

## LOCTITE® 518™

May 2021

### PRODUCT DESCRIPTION

LOCTITE® 518™ provides the following product characteristics:

<b>Technology</b>	Acrylic
Chemical Type	Dimethacrylate ester
Appearance (uncured)	Red gel-like material
Fluorescence	Positive under UV light
Viscosity	Thixotropic
<b>Cure</b>	Anaerobic
Secondary Cure	Activator
<b>Application</b>	Sealing
Strength	Medium

LOCTITE® 518™ is a single component, medium strength, anaerobic sealant which cures when confined in the absence of air between close fitting metal surfaces and provides resistance to low pressures immediately after assembly of flanges. The thixotropic nature of LOCTITE® 518™ reduces the migration of liquid product after application to the substrate. LOCTITE® 518™ provides robust curing performance. It not only works on active metals (e.g. mild steel) but also on passive substrates such as aluminum with a low copper content. The product offers gap performance to 0.25 mm (0.01 in) and contamination tolerance. It cures in the presence of minor surface contaminations from various oils, such as cutting, lubrication, anti-corrosion and protection fluids and cleaners containing surfactants and corrosion inhibitors. Typical applications include sealing close fitting joints between rigid metal faces and flanges as a form-in-place gasket, e.g. gearbox and engine casings, etc.

### TYPICAL PROPERTIES OF UNCURED MATERIAL

Specific Gravity @ 23 °C	1.1
Viscosity, Brookfield - HBT, 25 °C, mPa·s (cP):	4,000,000
Spindle TC, speed 0.5 rpm, Helipath	

### Instant Sealing Capability

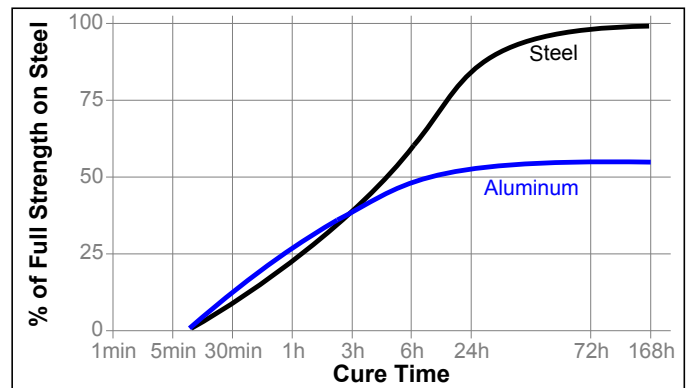
Anaerobic sealants have the ability to resist low on-line test pressures while uncured. This test was performed with uncured product immediately after assembly of an annular steel sealing surface with an internal diameter of 50 mm (2 in) and an external diameter of 70 mm (2.8 in). Note: Instant sealing capability by application of pen roller will be limited to 0.125 mm (0.005 in) due to the applied film thickness.

Pressure Resistance, MPa:	
Induced Gap 0.05 mm	1.35
Induced Gap 0.125 mm	0.14
Induced Gap 0.25 mm	0.1

### TYPICAL CURING PERFORMANCE

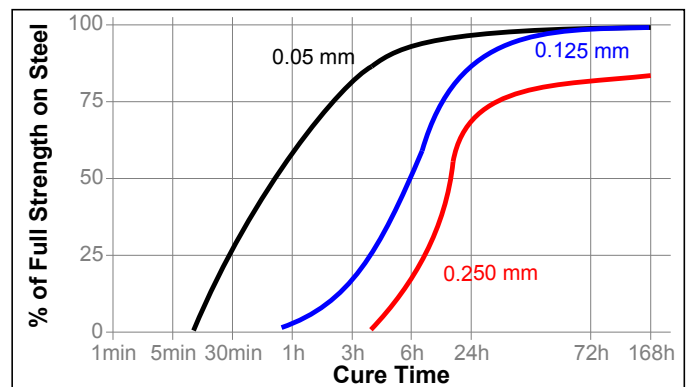
#### Cure Speed vs. Substrate

The rate of cure will depend on the substrate used. The graph below shows the shear strength developed with time @ 23°C on grit blasted steel lap shears compared to different materials and tested according to ISO 4587.



#### Cure Speed vs. Bond Gap

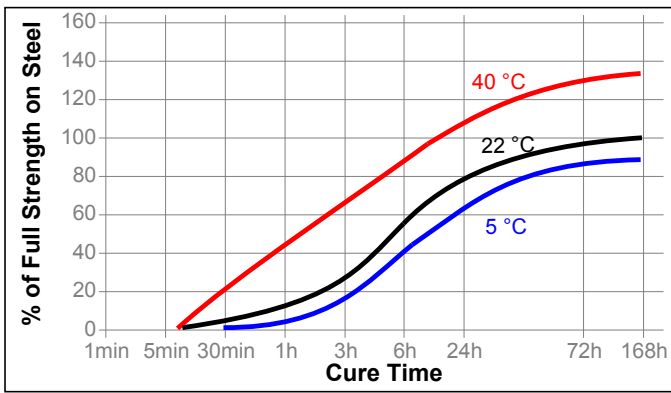
The rate of cure will depend on the bondline gap. The following graph shows shear strength developed with time @ 23°C on grit blasted steel lap shears at different controlled gaps and tested according to ISO 4587.



#### Cure Speed vs. Temperature

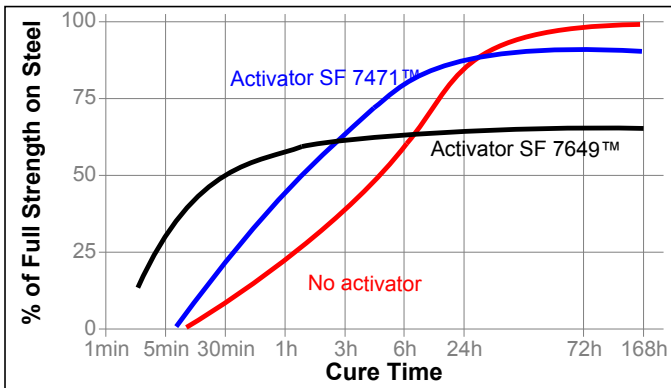
The rate of cure will depend on the ambient temperature. The graph below shows the shear strength developed with time @ 23°C on grit blasted steel lap shears at different temperatures and tested according to ISO 4587.





#### Cure Speed vs. Activator

Where cure speed is unacceptably long, or large gaps are present, applying activator to the surface will improve cure speed. The graph below shows the shear strength developed with time @ 23°C on grit blasted steel lap shears using Activator SF 7471™ or SF 7649™ and tested according to ISO 4587.



#### TYPICAL PERFORMANCE OF CURED MATERIAL

##### Physical Properties

Cured for 24 hours @ 23°C

Glass Transition Temperature ISO 11359-2, °C	100
Coefficient of Thermal Expansion, ISO 11359-2, K <sup>-1</sup> :	
Below Tg	145 × 10 <sup>-6</sup>
Above Tg	160 × 10 <sup>-6</sup>
Elongation, at break, ISO 527-2, %	64
Tensile Strength, ISO 527-2	N/mm <sup>2</sup> 7.3 (psi) (1,060)
Tensile Modulus, ISO 527-2	N/mm <sup>2</sup> 54 (psi) (7,850)

##### Adhesive Properties

Cured for 1 hour @ 23°C

Compressive Shear Strength, ISO 10123:	
Steel pins and collars	N/mm <sup>2</sup> 5 (psi) (730)

Cured for 24 hours @ 23°C

Compressive Shear Strength, ISO 10123:	
Steel pins and collars	N/mm <sup>2</sup> 5 (psi) (730)

Lap Shear Strength :

Mild Steel (grit blasted)	N/mm <sup>2</sup> 8.4 (psi) (1,220)
Mild Steel	N/mm <sup>2</sup> 5.5 (psi) (800)
Aluminum	N/mm <sup>2</sup> 5.4 (psi) (780)
Aluminum (Alclad)	N/mm <sup>2</sup> 2.2 (psi) (320)
Mild Steel (grit blasted) to Aluminum	N/mm <sup>2</sup> 6.7 (psi) (970)

Cured for 72 hours @ 23°C

Lap Shear Strength :

Mild Steel (grit blasted)	N/mm <sup>2</sup> 11 (psi) (1,530)
Mild Steel	N/mm <sup>2</sup> 5.5 (psi) (800)
Aluminum	N/mm <sup>2</sup> 5.8 (psi) (840)
Aluminum (Alclad)	N/mm <sup>2</sup> 1.6 (psi) (230)
Mild Steel (grit blasted) to Aluminum	N/mm <sup>2</sup> 6.7 (psi) (970)

Tensile Strength, ISO 6922:

Grit blasted mild steel pin	N/mm <sup>2</sup> 10 (psi) (1,450)
Aluminum pins	N/mm <sup>2</sup> 13 (psi) (1,930)

#### Sealing Capability

An annular shaped gasket with an inner diameter of 50 mm and an external diameter of 70 mm was tested up to 1.3 MPa for leakage (immersion in water for 1 minute). Product was cured for 20 hours.

Sealed to Maximum Induced Gap, mm:

Mild steel	0.25
Aluminum	0.25

#### TYPICAL ENVIRONMENTAL RESISTANCE

The following tests refer to the effect of environment on strength. This is not a measure of sealing performance.

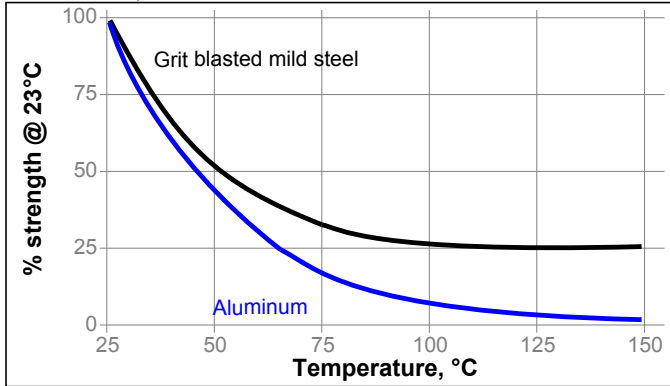
Cured for 1 week @ 23°C.

Lap Shear Strength ISO 4587:	
Steel (grit blasted)	



**Hot Strength**

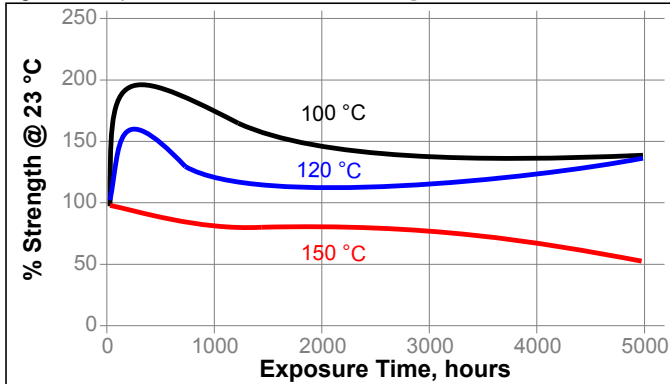
Tested at temperature

**Cold Strength**

This product has been tested to -75°C (-100 F). This product may work below this temperature, but has not been tested.

**Heat Aging**

Aged at temperature indicated and tested @ 23 °C

**Chemical/Solvent Resistance**

Aged under conditions indicated and tested @ 23 °C

Environment	°C	% of initial strength			
		500 h	1000 h	3000 h	5000 h
Motor oil (5W30 -Synthetic)	120	175	115	110	145
Motor oil (5W30 -Synthetic)	150	55	50	50	50
Water/glycol 50/50	87	80	65	65	55
ATF	120	175	100	105	140
ATF	150	60	40	40	40
Unleaded gasoline	23	15	10	10	5
DEF (AdBlue®)	23	95	65	70	85

**GENERAL INFORMATION**

**This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or other strong oxidizing materials.**

**For safe handling information on this product, consult the Safety Data Sheet (SDS).**

Where aqueous washing systems are used to clean the surfaces before bonding, it is important to check for compatibility of the washing solution with the adhesive. In some cases these aqueous washes can affect the cure and performance of the adhesive.

This product is not normally recommended for use on plastics (particularly thermoplastic materials where stress cracking of the plastic could result). Users are recommended to confirm compatibility of the product with such substrates.

**Directions for use:**

1. For best performance bond surfaces should be clean and free from grease and other contaminants.
2. The product is designed for close fitting flanged parts with gaps up to 0.25 mm (0.01 in).
3. Apply manually as a continuous bead, a rolled film or by screen printing to one surface of the flanges. For gaps greater than 0.125mm (0.005 in) using a pen roller, a rolled film should be applied to both flange surfaces.
4. Low pressures (<0.05 MPa, <7 psi) may be used when testing to confirm a complete seal immediately after assembly and before curing.
5. Flanges should be tightened as soon as possible after assembly to avoid shimming.

**Storage**

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

**Optimal Storage: 8 °C to 21 °C. Storage below 8 °C or greater than 28 °C can adversely affect product properties.**

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Henkel representative.

**Product Specification**

The technical data contained herein are intended as reference only and are not considered specifications for the product. Product specifications are located on the Certificate of Analysis or please contact Henkel representative.

**Approval and Certificate**

Please contact a Henkel representative for related approval or certificate of this product.

**Data Ranges**

The data contained herein may be reported as a typical value and/or range. Values are based on actual test data and are verified on a periodic basis.

Temperature/Humidity Ranges: 23 °C / 50% RH = 23+2 °C / 50+5% RH.

**Conversions**

$(°C \times 1.8) + 32 = °F$   
 $kV/mm \times 25.4 = V/mil$   
 $mm / 25.4 = inches$   
 $\mu m / 25.4 = mil$   
 $N \times 0.225 = lb$   
 $N/mm \times 5.71 = lb/in$   
 $N/mm^2 \times 145 = psi$   
 $MPa \times 145 = psi$   
 $N \cdot m \times 8.851 = lb \cdot in$   
 $N \cdot m \times 0.738 = lb \cdot ft$   
 $N \cdot mm \times 0.142 = oz \cdot in$   
 $mPa \cdot s = cP$

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## Safety Data Sheet according to (EC) No 1907/2006 as amended

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LOCTITE 518

SDS No. : 153499  
V007.0

Revision: 16.09.2021  
printing date: 06.04.2022

Replaces version from: 09.02.2021

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

#### 1.1. Product identifier

LOCTITE 518

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

Intended use:

Adhesive

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

Henkel Ltd

Adhesives

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000

Fax-no.: +44 (1442) 278071

ua-productsafety.uk@henkel.com

For Safety Data Sheet updates please visit our website <https://mysds.henkel.com/index.html#/appSelection> or [www.henkel-adhesives.com](http://www.henkel-adhesives.com).

#### 1.4. Emergency telephone number

24 Hours Emergency Tel: +44 (0)1442 278497

### SECTION 2: Hazards identification

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

##### Classification (CLP):

Serious eye irritation

Category 2

H319 Causes serious eye irritation.

Skin sensitizer

Category 1

H317 May cause an allergic skin reaction.

Specific target organ toxicity - single exposure

Category 3

H335 May cause respiratory irritation.

Target organ: respiratory tract irritation

#### 2.2. Label elements

##### Label elements (CLP):

**Hazard pictogram:****Contains**

1,1'-(methylenedi-p-phenylene)bismaleimide

Cumene hydroperoxide  
Acetic acid, 2-phenylhydrazide**Signal word:**

Warning

**Hazard statement:**H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.**Precautionary statement:**

"\*\*\*\*" \*\*\*For consumer use only: P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P501 Dispose of contents/container in accordance with national regulation.\*\*\*

**Precautionary statement:  
Prevention**P261 Avoid breathing vapors.  
P280 Wear protective gloves.**Precautionary statement:  
Response**P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
P337+P313 If eye irritation persists: Get medical advice/attention.**2.3. Other hazards**

None if used properly.

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

This product contains a substance that is classified as Acute Toxicity Category 3, Inhalation, in powder form. Experimental data show that this substance, as an ingredient in this mixture, is not biologically available according to CLP Art. 12 b.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures****General chemical description:**

Anaerobic Sealant

**Declaration of the ingredients according to CLP (EC) No 1272/2008:**

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
1,1'-(methylenedi-p-phenylene)bismaleimide 13676-54-5	237-163-4 01-2119969947-11	5- < 10 %	Acute Tox. 3; Inhalation H331 Skin Sens. 1 H317
Cumene hydroperoxide 80-15-9	201-254-7 01-2119475796-19	0,25- < 2,5 %	STOT RE 2 H373 Skin Corr. 1B H314 Acute Tox. 2; Inhalation H330 Aquatic Chronic 2 H411 Acute Tox. 4; Oral H302 Acute Tox. 4; Dermal H312 Org. Perox. E H242 STOT SE 3 H335
Acetic acid, 2-phenylhydrazide 114-83-0	204-055-3	0,1- < 1 %	Acute Tox. 3; Oral H301 Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Irrit. 2 H319 STOT SE 3; Inhalation H335 Carc. 2 H351

For full text of the H - statements and other abbreviations see section 16 "Other information".  
Substances without classification may have community workplace exposure limits available.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**Inhalation:**

Move to fresh air. If symptoms persist, seek medical advice.

**Skin contact:**

Rinse with running water and soap.

Obtain medical attention if irritation persists.

**Eye contact:**

Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

**Ingestion:**

Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

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

**EYE:** Irritation, conjunctivitis.

**RESPIRATORY:** Irritation, coughing, shortness of breath, chest tightness.

**SKIN:** Rash, Urticaria.

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

See section: Description of first aid measures

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### Suitable extinguishing media:

water, carbon dioxide, foam, powder

#### Extinguishing media which must not be used for safety reasons:

High pressure waterjet

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

In the event of a fire, carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) can be released.

### 5.3. Advice for firefighters

Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

#### Additional information:

In case of fire, keep containers cool with water spray.

## SECTION 6: Accidental release measures

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

Avoid contact with skin and eyes.

Wear protective equipment.

Ensure adequate ventilation.

Keep away from sources of ignition.

### 6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

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

Dispose of contaminated material as waste according to Section 13.

For small spills wipe up with paper towel and place in container for disposal.

For large spills absorb onto inert absorbent material and place in sealed container for disposal.

### 6.4. Reference to other sections

See advice in section 8

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Avoid skin and eye contact.

See advice in section 8

#### Hygiene measures:

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

Good industrial hygiene practices should be observed.

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

Ensure good ventilation/extraction.

Refer to Technical Data Sheet

Keep container tightly sealed.

### 7.3. Specific end use(s)

Adhesive



## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational Exposure Limits

Valid for  
Great Britain

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
Silicon dioxide 112945-52-5 [SILICA, AMORPHOUS, INHALABLE DUST]		6	Time Weighted Average (TWA):		EH40 WEL
Silicon dioxide 112945-52-5 [SILICA, AMORPHOUS, RESPIRABLE DUST]		2,4	Time Weighted Average (TWA):		EH40 WEL
Silicon dioxide 112945-52-5 [Dust, respirable dust]		4	Time Weighted Average (TWA):		EH40 WEL
Silicon dioxide 112945-52-5 [Dust, inhalable dust]		10	Time Weighted Average (TWA):		EH40 WEL
Propane-1,2-diol 57-55-6 [PROPANE-1,2-DIOL, PARTICULATES]		10	Time Weighted Average (TWA):		EH40 WEL
Propane-1,2-diol 57-55-6 [PROPANE-1,2-DIOL, TOTAL VAPOUR AND PARTICULATES]	150	474	Time Weighted Average (TWA):		EH40 WEL

#### Occupational Exposure Limits

Valid for  
Ireland

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
Silicon dioxide 112945-52-5 [SILICA, AMORPHOUS]		6	Time Weighted Average (TWA):		IR_OEL
Silicon dioxide 112945-52-5 [SILICA, AMORPHOUS]		2,4	Time Weighted Average (TWA):		IR_OEL
Silicon dioxide 112945-52-5 [DUST NON-SPECIFIC]		10	Time Weighted Average (TWA):		IR_OEL
Silicon dioxide 112945-52-5 [DUST NON-SPECIFIC]		4	Time Weighted Average (TWA):		IR_OEL
Propane-1,2-diol 57-55-6 [PROPANE-1,2-DIOL]		10	Time Weighted Average (TWA):		IR_OEL
Propane-1,2-diol 57-55-6 [PROPANE-1,2-DIOL]	150	470	Time Weighted Average (TWA):		IR_OEL

**Predicted No-Effect Concentration (PNEC):**

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	aqua (freshwater)		0,0031 mg/l				
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	aqua (marine water)		0,00031 mg/l				
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	aqua (intermittent releases)		0,031 mg/l				
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	Sewage treatment plant		0,35 mg/l				
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	sediment (freshwater)				0,023 mg/kg		
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	sediment (marine water)				0,0023 mg/kg		
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	Soil				0,0029 mg/kg		

**Derived No-Effect Level (DNEL):**

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
.alpha.,.alpha.-Dimethylbenzyl hydroperoxide 80-15-9	Workers	inhalation	Long term exposure - systemic effects		6 mg/m <sup>3</sup>	

**Biological Exposure Indices:**

None

**8.2. Exposure controls:**

Engineering controls:

Ensure good ventilation/extraction.

Respiratory protection:

Ensure adequate ventilation.

An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area

Filter type: A (EN 14387)

Hand protection:

Chemical-resistant protective gloves (EN 374).

Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to &gt; 30 minutes permeation time as per EN 374):

nitrile rubber (NBR; &gt;= 0.4 mm thickness)

Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to &gt; 480 minutes permeation time as per EN 374):

nitrile rubber (NBR; &gt;= 0.4 mm thickness)

This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

**Eye protection:**

Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.  
Protective eye equipment should conform to EN166.

**Skin protection:**

Wear suitable protective clothing.  
Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

**Advices to personal protection equipment:**

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions.  
Personal protective equipment should conform to the relevant EN standard.

## SECTION 9: Physical and chemical properties

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

Appearance	gel
Odor	pink mild
Odour threshold	No data available / Not applicable
pH	Not applicable, Mixture is non-soluble (in water).
Melting point	No data available / Not applicable
Solidification temperature	No data available / Not applicable
Initial boiling point	> 150 °C (> 302 °F)
Flash point	> 93,3 °C (> 199.94 °F)
Evaporation rate	No data available / Not applicable
Flammability	No data available / Not applicable
Explosive limits	No data available / Not applicable
Vapour pressure (27 °C (80.6 °F))	< 5 mm hg
Vapour pressure (50 °C (122 °F))	< 300 mbar
Relative vapour density:	Not available.
Density ( )	1,178 g/cm3
Bulk density	No data available / Not applicable
Solubility	No data available / Not applicable
Solubility (qualitative) (Solvent: Water)	Slight
Partition coefficient: n-octanol/water	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Decomposition temperature	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Oxidising properties	No data available / Not applicable

**9.2. Other information**

No data available / Not applicable

## SECTION 10: Stability and reactivity

**10.1. Reactivity**

Reacts with strong oxidants.  
Acids.  
Reducing agents.  
Strong bases.

**10.2. Chemical stability**

Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**

See section reactivity

**10.4. Conditions to avoid**

Stable under normal conditions of storage and use.

**10.5. Incompatible materials**

See section reactivity.

**10.6. Hazardous decomposition products**

carbon oxides.

Hydrocarbons

nitrogen oxides

Rapid polymerisation may generate excessive heat and pressure.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Acute oral toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
1,1'-(methylenedi-p-phenylene)bismaleimide 13676-54-5	LD50	> 2.000 mg/kg	rat	OECD Guideline 423 (Acute Oral toxicity)
Cumene hydroperoxide 80-15-9	LD50	382 mg/kg	rat	other guideline:
Acetic acid, 2-phenylhydrazide 114-83-0	LD50	270 mg/kg	rat	not specified

**Acute dermal toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
1,1'-(methylenedi-p-phenylene)bismaleimide 13676-54-5	LD50	> 5.400 mg/kg	rat	not specified
Cumene hydroperoxide 80-15-9	LD50	530 - 1.060 mg/kg	rat	other guideline:
Cumene hydroperoxide 80-15-9	Acute toxicity estimate (ATE)	1.100 mg/kg		Expert judgement

**Acute inhalative toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Test atmosphere	Exposure time	Species	Method
1,1'-(methylenedi-p-phenylene)bismaleimide 13676-54-5	LC50	0,515 - 1 mg/l	dust	4 h	rat	OECD Guideline 436 (Acute Inhalation Toxicity: Acute Toxic Class (ATC) Method)
1,1'-(methylenedi-p-phenylene)bismaleimide 13676-54-5	Acute toxicity estimate (ATE)	0,515 mg/l				Expert judgement
Cumene hydroperoxide 80-15-9	LC50	1,370 mg/l	vapour	4 h	rat	not specified

**Skin corrosion/irritation:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Cumene hydroperoxide 80-15-9	corrosive		rabbit	Draize Test

**Serious eye damage/irritation:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
1,1'-(methylenedi-p-phenylene)bismaleimide 13676-54-5	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation/ Corrosion)

**Respiratory or skin sensitization:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Species	Method
1,1'-(methylenedi-p-phenylene)bismaleimide 13676-54-5	sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

**Germ cell mutagenicity:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Type of study/ Route of administration	Metabolic activation/ Exposure time	Species	Method
1,1'-(methylenedi-p-phenylene)bismaleimide 13676-54-5	negative	in vitro mammalian cell micronucleus test	with and without		OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
Cumene hydroperoxide 80-15-9	positive	bacterial reverse mutation assay (e.g Ames test)	without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)

**Carcinogenicity**

No data available.

**Reproductive toxicity:**

No data available.

**STOT-single exposure:**

No data available.

**STOT-repeated exposure::**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
Cumene hydroperoxide 80-15-9		inhalation: aerosol	6 h/d 5 d/w	rat	not specified

**Aspiration hazard:**

No data available.

**SECTION 12: Ecological information****General ecological information:**

Do not empty into drains / surface water / ground water.

**12.1. Toxicity****Toxicity (Fish):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
1,1'-(methylenedi-p-phenylene)bismaleimide 13676-54-5	LC50	Toxicity > Water solubility	96 h	Carassius sp.	OECD Guideline 203 (Fish, Acute Toxicity Test)
Cumene hydroperoxide 80-15-9	LC50	3,9 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)

**Toxicity (Daphnia):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
1,1'-(methylenedi-p-phenylene)bismaleimide 13676-54-5	EC50	Toxicity > Water solubility	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Cumene hydroperoxide 80-15-9	EC50	18,84 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

**Chronic toxicity to aquatic invertebrates**

No data available.

**Toxicity (Algae):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
1,1'-(methylenedi-p-phenylene)bismaleimide 13676-54-5	NOEC	Toxicity > Water solubility	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
1,1'-(methylenedi-p-phenylene)bismaleimide 13676-54-5	EC50	Toxicity > Water solubility	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Cumene hydroperoxide 80-15-9	EC50	3,1 mg/l	72 h	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Cumene hydroperoxide 80-15-9	NOEC	1 mg/l	72 h	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)

### Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
1,1'-(methylenedi-p-phenylene)bismaleimide 13676-54-5	EC50	Toxicity > Water solubility	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Cumene hydroperoxide 80-15-9	EC10	70 mg/l	30 min		not specified

### 12.2. Persistence and degradability

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
1,1'-(methylenedi-p-phenylene)bismaleimide 13676-54-5	not readily biodegradable.	aerobic	0 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Cumene hydroperoxide 80-15-9	not readily biodegradable.	aerobic	3 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)

### 12.3. Bioaccumulative potential

Hazardous substances CAS-No.	Bioconcentration factor (BCF)	Exposure time	Temperature	Species	Method
Cumene hydroperoxide 80-15-9	9,1			calculation	OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)

### 12.4. Mobility in soil

Hazardous substances CAS-No.	LogPow	Temperature	Method
1,1'-(methylenedi-p-phenylene)bismaleimide 13676-54-5	1,5	25 °C	OECD Guideline 117 (Partition Coefficient (n-octanol/ water), HPLC Method)
Cumene hydroperoxide 80-15-9	1,6	25 °C	OECD Guideline 117 (Partition Coefficient (n-octanol/ water), HPLC Method)
Acetic acid, 2-phenylhydrazide 114-83-0	0,74		not specified

### 12.5. Results of PBT and vPvB assessment

Hazardous substances CAS-No.	PBT/ vPvB
Cumene hydroperoxide 80-15-9	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

### 12.6. Other adverse effects

No data available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product disposal:

Dispose of in accordance with local and national regulations.

Do not empty into drains / surface water / ground water.

Disposal of uncleaned packages:

After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

Waste code

08 04 09\* waste adhesives and sealants containing organic solvents and other dangerous substances

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.



## SECTION 14: Transport information

### 14.1. UN number

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

### 14.2. UN proper shipping name

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

### 14.3. Transport hazard class(es)

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

### 14.4. Packing group

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

### 14.5. Environmental hazards

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

### 14.6. Special precautions for user

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

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

not applicable

## SECTION 15: Regulatory information

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

Ozone Depleting Substance (ODS) (Regulation (EC) No 1005/2009):	Not applicable
Prior Informed Consent (PIC) (Regulation (EU) No 649/2012):	Not applicable
Persistent organic pollutants (Regulation (EU) 2019/1021):	Not applicable
VOC content (2010/75/EC)	< 3 %

### 15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

## SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

- H242 Heating may cause a fire.
- H301 Toxic if swallowed.
- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H330 Fatal if inhaled.
- H331 Toxic if inhaled.
- H335 May cause respiratory irritation.
- H351 Suspected of causing cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H411 Toxic to aquatic life with long lasting effects.

### Further information:

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