

Product VM20 catalyst  
 Revision date 21 February 2018  
 Revision 1



## Safety Data Sheet (SDS)

### Section 1: Identification of the substance/preparation and of the company/undertaking

#### 1.1 Product identifier

**Product name** VM20 catalyst  
**Synonyms, Trade names** No information available.

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

**Identified uses** Curing agent.  
**Uses advised against** Any other purpose.

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

**Supplier** Renishaw plc  
 Brooms Road  
 Stone Business Park  
 Stone, Staffordshire  
 ST15 0SH  
 United Kingdom  
 Tel: +44 (0) 1785 285000 (during UK office hours 09:00 to 17:00 UTC).  
 msds@renishaw.com

**Contact person**

#### 1.4 Emergency telephone number

**Emergency telephone** 999 / 911 or local emergency number

### Section 2: Hazards identification

#### 2.1 Classification of the substance or mixture

**Classification (EC 1272/2008)**  
 Physical and chemical hazards Not classified  
 Human health Not classified  
 Environment Not classified

#### 2.2 Label elements

**Contains** Not applicable

**Label in accordance with (EC) no. 1272/2008** No pictogram required

**Signal word** No Signal Word

**Hazard statements** No hazard statements required

**Precautionary statements** No precautionary statements required

#### 2.3 Other hazards

With exposure to acids, bases and oxidizing agents, product will release hydrogen: Extremely flammable. Danger of explosion!

### Section 3: Composition/identification of ingredients

#### 3.1 Substance

Not applicable.

### 3.2 Mixtures

Name	Product identifier	Reg. EU 1272/2008	%
ORGANOPOLYSILOXANE	CAS-No.: EC No.:		<100%

The full text for all hazard statements are displayed in section 16.

**Composition comments**

The data shown are in accordance with the latest EC Directives. There are no 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.

## Section 4: First aid measures

### 4.1 Description of first aid measures

**General information**

Provide general first aid, rest, warmth and fresh air. As a general rule, in case of doubt or if symptoms persist, always call a doctor. Seek medical attention for all burns and eye injuries, regardless how minor they may seem. First aid personnel must be aware of own risk during rescue.

**Inhalation**

If this product is inhaled and symptoms occur, move the exposed person to fresh air promptly. If breathing is difficult, give oxygen. Seek medical attention. Keep person warm and at rest.

**Ingestion**

If this product is ingested, remove victim immediately from source of exposure. Rinse mouth thoroughly. Do not induce vomiting. Provide fresh air, warmth and rest, preferably in comfortable upright sitting position. Get medical attention immediately! Never give anything by mouth to an unconscious person.

**Skin contact**

Immediately wash with water, preferably under a shower, removing contaminated clothing while washing proceeds. Obtain medical attention if irritation persists or if blistering occurs. Contaminated clothing should be washed before re-use.

**Eye contact**

Do not rub eye. If this product contacts the eyes, gently flush eyes with water for at least fifteen (15) minutes, lifting the upper and lower eyelids occasionally. Avoid contaminating unaffected eye. Remove contact lenses if present and easy to do so. Seek medical attention.

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

**General information**

The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

**Inhalation**

No specific symptoms noted.

**Ingestion**

No specific symptoms noted.

**Skin contact**

No specific symptoms noted.

**Eye contact**

May cause temporary eye irritation.

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

**Notes to the physician**

Treat symptomatically.

## Section 5: Fire-fighting measures

### 5.1 Extinguishing media

**Extinguishing media**

Extinguish with foam, carbon dioxide or water fog.

**Unsuitable extinguishing media**

High volume water jet.

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

**Hazardous combustion products**

Fire may generate Irritating, toxic and corrosive gases. Decomposition products may include: Silicon dioxide, traces of incompletely burned carbon compounds, formaldehyde, carbon monoxide and carbon dioxide.

**Unusual fire & explosion hazards**

Will react with oxidizing agents or acids and alkalis, causing heating and hydrogen release - explosion risk.

**Specific hazards**

If heated, harmful vapours may be formed. Floors may become slippery, avoid falls.

### 5.3 Advice for firefighters

- Special fire fighting procedures** If possible, fight fire from protected position. Avoid breathing fire vapours. Ventilate closed spaces before entering them. Keep up-wind to avoid fumes. Containers close to fire should be removed immediately or cooled with water if safe to do so.
- Protective equipment for firefighters** 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.

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## Section 6: Accidental release measures

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

- Personal precautions** Do not touch or walk through spilled material. Evacuate and ventilate area. Eliminate all sources of ignition. Wear protective clothing as described in Section 8 of this safety data sheet. On exposure to impurities, product will release hydrogen gas. Avoid inhalation of vapours and contact with skin and eyes. Provide adequate ventilation. In case of inadequate ventilation, use respiratory protection. Keep unnecessary and unprotected personnel from entering.
- For emergency responders** Follow safe handling advice and personal protective equipment recommendations for normal use of product.

### 6.2 Environmental precautions

- Environmental precautions** Do not discharge onto the ground or into water courses.

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

- Spill clean up methods** Stop leak if possible without risk. DO NOT touch spilled material! Wear necessary protective equipment. Ventilate and evacuate the area. Eliminate all sources of ignition. Wear respirator if ventilation is not adequate. Scrape up with rag or other material and place into suitable clean labelled container. In such a case be aware of generation of hydrogen gas by contaminants. Ensure that waste and contaminated materials are collected and removed from the work area as soon as possible in a suitably labelled container Wash work area with water.

### 6.4 Reference to other sections

- Reference to other sections** See section 1 for emergency contact. For personal protection, see section 8. For waste disposal, see section 13.

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## Section 7: Handling and storage

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### 7.1 Precautions for safe handling

- Handling** Keep away from heat, sparks and open flame. Static electricity and formation of sparks must be prevented. Open container carefully as content may be under pressure. Do not eat, drink or smoke when using the product. Do not use contact lenses. Avoid contact with skin and eyes. Avoid inhalation of vapours. Avoid prolonged or repeated contact. Provide good ventilation. Wear personal protective equipment. Handle and open container with care. Do not drop, drag or bang the container. Do not mix with other chemicals. Observe good industrial hygiene practices. Vent container properly to eliminate internal pressure. Do not return product to containers for reuse.

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

- Storage precautions** Keep away from heat, sparks, direct sunlight and open flames. Store separately from acids, alkalis and oxidising agents. Keep only in a vented container in a well ventilated area. Keep container closed and store away from water or moisture. Keep upright.
- Storage class** Combustible liquids.

### 7.3 Specific end use(s)

- Specific end use(s)** The identified uses for this product are detailed in Section 1.
- Usage description** Use only according to directions.

## Section 8: Exposure controls/Personal protection

### 8.1 Control parameters

#### Ingredient comments

No exposure limits noted for ingredient(s).  
WEL - Workplace Exposure Limits - EH40/2005 Workplace exposure limits.  
The National Institute for Occupational Safety and Health (NIOSH).

### 8.2 Exposure Controls

#### Protective equipment



#### Engineering measures Respiratory equipment

Provide adequate ventilation, including appropriate local extraction.  
Where risk assessment shows air-purifying respirators are appropriate a full face respirator conforming to EN143, and suitable respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as CEN (EU).  
Change filters frequently. Use respiratory protection as specified by an industrial hygienist or other qualified professional if concentrations exceed the limits listed in Section 8. Type A/organic vapour protective components recommended. Consult manufacturer for specific advice.

#### Hand protection

Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374) is recommended. Gloves must be inspected prior to use. Suggested material: Nitrile/Chloroprene. Consult manufacturer for specific advice.  
Breakthrough time: >480 minutes.  
Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Change gloves regularly. Selection of the glove material depends on consideration of the penetration times, rates of diffusion and degradation, and concentration specific to the workplace.

#### Eye protection

Wear safety goggles or face shield to prevent any possibility of eye contact. Use equipment for eye protection tested and approved under appropriate government standards such as EN 166(EU).

#### Other protection

Wear appropriate clothing to prevent any possibility of skin contact. 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. The selected clothing must satisfy the European norm standard EN 943.

#### Hygiene measures

Observe normal hygiene standards. Keep container tightly closed. Do not eat, drink or smoke during work. Handle in accordance with good industrial hygiene and safety practice. Keep container tightly closed. Wash promptly if skin becomes wet or contaminated.

#### Process conditions

Ensure that eye flushing systems and safety showers are located close by in the work place.

## Section 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<b>Appearance</b>	Liquid.
<b>Colour</b>	Colourless.
<b>Odour</b>	Odourless.
<b>Odour threshold - lower</b>	No information available.
<b>Odour threshold - upper</b>	No information available.
<b>pH-Value, Conc. Solution</b>	No information available.
<b>pH-Value, Diluted solution</b>	No information available.
<b>Melting point</b>	No information available.
<b>Initial boiling point and boiling</b>	No information available.

range

Flash point	> 94.00 °C
Evaporation rate	No information available.
Flammability state	No information available.
Flammability limit - lower(%)	No information available.
Flammability limit - upper(%)	No information available.
Vapour pressure	Negligible at 25 °C.
Vapour density (air=1)	No information available.
Relative density	No information available.
Bulk density	No information available.
Solubility	Insoluble.
Decomposition temperature	No information available.
Partition coefficient; n- Octanol/Water	No information available.
Auto ignition temperature (°C)	No information available.
Viscosity	No information available.
Explosive properties	Not classified as explosive.
Oxidising properties	No information available.

## 9.2 Other information

Molecular weight	No information available.
Volatile organic compound	No information available.
Other information	None noted.

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## Section 10: Stability and reactivity

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### 10.1 Reactivity

Reactivity	Product will release hydrogen gas on contact with acids, bases and oxidizing agents.
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### 10.2 Chemical stability

Stability	Stable under normal temperature conditions and recommended use.
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### 10.3 Possibility of hazardous reactions

Hazardous reactions	Product will release hydrogen gas on contact with acids, bases and oxidizing agents.
Hazardous polymerisation	May polymerise.
Polymerisation description	Unknown.

### 10.4 Conditions to Avoid

Conditions to avoid	Heat, sparks, open flames, temperature extremes and direct sunlight.
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### 10.5 Incompatible materials

Materials to avoid	Store separately from acids, alkalies, and oxidising agents. Avoid contact with metals and water. Strong reducing agents, Alcohols.
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## 10.6 Hazardous decomposition products

**Hazardous decomposition products** Thermal decomposition or combustion may liberate carbon oxides and other harmful gases or vapors. Decomposition products may include: Silicone dioxide, and formaldehyde. Hydrogen. Incompletely burned carbon compounds.

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## Section 11: Toxicological information

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### 11.1 Information on toxicological effects

<b>Toxicological information</b>	No toxicological information for the overall finished product.
<b>Acute toxicity (Oral LD50)</b>	No information available.
<b>Acute toxicity (Dermal LD50)</b>	No information available.
<b>Acute toxicity (Inhalation LD50)</b>	No information available.
<b>Serious eye damage/irritation</b>	May cause temporary eye irritation.
<b>Skin corrosion/irritation</b>	No information available.
<b>Respiratory sensitisation</b>	No information available.
<b>Skin sensitisation</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.
<b>Specific target organ toxicity - Single exposure:</b>	
<b>STOT - Single exposure</b>	No information available.
<b>Specific target organ toxicity - Repeated exposure:</b>	
<b>STOT - Repeated exposure</b>	No information available.
<b>Inhalation</b>	No specific symptoms noted.
<b>Ingestion</b>	No specific symptoms noted.
<b>Skin contact</b>	No specific symptoms noted.
<b>Eye contact</b>	May cause temporary eye irritation.
<b>Waste management</b>	When handling waste, consideration should be made to the safety precautions applying to handling of the product.
<b>Routes of entry</b>	No information available.
<b>Target organs</b>	No target organs specified.
<b>Aspiration hazards:</b>	No information available.
<b>Reproductive toxicity:</b>	No information available.

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## Section 12: Ecological information

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### 12.1 Toxicity

<b>Acute toxicity - Fish</b>	No information available.
<b>Acute toxicity - Aquatic invertebrates</b>	No information available.
<b>Acute toxicity - Aquatic plants</b>	No information available.
<b>Acute toxicity - Microorganisms</b>	No information available.
<b>Chronic toxicity - Fish</b>	No information available.
<b>Chronic toxicity - Aquatic invertebrates</b>	No information available.
<b>Chronic toxicity - Aquatic plants</b>	No information available.
<b>Chronic toxicity - Microorganisms</b>	No information available.
<b>Ecotoxicity</b>	No ecological information on the finished product.
<b>Eco toxicological information</b>	No ecological toxicity available on the overall finished product.

### 12.2 Persistence and degradability

<b>Degradability</b>	No information available.
<b>Biological oxygen demand</b>	No information available.
<b>Chemical oxygen demand</b>	No information available.

**12.3 Bioaccumulative potential**

<b>Bioaccumulative potential</b>	No data available on bioaccumulation.
<b>Bioaccumulation factor</b>	No information available.
<b>Partition coefficient; n-Octanol/Water</b>	No information available.

**12.4 Mobility in soil**

<b>Mobility</b>	No information available.
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**12.5 Results of PBT and vPvB assessment**

**Results of PBT and vPvB assessment** This product is not identified as a PBT/vPvB substance.

**12.6 Other adverse effects**

<b>Other adverse effects</b>	None known.
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**Section 13: Disposal considerations**

<b>Waste management</b>	When handling waste, consideration should be made to the safety precautions applying to handling of the product.
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**13.1 Waste treatment methods**

<b>Disposal methods</b>	Dispose of waste and residues in accordance with local authority requirements, and in accordance with all local, national and international regulations. For waste disposal, use a licensed industrial waste disposal agent.
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**Section 14: Transport information**

**14.1 UN number**

<b>UN no. (ADR)</b>	Not applicable.
<b>UN no. (IMDG)</b>	Not applicable.
<b>UN no. (IATA)</b>	Not applicable.

**14.2 UN proper shipping name**

<b>ADR proper shipping name</b>	Not applicable.
<b>IMDG proper shipping name</b>	Not applicable.
<b>IATA proper shipping name</b>	Not applicable.

**14.3 Transport hazard class(es)**

<b>ADR class</b>	Not applicable.
<b>IMDG class</b>	Not applicable.
<b>IATA class</b>	Not applicable.

**Transport labels** Not applicable

**14.4 Packing group**

<b>ADR/RID/ADN packing group</b>	Not applicable.
<b>IMDG packing group</b>	Not applicable.
<b>IATA packing group</b>	Not applicable.

**14.5 Environmental hazards**

<b>ADR</b>	No
<b>IMDG</b>	No
<b>IATA</b>	No

**14.6 Special precautions for user**

<b>EMS</b>	Not applicable.
<b>Emergency action code</b>	Not applicable.
<b>Hazard no. (ADR)</b>	Not applicable.
<b>Tunnel restriction code</b>	Not applicable.

**14.7 Transport in bulk according to annex II of MARPOL73/78 and the IBC code**

Not applicable.

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**Section 15: Regulatory information**

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**15.1 Safety, health and environmental regulations/Legislation specific for the substance or mixture**

<b>EU legislation</b>	Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments. The UN Globally Harmonized System (GHS) Safety Data Sheet format (Annex IV) is implemented as Annex II of REACH EU No 453/2010 of 20th May 2010 amending regulation (EC) No 1907/2006.
<b>Approved code of practice</b>	Workplace Exposure Limits Guidance Note EH40/2005.
<b>Chemical safety assessment</b>	No chemical safety assessment has been carried out.

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**Section 16: Other information**

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<b>General information</b>	This Safety Data Sheet is in accordance with Reach Regulation (EC) No 453/2010.
<b>Revision comments</b>	This is a first issue.
<b>Revision date</b>	21 February 2018
<b>Revision</b>	1
<b>Safety data sheet status</b>	Approved.

**Hazard statements in full**

**Disclaimer**

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.