



# HARDSIL CC; Part A (Base)

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878  
Issue date: 12/2/2015 Revision date: 7/19/2023 Version: 1.2

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

#### 1.1. Product identifier

Product form	: Substance
Substance name	: HARDSIL CC; Part A (Base)
CAS-No.	: 68037-82-1
Product code	: PP2-HSCCA
Synonyms	: POLY(PHENYLMETHYLVINYLSILOXANES) RESIN; SILICONE RESIN; SILOXANE, PHENYLMETHYL, PHENYLVINYL; SILOXANES AND SILICONES, METHYL PHENYL, PHENYL VINYL, [(METHYLPHENYLVINYLSILYL)OXY] TERMINATED
Product group	: Trade product
Other means of identification	: NOTE: This MSDS provides data on the base resin, Pat A. Part B contains an equivalent of one part per hundred of dicumyl peroxide for which a separate MSDS is available.
Chemical family	: ORGANOSILOXANE

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

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Chemical intermediate

##### 1.2.2. Uses advised against

No additional information available

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

##### GELEST, INC.

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Morrisville, PA 19067  
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#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Not classified

##### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

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

EUH-statements : EUH210 - Safety data sheet available on request.

#### 2.3. Other hazards

Contains no PBT/vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

# HARDSIL CC; Part A (Base)

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Substance type	: Multi-constituent
Name	: HARDSIL CC; Part A (Base)
CAS-No.	: 68037-82-1

#### 3.2. Mixtures

Not applicable

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general	: Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.
First-aid measures after skin contact	: Wash with plenty of water/.... Get medical advice/attention.
First-aid measures after eye contact	: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion	: Never give anything by mouth to an unconscious person. Get medical advice/attention.

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

Symptoms/effects after inhalation	: No information available.
Symptoms/effects after skin contact	: May cause skin irritation.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: May be harmful if swallowed.

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

No additional information available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Water fog. Foam. Carbon dioxide. Dry chemical.
Unsuitable extinguishing media	: None known.

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

Fire hazard	: Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.
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#### 5.3. Advice for firefighters

Firefighting instructions	: Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapour and mist.

### SECTION 6: Accidental release measures

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

##### 6.1.1. For non-emergency personnel

Protective equipment	: Wear protective equipment as described in Section 8.
Emergency procedures	: Evacuate unnecessary personnel.

# HARDSIL CC; Part A (Base)

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it.

### 6.4. Reference to other sections

See Section 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapour and mist. Spillage of this material may create a slippery condition for foot or vehicle traffic. Use only in well ventilated areas.

Hygiene measures : Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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

Storage conditions : Keep container tightly closed.

Incompatible materials : Strong oxidizers.

Storage area : Store in a well-ventilated place. Store away from heat.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

No additional information available

#### 8.1.2. Recommended monitoring procedures

No additional information available

#### 8.1.3. Air contaminants formed

No additional information available

#### 8.1.4. DNEL and PNEC

No additional information available

#### 8.1.5. Control banding

No additional information available

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

##### Appropriate engineering controls:

Provide local exhaust or general room ventilation.

#### 8.2.2. Personal protection equipment

##### Personal protective equipment:

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

# HARDSIL CC; Part A (Base)

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 8.2.2.1. Eye and face protection

#### Eye protection:

Chemical goggles. Contact lenses should not be worn

### 8.2.2.2. Skin protection

#### Skin and body protection:

Wear suitable protective clothing

#### Hand protection:

Neoprene or nitrile rubber gloves

### 8.2.2.3. Respiratory protection

#### Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified organic vapor (black cartridge) respirator.

### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

No additional information available

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Colour	: Not available
Appearance	: Clear liquid. Viscous.
Odour	: Not available
Odour threshold	: Not available
Melting point	: < 0 °C
Freezing point	: Not available
Boiling point	: > 205 °C
Flammability	: Not available
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: > 180 °C
Auto-ignition temperature	: 475 °C
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: 80 – 150 mm <sup>2</sup> /s
Solubility	: Insoluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: < 0.01 mm Hg
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 1.1
Relative vapour density at 20°C	: > 1
Particle characteristics	: Not applicable

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

VOC content : < 3 %

# HARDSIL CC; Part A (Base)

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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

Stable.

#### 10.3. Possibility of hazardous reactions

No additional information available

#### 10.4. Conditions to avoid

Heat. Open flame. Sparks.

#### 10.5. Incompatible materials

Strong oxidizers.

#### 10.6. Hazardous decomposition products

(at temperatures >250°C): Organic acid vapors. Silicon dioxide. Traces of formaldehyde and benzene have been observed during the oxidative thermal decomposition of similar products at elevated temperatures (>150°C).

### SECTION 11: Toxicological information

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

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

#### HARDSIL CC; Part A (Base) (68037-82-1)

Viscosity, kinematic	80 – 150 mm²/s
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#### 11.2. Information on other hazards

No additional information available

### SECTION 12: Ecological information

#### 12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

# HARDSIL CC; Part A (Base)

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Sewage disposal recommendations : Do not dispose of waste into sewer.  
Product/Packaging disposal recommendations : Incinerate. Dispose in a safe manner in accordance with local/national regulations.  
Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.2. UN proper shipping name</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.4. Packing group</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

### 14.6. Special precautions for user

#### Overland transport

No data available

#### Transport by sea

No data available

#### Air transport

No data available

#### Inland waterway transport

No data available

# HARDSIL CC; Part A (Base)

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### Rail transport

No data available

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

##### REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

##### REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

##### REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

##### PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

##### POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

##### Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

##### VOC Directive (2004/42)

VOC content : < 3 %

##### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

##### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

### Abbreviations and acronyms:

Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor

Other information : Prepared by safety and environmental affairs.

### Full text of H- and EUH-statements:

EUH210	Safety data sheet available on request.
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# **HARDSIL CC; Part A (Base)**

## **Safety Data Sheet**

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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SDS EU (REACH Annex II) - Custom v22

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

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## High Modulus Clear Casting and Impregnation Resin




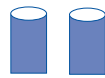
Features: Provides rigid silicone resins with excellent optical properties. HardSil™ C is a curable phenyl silicone resin with excellent thermal stability and good electrical properties.

Applications:

**Electrical Components** - high temperature, high power encapsulating and mounting resin.

**Laminated Structures** - hard, heat resistant impregnants for continuous exposures up to 300°C.

**X-ray equipment**- radiation resistant encapsulating resin.

Capsular Description:	Thickness		Cure		Hardness		Type	
		thick		thermal		high		2-part

### HardSil™ CC Clear Casting and Impregnation Resin

#### Description

HardSil™ CC is a peroxide curable solventless silicone resin supplied with catalyst.

#### Bulk Properties

Color	clear-straw transparent
Dielectric Strength (1/8")	350 volts/mil
Volume Resistivity	5 x 10 <sup>15</sup> ohm-cm
Refractive Index	1.530

#### Resin Properties

Form	liquid
Flashpoint	>180°C
Specific Gravity	1.10
Viscosity	80-150 cSt.

#### Application Methods

Gelest HardSil™ CC Part A (resin) and 1 wgt % Part B (peroxide) are combined and mixed thoroughly. The mix is poured or applied as an encapsulant or impregnant. Cure is for 6 hours at 150°C followed by two hours at 200°C. If the component is operating above 200°C, it should be cured for three hours at the maximum operating temperature before entering service.

#### Cautions

Use in a well ventilated area.  
Avoid contact with skin and eyes.  
Part B catalyst is an oxidizer and should be stored away from flammables.

Shelf life: 12 months when stored below 25°C in sealed containers.

#### Standard Packaging

PP2-HSCC HardSil™ CC 99:1 kit
100g/\$140.00
1kg/\$925.00



# HARDSIL CC; Part B (Catalyst)

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878  
Issue date: 12/2/2015 Revision date: 7/19/2023 Version: 2.1

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

#### 1.1. Product identifier

Product form	: Substance
Substance name	: HARDSIL CC; Part B (Catalyst)
EC-No.	: 201-279-3
CAS-No.	: 80-43-3
Product code	: PP2-HSCCB
Formula	: C <sub>18</sub> H <sub>22</sub> O <sub>2</sub>
Synonyms	: DICUMYL PEROXIDE; BIS(1-METHYL-1-PHENYLETHYL)PEROXIDE
Product group	: Trade product
Chemical family	: PEROXIDE

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

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Chemical intermediate

##### 1.2.2. Uses advised against

No additional information available

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

##### GELEST, INC.

11 East Steel Road  
Morrisville, PA 19067

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T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST

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[info@gelestde.com](mailto:info@gelestde.com) - [www.gelest.com](http://www.gelest.com)

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Organic Peroxides, Type F	H242
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319
Reproductive toxicity, Category 1B	H360
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411
Full text of H- and EUH-statements: see section 16	

##### Adverse physicochemical, human health and environmental effects

No additional information available

# HARDSIL CC; Part B (Catalyst)

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

Hazard statements (CLP)

Precautionary statements (CLP)

- : Danger
- H242 - Heating may cause a fire.
- H315 - Causes skin irritation.
- H319 - Causes serious eye irritation.
- H360 - May damage fertility or the unborn child.
- H411 - Toxic to aquatic life with long lasting effects.
- : P202 - Do not handle until all safety precautions have been read and understood.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P240 - Ground and bond container and receiving equipment.
- P264 - Wash hands thoroughly after handling.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

### 2.3. Other hazards

Contains no PBT/vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Substance type : Mono-constituent

Name : HARDSIL CC; Part B (Catalyst)

CAS-No. : 80-43-3

EC-No. : 201-279-3

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Dicumyl peroxide	CAS-No.: 80-43-3 EC-No.: 201-279-3 EC Index-No.: 617-006-00-X	97 – 100	Org. Perox. F, H242 Repr. 1B, H360D Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 2, H411

Full text of H- and EUH-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.
- First-aid measures after skin contact : Wash with plenty of water/.... Get medical advice/attention.
- First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

# HARDSIL CC; Part B (Catalyst)

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get medical advice/attention.

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

Symptoms/effects : May damage fertility or the unborn child.  
Symptoms/effects after inhalation : May cause irritation to the respiratory tract. Excessive inhalation of vapors has been reported to cause nose and upper respiratory tract irritation with the appearance of visible blood vessels in the nose and nosebleeds. Overexposure may cause: Cough. Headache. Nausea.  
Symptoms/effects after skin contact : Causes skin irritation.  
Symptoms/effects after eye contact : Causes serious eye irritation.  
Symptoms/effects after ingestion : May be harmful if swallowed.

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Foam. Carbon dioxide. Dry chemical.  
Unsuitable extinguishing media : Water.

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

Fire hazard : Heating may cause a fire. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

### 5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray to cool exposed surfaces.  
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid contact with skin and eyes. Do not breathe dust.

## SECTION 6: Accidental release measures

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

General measures : Remove ignition sources. Use special care to avoid static electric charges.

#### 6.1.1. For non-emergency personnel

Protective equipment : Wear protective equipment as described in Section 8.  
Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

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

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.  
Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal. Use only non-sparking tools.

### 6.4. Reference to other sections

See Section 8. Exposure controls and personal protection.

# HARDSIL CC; Part B (Catalyst)

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Precautions for safe handling : Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust. Ground containers when handling powder. Use only outdoors or in a well-ventilated area. Use only non-sparking tools.
- Hygiene measures : Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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

- Technical measures : Proper grounding procedures to avoid static electricity should be followed.
- Storage conditions : Keep container tightly closed. Store away from flammables. Store below 30°C. Protect from sunlight. Keep only in original container.
- Incompatible materials : Flammable or combustible materials. Metals. Oxidizing agent.
- Storage area : Store in a well-ventilated place. Store away from heat.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### 8.1.1 National occupational exposure and biological limit values

No additional information available

##### 8.1.2. Recommended monitoring procedures

No additional information available

##### 8.1.3. Air contaminants formed

No additional information available

##### 8.1.4. DNEL and PNEC

No additional information available

##### 8.1.5. Control banding

No additional information available

#### 8.2. Exposure controls

##### 8.2.1. Appropriate engineering controls

###### Appropriate engineering controls:

Provide local exhaust or general room ventilation.

##### 8.2.2. Personal protection equipment

###### Personal protective equipment:

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

###### 8.2.2.1. Eye and face protection

###### Eye protection:

Chemical goggles. Contact lenses should not be worn

###### 8.2.2.2. Skin protection

###### Skin and body protection:

Wear suitable protective clothing

###### Hand protection:

Neoprene or nitrile rubber gloves

# HARDSIL CC; Part B (Catalyst)

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 8.2.2.3. Respiratory protection

#### Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified combination organic vapor - gas (yellow cartridge) respirator.

### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

No additional information available

## SECTION 9: Physical and chemical properties

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

Physical state	: Solid
Colour	: Off-white.
Appearance	: Thick solid.
Molecular mass	: 259.29 g/mol
Odour	: Menthol-like.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Heating may cause a fire.
Explosive properties	: Heating may cause a fire.
Explosive limits	: Not applicable
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
SADT	: 91 °C Self-accelerating decomposition temperature: for pure dicumyl peroxide
pH	: Not available
pH solution	: Not available
Viscosity, kinematic	: Not applicable
Solubility	: Insoluble in water. Reacts with water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: 15.4 mm Hg @ 38°C
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 1.56
Relative vapour density at 20°C	: 9.3
Particle size	: Not available

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable in sealed containers stored below 30°C (86°F). Never allow temperature to exceed 50°C (122°F).

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### 10.3. Possibility of hazardous reactions

Hazardous polymerization does not occur. May initiate polymerization when mixed with active monomers. Corroded metal and acid clays may catalyze decomposition.

### 10.4. Conditions to avoid

Heat. Open flame. Sparks.

### 10.5. Incompatible materials

Flammable or combustible materials. Metals. Oxidizing agent.

### 10.6. Hazardous decomposition products

Acetophenone. Cumyl alcohol. Dimethylphenylcarbinol. Methane. Organic acid vapors.

## SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

#### Dicumyl peroxide (80-43-3)

LD50 oral rat	4100 mg/kg
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation : Causes skin irritation.  
Serious eye damage/irritation : Causes serious eye irritation.  
Respiratory or skin sensitisation : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified  
Reproductive toxicity : May damage fertility or the unborn child.  
STOT-single exposure : Not classified  
Additional information : May cause respiratory irritation.  
STOT-repeated exposure : Not classified  
Aspiration hazard : Not classified

### 11.2. Information on other hazards

No additional information available

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Harmful to aquatic life.  
Hazardous to the aquatic environment, short-term (acute) : Not classified  
Hazardous to the aquatic environment, long-term (chronic) : Toxic to aquatic life with long lasting effects.

#### Dicumyl peroxide (80-43-3)

LC50 - Fish [1]	80.51 – 146.07 mg/l (Exposure time: 96 h - Species: Poecilia reticulata [semi-static])
LC50 - Fish [2]	15.6 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 - Crustacea [1]	> 0.397 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 20 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
LOEC (chronic)	0.247 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

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### Dicumyl peroxide (80-43-3)

NOEC (chronic) 0.177 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

#### Dicumyl peroxide (80-43-3)

Partition coefficient n-octanol/water (Log Pow) 3.78

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Sewage disposal recommendations : Do not dispose of waste into sewer.  
Product/Packaging disposal recommendations : May be incinerated. Dispose in a safe manner in accordance with local/national regulations.  
Dispose of contents/container to licensed waste disposal facility..  
Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

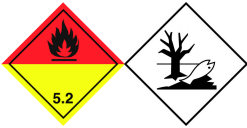
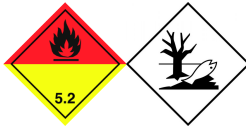
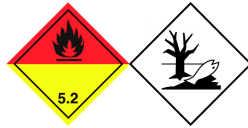
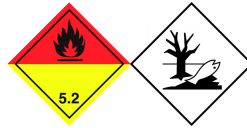
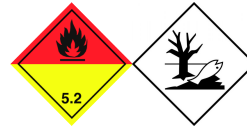
ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
UN 3110	UN 3110	UN 3110	UN 3110	UN 3110
<b>14.2. UN proper shipping name</b>				
ORGANIC PEROXIDE TYPE F, SOLID	ORGANIC PEROXIDE TYPE F, SOLID	Organic peroxide type F, solid	ORGANIC PEROXIDE TYPE F, SOLID	ORGANIC PEROXIDE TYPE F, SOLID
<b>Transport document description</b>				
UN 3110 ORGANIC PEROXIDE TYPE F, SOLID (DICUMYL PEROXIDE), 5.2, (D), ENVIRONMENTALLY HAZARDOUS	UN 3110 ORGANIC PEROXIDE TYPE F, SOLID (DICUMYL PEROXIDE), 5.2, MARINE POLLUTANT/ENVIRONME NTALLY HAZARDOUS	UN 3110 Organic peroxide type F, solid (DICUMYL PEROXIDE), 5.2, ENVIRONMENTALLY HAZARDOUS	UN 3110 ORGANIC PEROXIDE TYPE F, SOLID (DICUMYL PEROXIDE), 5.2, ENVIRONMENTALLY HAZARDOUS	UN 3110 ORGANIC PEROXIDE TYPE F, SOLID (DICUMYL PEROXIDE), 5.2, ENVIRONMENTALLY HAZARDOUS
<b>14.3. Transport hazard class(es)</b>				
5.2	5.2	5.2	5.2	5.2



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ADR	IMDG	IATA	ADN	RID
				
<b>14.4. Packing group</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available				

### 14.6. Special precautions for user

#### Overland transport

Classification code (ADR)	: P1
Special provisions (ADR)	: 122, 274
Limited quantities (ADR)	: 500g
Excepted quantities (ADR)	: E0
Packing instructions (ADR)	: P520, IBC520
Mixed packing provisions (ADR)	: MP4
Portable tank and bulk container instructions (ADR)	: T23
Portable tank and bulk container special provisions (ADR)	: TP33
Tank code (ADR)	: S4AN(+)
Tank special provisions (ADR)	: TU3, TU13, TU30, TE12, TA2, TM4
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Special provisions for carriage - Packages (ADR)	: V1
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV15, CV22, CV24
Hazard identification number (Kemler No.)	: 539
Orange plates	: 

Tunnel restriction code (ADR) : D

#### Transport by sea

Special provisions (IMDG)	: 122, 274
Limited quantities (IMDG)	: 500 g
Excepted quantities (IMDG)	: E0
Packing instructions (IMDG)	: P520
IBC packing instructions (IMDG)	: IBC520
Tank instructions (IMDG)	: T23
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-J
EmS-No. (Spillage)	: S-R
Stowage category (IMDG)	: D
Stowage and handling (IMDG)	: SW1
Segregation (IMDG)	: SG35, SG36, SG72
Properties and observations (IMDG)	: Decomposes at elevated temperatures or in a fire. Burns vigorously. Insoluble in water. Contact with the eyes and skin should be avoided. May evolve irritant or toxic fumes.

#### Air transport

PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Forbidden

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PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: 570
PCA max net quantity (IATA)	: 10kg
CAO packing instructions (IATA)	: 570
CAO max net quantity (IATA)	: 25kg
Special provisions (IATA)	: A20, A802
ERG code (IATA)	: 5L

### Inland waterway transport

Classification code (ADN)	: P1
Special provisions (ADN)	: 122, 274
Limited quantities (ADN)	: 500 g
Excepted quantities (ADN)	: E0
Equipment required (ADN)	: PP, EX, A
Ventilation (ADN)	: VE01
Number of blue cones/lights (ADN)	: 0

### Rail transport

Classification code (RID)	: P1
Special provisions (RID)	: 122, 274
Limited quantities (RID)	: 500g
Excepted quantities (RID)	: E0
Packing instructions (RID)	: P520, IBC520
Mixed packing provisions (RID)	: MP4
Portable tank and bulk container instructions (RID)	: T23
Portable tank and bulk container special provisions (RID)	: TP33
Tank codes for RID tanks (RID)	: S4AN(+)
Special provisions for RID tanks (RID)	: TU3, TU13, TU30, TE12, TA2, TM4
Transport category (RID)	: 2
Special provisions for carriage – Packages (RID)	: W7
Special provisions for carriage - Loading, unloading and handling (RID)	: CW22, CW24, CW29
Colis express (express parcels) (RID)	: CE10
Hazard identification number (RID)	: 539

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

##### REACH Annex XVII (Restriction List)

##### EU restriction list (REACH Annex XVII)

Reference code	Applicable on	Entry title or description
30.	HARDSIL CC; Part B (Catalyst) ; Dicumyl peroxide	Substances which are classified as reproductive toxicant category 1A or 1B in Part 3 of Annex VI to Regulation (EC) No 1272/2008 and are listed in Appendix 5 or Appendix 6, respectively.

##### REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

##### REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

##### PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

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### POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

### Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

### 15.1.2. National regulations

No additional information available

## 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

### Abbreviations and acronyms:

Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor

Other information : Prepared by safety and environmental affairs.

### Full text of H- and EUH-statements:

Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H242	Heating may cause a fire.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H360	May damage fertility or the unborn child.
H360D	May damage the unborn child.
H411	Toxic to aquatic life with long lasting effects.
Org. Perox. F	Organic Peroxides, Type F
Repr. 1B	Reproductive toxicity, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2

SDS EU (REACH Annex II) - Custom v22

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