity (single exposure)

## SECTION 11: Toxicological information

Product/ingredient name	Category	Route of exposure	Target organs
propan-2-ol	Category 3	Not applicable.	Narcotic effects

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Not available.

### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation. Defatting to the skin.
- Ingestion** : Irritating to mouth, throat and stomach.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
dryness  
cracking
- Ingestion** : No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

### Potential chronic health effects

Product/ingredient name	Result	Species	Dose	Exposure
1,1,3,3-tetramethyl-1,3-divinylidisiloxane	Sub-acute NOAEL Inhalation Vapour	Rat - Male, Female	1.9 mg/l	14 days; 6 hours per day

- Conclusion/Summary** : Not available.
- General** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

## SECTION 11: Toxicological information

**Other information** : Not available.

**Other adverse symptoms** : No known significant effects or critical hazards.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
1,1,3,3-tetramethyl-1,3-divinyldisiloxane	Acute NOEC >0.12 mg/l Fresh water	Algae - Pseudokirchnerella subcapitata	72 hours
propan-2-ol	Acute NOEC >0.1 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute NOEC >0.13 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Acute LC50 1400000 µg/l Marine water	Crustaceans - Crangon crangon	48 hours
	Acute LC50 1400000 µg/l	Fish - Gambusia affinis	96 hours

**Conclusion/Summary** : Not available.

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
1,1,3,3-tetramethyl-1,3-divinyldisiloxane	301D Ready Biodegradability - Closed Bottle Test	0.9 % - 28 days	-	-
propan-2-ol	EU C.5 and C.6	53 to 77 % - Readily - 5 days	-	-

**Conclusion/Summary** : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
1,1,3,3-tetramethyl-1,3-divinyldisiloxane	-	-	Not readily
propan-2-ol	-	-	Readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
decamethylcyclopentasiloxane	8.023	7060	high
1,1,3,3-tetramethyl-1,3-divinyldisiloxane	-	1290 to 2410	high
propan-2-ol	0.05	-	low

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

### 12.5 Results of PBT and vPvB assessment

**PBT** : Not applicable.

**vPvB** : Not applicable.

**12.6 Other adverse effects** : No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Empty containers or liners may retain some product residues. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Return accumulated waste material to the refinery for metal recovery, or dispose of in accordance with local and national regulations.





**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number</b>	UN1993	1993	UN1993	UN1993
<b>14.2 UN proper shipping name</b>	FLAMMABLE LIQUID, N.O.S. (1,1,3,3-tetramethyl-1,3-divinylidisiloxane, Isopropyl alcohol)	FLAMMABLE LIQUIDS, N.O.S. (1,1,3,3-tetramethyl-1,3-divinylidisiloxane, Isopropyl alcohol)	FLAMMABLE LIQUID, N.O.S. (1,1,3,3-tetramethyl-1,3-divinylidisiloxane, Isopropyl alcohol)	Flammable liquid, n.o.s. (1,1,3,3-tetramethyl-1,3-divinylidisiloxane, Isopropyl alcohol)
<b>14.3 Transport hazard class(es)</b>	3 	3 	3 	3 
<b>14.4 Packing group</b>	III	III	III	III
<b>14.5 Environmental hazards</b>	No.	Yes.	No.	No.
<b>Additional information</b>	<p><b>Hazard identification number</b> 30</p> <p><b>Limited quantity</b> 5 L</p> <p><b>Special provisions</b> 274, 601, 640E</p> <p><b>Tunnel code (D/E)</b></p>	<p>The product is only regulated as an environmentally hazardous substance when transported in tank vessels.</p> <p><b>Special provisions</b> 601</p>	<p><b>Emergency schedules (EmS)</b> F-E, _S-E_</p> <p><b>Special provisions</b> 223, 274, 955</p>	<p><b>Passenger and Cargo Aircraft</b> Quantity limitation: 60 L Packaging instructions: 355 <b>Cargo Aircraft Only</b> Quantity limitation: 220 L Packaging instructions: 366 <b>Limited Quantities - Passenger Aircraft</b> Quantity limitation: 10</p>

Karstedt Catalyst in Pentasiloxane

## SECTION 14: Transport information

				L Packaging instructions: Y344  <b>Special provisions</b> A3
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**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** : Not available.

## SECTION 15: Regulatory information

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

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorisation

###### Annex XIV

None of the components are listed.

###### Substances of very high concern

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

#### Other EU regulations

**Europe inventory** : All components are listed or exempted.

#### Seveso II Directive

This product is controlled under the Seveso II Directive.

#### Danger criteria

<b>Category</b>
P5c: Flammable liquids 2 and 3 not falling under P5a or P5b C6: Flammable (R10)

#### International regulations

##### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

##### Montreal Protocol (Annexes A, B, C, E)

Not listed.

##### Stockholm Convention on Persistent Organic Pollutants

Not listed.

##### Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

##### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

#### International lists

## SECTION 15: Regulatory information

### National inventory

<b>Australia</b>	: All components are listed or exempted.
<b>Canada</b>	: All components are listed or exempted.
<b>China</b>	: All components are listed or exempted.
<b>Japan</b>	: Not determined.
<b>Malaysia</b>	: Not determined.
<b>New Zealand</b>	: All components are listed or exempted.
<b>Philippines</b>	: All components are listed or exempted.
<b>Republic of Korea</b>	: All components are listed or exempted.
<b>Taiwan</b>	: Not determined.
<b>United States</b>	: <b>United States inventory (TSCA 8b)</b> : All components are listed or exempted.

**15.2 Chemical Safety Assessment** : This product contains substances for which Chemical Safety Assessments are still required.

## SECTION 16: Other information

✔ Indicates information that has changed from previously issued version.

<b>Abbreviations and acronyms</b>	: ATE = Acute Toxicity Estimate CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EUH statement = CLP-specific Hazard statement PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration RRN = REACH Registration Number vPvB = Very Persistent and Very Bioaccumulative
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### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 4, H413	Expert judgment Calculation method Calculation method Calculation method

<b>Full text of abbreviated H statements</b>	: H225 H226 H315 H319 H336 (Narcotic effects) H413	Highly flammable liquid and vapour. Flammable liquid and vapour. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. (Narcotic effects) May cause long lasting harmful effects to aquatic life.
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<b>Full text of classifications [CLP/GHS]</b>	: Aquatic Chronic 4, H413 Eye Irrit. 2, H319  Flam. Liq. 2, H225 Flam. Liq. 3, H226 Skin Irrit. 2, H315 STOT SE 3, H336 (Narcotic effects)	LONG-TERM AQUATIC HAZARD - Category 4 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2  FLAMMABLE LIQUIDS - Category 2 FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
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<b>Full text of abbreviated R phrases</b>	: R11- Highly flammable. R10- Flammable. R36- Irritating to eyes. R38- Irritating to skin. R67- Vapours may cause drowsiness and dizziness. R53- May cause long-term adverse effects in the aquatic environment.
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<b>Full text of classifications [DSD/DPD]</b>	: F - Highly flammable Xi - Irritant
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## SECTION 16: Other information

**Date of printing** : 04/03/2015.

**Date of issue/ Date of revision** : 04/03/2015.

**Date of previous issue** : 04/03/2015.

**Version** : 0.03

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