

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

### 1.1. Product identifier

Trade name or designation of the mixture	CHO-BOND 1030
Registration number	Not available.
Synonyms	None.
SDS number	PHC-045 EU
Product code	50-02-1030-0000, 50-02-1030-1000, 50-01-1030-0000
Issue date	10-June-2014
Version number	01

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

Identified uses	Moisture cure adhesive / sealant Use pattern: Professional use
Uses advised against	None known.

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

#### Supplier

Company name	Parker Hannifin Corp.
Address	Chomerics Europe - Parker Hannifin Ltd., Seal Group Unit 6 Century Point, Halifax Road High Wycombe, Bucks, HP12 3SL UK
Division	Chomerics Division
Telephone	Information +44 (0) 1494 455 400
e-mail	chomerics_europe@parker.com
Contact person	Not available.

1.4. Emergency telephone number	INFOTRAC 001-352-323-3500
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## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

#### Classification according to Directive 67/548/EEC or 1999/45/EC as amended

This preparation does not meet the criteria for classification according to Directive 1999/45/EC as amended.

The full text for all R-phrases is displayed in section 16.

#### Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards		
Serious eye damage/eye irritation	Category 2	H319 - Causes serious eye irritation.

#### Hazard summary

Physical hazards	Not classified for physical hazards.
Health hazards	Causes serious eye irritation. Occupational exposure to the substance or mixture may cause adverse health effects. For further information, please refer to section 11.
Environmental hazards	Not classified for hazards to the environment.
Specific hazards	May slowly hydrolyze in the presence of water to: Acetic acid. Methanol. When heated above 150°C in air, may release formaldehyde gas. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. See ECOLOGICAL INFORMATION, Section 12.

## Main symptoms

Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.  
May cause mild skin irritation. May cause redness and pain.  
High concentrations of vapors or mists may cause coughing and mild, temporary irritation.  
Inhalation of fumes may result in metal fume fever, a flu-like illness. Symptoms of metal fume fever may include fever, fatigue, vomiting, muscle aches and shortness of breath.  
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.  
Silver in the form of a finely divided dust may cause discoloration in contact with skin, and argyrosis in case of inhalation.  
Avoid heating, which will result in the liberation of formaldehyde gas.

## 2.2. Label elements

### Label according to Regulation (EC) No. 1272/2008 as amended

#### Hazard pictograms



#### Signal word

Warning

#### Hazard statements

H319

Causes serious eye irritation.

#### Precautionary statements

##### Prevention

P264

Wash hands and face thoroughly after handling.

P280

Wear protective gloves/clothing and eye/face protection.

##### Response

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313

If eye irritation persists: Get medical advice/attention.

##### Storage

None required.

##### Disposal

P501

Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Supplemental label information

None required according to Regulation (EC) No. 1272/2008.

## 2.3. Other hazards

Other hazards which do not result in classification:

May slowly hydrolyze in the presence of water to: Acetic acid. Methanol. Upon completion of the curing process, these hydrolysis products are no longer released. When heated above 150°C in air, may release formaldehyde gas. Formaldehyde is an eye and throat irritant and acute toxicant. Formaldehyde may cause sensitisation by skin contact. Formaldehyde has shown limited evidence of a carcinogenic effect.

May be mildly irritating to the skin and respiratory system. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Inhalation of fumes may result in metal fume fever, a flu-like illness. Symptoms of metal fume fever may include fever, fatigue, vomiting, muscle aches and shortness of breath. Silver in the form of a finely divided dust may cause discoloration in contact with skin, and argyrosis in case of inhalation. Prolonged overexposure may cause slight liver and kidney effects, such as increased organ weights.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Copper	60 - 100	7440-50-8 231-159-6	Not available.	Not Available.	#
<b>Classification:</b>	<b>DSD:</b> - <b>CLP:</b> -				
Cyclopolydimethylsiloxane	< 13	69430-24-6 Polymer	Not available.	Not Available.	No additional information.
<b>Classification:</b>	<b>DSD:</b> - <b>CLP:</b> -				

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Polydimethylsiloxane	< 13	70131-67-8 Polymer	Not available.	Not Available.	(self classified)
<b>Classification:</b>	<b>DSD:</b> Xi;R36/37/38 <b>CLP:</b> Eye Irrit. 2;H319				
Silver	1 - 5	7440-22-4 231-131-3	Not available.	None.	#
<b>Classification:</b>	<b>DSD:</b> - <b>CLP:</b> -				
Trimethoxymethylsilane	1 - 2	1185-55-3 214-685-0	Not available.	Not Available.	(self classified)
<b>Classification:</b>	<b>DSD:</b> F;R11, Xi;R36 <b>CLP:</b> Flam. Liq. 2;H225, Eye Irrit. 2;H319				
Titanium dioxide	0,1< 0,5	13463-67-7 236-675-5	Not available.	Not Available.	(self classified)
<b>Classification:</b>	<b>DSD:</b> Carc. Cat. 3;R40 <b>CLP:</b> Carc. 2;H351				

#### Byproducts

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
ACETIC ACID	Not Known	64-19-7 200-580-7	Not Available.	607-002-00-6	#
METHANOL	Not Known	67-56-1 200-659-6	Not Available.	603-001-00-X	#

#### Decomposition

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
FORMALDEHYDE	Not Known	50-00-0 200-001-8	Not Available.	605-001-00-5	#

CLP: Regulation No. 1272/2008.

DSD: Directive 67/548/EEC.

- : Designates the substance is not classified according to the applicable regulations.

#: This substance has been assigned Community workplace exposure limit(s).

#### Composition comments

The full text for all R- and H-phrases is displayed in section 16. The above Byproducts are possible decomposition products in case of hydrolysis. These possible hydrolysis products are not intentionally added to this product.  
The above decomposition products are released when the product is heated above 150°C. The possible decomposition products are not intentionally added to this product.

## SECTION 4: First aid measures

#### General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

#### 4.1. Description of first aid measures

##### Inhalation

Move to fresh air. If breathing is difficult, trained personnel should give oxygen. If breathing stops, provide artificial respiration. If symptoms persist, get medical attention.

##### Skin contact

Immediately take off all contaminated clothing. Wash off immediately with soap and plenty of water. When symptoms persist or in all cases of doubt, seek medical advice. Wash contaminated clothing before reuse.

##### Eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

<b>Ingestion</b>	Do not induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions. When symptoms persist or in all cases of doubt, seek medical advice.
<b>4.2. Most important symptoms and effects, both acute and delayed</b>	<p>Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.</p> <p>May be mildly irritating to the skin and respiratory system. May cause mild skin irritation. May cause redness and pain. High concentrations of vapors or mists may cause coughing and mild, temporary irritation.</p> <p>Inhalation of fumes may result in metal fume fever, a flu-like illness. Symptoms of metal fume fever may include fever, fatigue, vomiting, muscle aches and shortness of breath.</p> <p>Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.</p> <p>Silver in the form of a finely divided dust may cause discoloration in contact with skin, and argyrosis in case of inhalation.</p> <p>When heated above 150°C in air, may release formaldehyde gas. Formaldehyde is an eye and throat irritant and acute toxicant. Formaldehyde may cause sensitisation by skin contact. Formaldehyde has shown limited evidence of a carcinogenic effect.</p>
<b>4.3. Indication of any immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically.

## SECTION 5: Firefighting measures

<b>General fire hazards</b>	Not considered flammable. However, may ignite if exposed to extreme heat and flame.
<b>5.1. Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Foam. Dry chemical powder. Dry sand. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water if possible. May react with water.
<b>5.2. Special hazards arising from the substance or mixture</b>	During cure, vapours are released which may be harmful. May slowly hydrolyze in the presence of water to: Acetic acid. Methanol. Upon completion of the curing process, these hydrolysis products are no longer released. The pressure in sealed containers can increase under the influence of heat. Burning produces obnoxious and toxic fumes. In the event of fire the following can be released: Carbon oxides. Formaldehyde. Metal oxides. Silicon oxides.
<b>5.3. Advice for firefighters</b>	
<b>Special protective equipment for firefighters</b>	Firefighters should wear full protective clothing including self contained breathing apparatus. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
<b>Special fire fighting procedures</b>	Move containers from fire area if you can do so without risk. Cool containers exposed to heat with water spray and remove container, if no risk is involved. Do not get water inside containers. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.

## SECTION 6: Accidental release measures

<b>6.1. Personal precautions, protective equipment and emergency procedures</b>	
<b>For non-emergency personnel</b>	Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Ventilate closed spaces before entering them. Wear appropriate protective equipment and clothing during clean-up.
<b>For emergency responders</b>	Keep unnecessary personnel away. Restrict access to area until completion of clean-up. Wear appropriate protective equipment and clothing during clean-up.
<b>6.2. Environmental precautions</b>	Avoid release to the environment. Prevent entry into waterways, sewer, basements or confined areas. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply. Contact local authorities in case of spillage to drain/aquatic environment.
<b>6.3. Methods and material for containment and cleaning up</b>	<p>Ventilate the area. Stop leak if you can do so without risk. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand). Pick up and transfer to properly labelled containers.</p> <p>Contaminated absorbent material may pose the same hazards as the spilled product.</p> <p>Never return spills to original containers for re-use.</p>
<b>6.4. Reference to other sections</b>	For personal protection, see section 8. For waste disposal, see section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Use only with adequate ventilation. Wear appropriate personal protective equipment. Wear protective gloves/clothing and eye/face protection. See Section 8 for personal protective equipment. Avoid breathing dust or fumes. Avoid breathing vapour. Avoid contact with eyes, skin, and clothing. Keep away from heat. Keep away from incompatibles. Protect from moisture. Keep containers closed when not in use. Empty containers retain residue and can be dangerous. Wash thoroughly after handling.

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

Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Store locked up. Keep containers dry and tightly closed to avoid moisture absorption and contamination. Protect against physical damage. Inspect periodically for damage or leaks. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel.

### 7.3. Specific end use(s)

Adhesives, sealants

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

##### Finland. Workplace Exposure Limits Components

Components	Type	Value	Form
Copper (CAS 7440-50-8)	TWA	1 mg/m3 0,1 mg/m3	Respirable dust and/or fume.
Silver (CAS 7440-22-4)	STEL TWA	0,03 mg/m3 0,1 mg/m3	
<b>Byproducts</b>	<b>Type</b>	<b>Value</b>	
ACETIC ACID (CAS 64-19-7)	STEL	25 mg/m3	
	TWA	10 ppm 13 mg/m3	
METHANOL (CAS 67-56-1)	STEL	5 ppm 330 mg/m3	
	TWA	250 ppm 270 mg/m3	
<b>Decomposition</b>	<b>Type</b>	<b>Value</b>	
FORMALDEHYDE (CAS 50-00-0)	Ceiling	1,2 mg/m3	
	TWA	1 ppm 0,37 mg/m3 0,3 ppm	

##### France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984 Components

Components	Type	Value	Form
Copper (CAS 7440-50-8)	VLE	2 mg/m3	Dust.
	VME	1 mg/m3	Dust.
		0,2 mg/m3	Fume.
Silver (CAS 7440-22-4)	VME	0,1 mg/m3	
Titanium dioxide (CAS 13463-67-7)	VME	10 mg/m3	
<b>Byproducts</b>	<b>Type</b>	<b>Value</b>	
ACETIC ACID (CAS 64-19-7)	VLE	25 mg/m3	
		10 ppm	
METHANOL (CAS 67-56-1)	VLE	1300 mg/m3	
	VME	1000 ppm 260 mg/m3	
		200 ppm	
<b>Decomposition</b>	<b>Type</b>	<b>Value</b>	
FORMALDEHYDE (CAS 50-00-0)	VLE	1 ppm	
	VME	0,5 ppm	

**Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG)**

Components	Type	Value	Form
Silver (CAS 7440-22-4)	TWA	0,1 mg/m3	Inhalable fraction.

**Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace**

Components	Type	Value	Form
Silver (CAS 7440-22-4)	AGW	0,1 mg/m3	Inhalable fraction.
Titanium dioxide (CAS 13463-67-7)	AGW	3 mg/m3	Respirable fraction.
		10 mg/m3	Inhalable fraction.

Byproducts	Type	Value	
ACETIC ACID (CAS 64-19-7)	AGW	25 mg/m3	
		10 ppm	
METHANOL (CAS 67-56-1)	AGW	270 mg/m3	
		200 ppm	

**Hungary. OELs. Joint Decree on Chemical Safety of Workplaces**

Components	Type	Value	Form
Copper (CAS 7440-50-8)	STEL	4 mg/m3	
		0,4 mg/m3	Smoke.
	TWA	1 mg/m3	
		0,1 mg/m3	Smoke.
Silver (CAS 7440-22-4)	STEL	0,4 mg/m3	
	TWA	0,1 mg/m3	

Byproducts	Type	Value	
ACETIC ACID (CAS 64-19-7)	STEL	25 mg/m3	
	TWA	25 mg/m3	
METHANOL (CAS 67-56-1)	TWA	260 mg/m3	

Decomposition	Type	Value	
FORMALDEHYDE (CAS 50-00-0)	STEL	0,6 mg/m3	
	TWA	0,6 mg/m3	

**Italy. Occupational Exposure Limits**

Components	Type	Value	Form
Copper (CAS 7440-50-8)	TWA	1 mg/m3	Dust and mist.
		0,2 mg/m3	Fume.
Silver (CAS 7440-22-4)	TWA	0,1 mg/m3	
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

Byproducts	Type	Value	
ACETIC ACID (CAS 64-19-7)	TWA	25 mg/m3	
		10 ppm	
METHANOL (CAS 67-56-1)	TWA	260 mg/m3	
		200 ppm	

Decomposition	Type	Value	
FORMALDEHYDE (CAS 50-00-0)	Ceiling	0,3 ppm	

**Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment**

Components	Type	Value	Form
Copper (CAS 7440-50-8)	STEL	0,3 mg/m3	Fume.
	TWA	0,2 mg/m3	Dust.
		0,1 mg/m3	Fume.
Silver (CAS 7440-22-4)	TWA	0,05 mg/m3	Dust and fume.
Titanium dioxide (CAS 13463-67-7)	STEL	30 mg/m3	

**Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment**

Components	Type	Value	Form
<b>Byproducts</b>	TWA <b>Type</b>	10 mg/m3 <b>Value</b>	Total dust.
ACETIC ACID (CAS 64-19-7)	STEL	30 mg/m3	
METHANOL (CAS 67-56-1)	TWA STEL	15 mg/m3 300 mg/m3	
<b>Decomposition</b>	TWA <b>Type</b>	100 mg/m3 <b>Value</b>	
FORMALDEHYDE (CAS 50-00-0)	STEL	1 mg/m3	
	TWA	0,5 mg/m3	

**Spain. Occupational Exposure Limits Components**

Components	Type	Value	Form
Copper (CAS 7440-50-8)	TWA	1 mg/m3 0,2 mg/m3	Dust and mist. Fume.
Silver (CAS 7440-22-4)	TWA	0,1 mg/m3	
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	
<b>Byproducts</b>	<b>Type</b>	<b>Value</b>	
ACETIC ACID (CAS 64-19-7)	STEL	37 mg/m3	
	TWA	15 ppm 25 mg/m3 10 ppm	
METHANOL (CAS 67-56-1)	TWA	266 mg/m3	
<b>Decomposition</b>	<b>Type</b>	<b>Value</b>	
FORMALDEHYDE (CAS 50-00-0)	STEL	0,37 mg/m3 0,3 ppm	

**UK. EH40 Workplace Exposure Limits (WELs)**

Components	Type	Value	Form
Copper (CAS 7440-50-8)	STEL TWA	2 mg/m3 1 mg/m3 0,2 mg/m3	Inhalable dusts and mists. Inhalable dusts and mists. Fume.
Silver (CAS 7440-22-4)	TWA	0,1 mg/m3	
Titanium dioxide (CAS 13463-67-7)	TWA	4 mg/m3	Respirable.
<b>Byproducts</b>	<b>Type</b>	<b>Value</b>	Inhalable
METHANOL (CAS 67-56-1)	STEL	10 mg/m3 333 mg/m3	
	TWA	250 ppm 266 mg/m3 200 ppm	
<b>Decomposition</b>	<b>Type</b>	<b>Value</b>	
FORMALDEHYDE (CAS 50-00-0)	STEL	2,5 mg/m3	
	TWA	2 ppm 2,5 mg/m3 2 ppm	

**EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU**

Components	Type	Value
Silver (CAS 7440-22-4)	TWA	0,1 mg/m3

**EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU**

Byproducts	Type	Value
ACETIC ACID (CAS 64-19-7)	TWA	25 mg/m3
METHANOL (CAS 67-56-1)	TWA	10 ppm 260 mg/m3 200 ppm

**Biological limit values****Czech Republic. Limit Values for Indicators of Biological Exposure Tests in Urine and Blood, Annex 2, Tables 1 and 2, Government Decree 432/2003 Sb.**

Byproducts	Value	Determinant	Specimen	Sampling time
METHANOL (CAS 67-56-1)	15 mg/l	Methanol	Urine	*
	0,47 mmol/l	Methanol	Urine	*

\* - For sampling details, please see the source document.

**France. Biological indicators of exposure (IBE) (National Institute for Research and Security (INRS, ND 2065)**

Byproducts	Value	Determinant	Specimen	Sampling time
METHANOL (CAS 67-56-1)	15 mg/l	Méthanol	Urine	*

\* - For sampling details, please see the source document.

**Slovakia. BLVs (Biological Limit Value). Regulation no. 355/2006 concerning protection of workers exposed to chemical agents, Annex 2**

Byproducts	Value	Determinant	Specimen	Sampling time
METHANOL (CAS 67-56-1)	20 mg/g	Methanol	Creatinine in urine	*
	30 mg/l	Methanol	Urine	*

\* - For sampling details, please see the source document.

**Spain. Biological Limit Values (VLBs), Occupational Exposure Limits for Chemical Agents, Table 4**

Byproducts	Value	Determinant	Specimen	Sampling time
METHANOL (CAS 67-56-1)	15 mg/l	Metanol	Urine	*

\* - For sampling details, please see the source document.

**Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)**

Byproducts	Value	Determinant	Specimen	Sampling time
METHANOL (CAS 67-56-1)	30 mg/l	Methanol	Urine	*

\* - For sampling details, please see the source document.

**Recommended monitoring procedures** Follow standard monitoring procedures.

**Derived no-effect level (DNEL)** Not available.

**Predicted no effect concentrations (PNECs)** Not available.

**Exposure guidelines****EU Exposure Limit Values: Skin designation**

METHANOL (CAS 67-56-1)

Can be absorbed through the skin.

**8.2. Exposure controls****Appropriate engineering controls**

Ensure adequate ventilation, especially in confined areas. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. In case of insufficient ventilation, wear suitable respiratory equipment.

**Individual protection measures, such as personal protective equipment****General information**

Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

**Eye/face protection**

Wear eye/face protection. Wear safety glasses with side shields (or goggles). A full face shield may also be necessary. See also EN 166.  
Eye wash fountain is recommended.



<b>Skin protection</b>	
<b>- Hand protection</b>	Wear protective gloves. The suitability for a specific workplace should be discussed with the producers of the protective gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it. Advice should be sought from glove suppliers.
<b>- Other</b>	Wear suitable protective clothing. Use of impervious boots is recommended. Depending on conditions of use, an impervious apron should be worn. Eye wash facilities and emergency shower must be available when handling this product.
<b>Respiratory protection</b>	If ventilation is insufficient, suitable respiratory protection must be provided. The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection. Advice should be sought from respiratory protection specialists.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>Hygiene measures</b>	Avoid breathing vapour. Do not breathe fumes. Avoid contact with eyes, skin and clothing. Handle in accordance with good industrial hygiene and safety practices. Do not eat, drink or smoke when using the product. Wash hands after handling. Remove soiled clothing and wash it thoroughly before reuse.
<b>Environmental exposure controls</b>	Contain spills and prevent releases and observe national regulations on emissions. Environmental manager must be informed of all major releases.

## SECTION 9: Physical and chemical properties

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

#### Appearance

<b>Physical state</b>	Solid (Paste).
<b>Form</b>	Paste.
<b>Colour</b>	Silver.
<b>Odour</b>	Mild.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	Not available.
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	> 93,3 °C (> 199,9 °F) (estimated)
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	The product is not flammable.

#### Upper/lower flammability or explosive limits

<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	> 1 g/cm <sup>3</sup>
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble. May react with water.
<b>Solubility (other)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	None known.

### 9.2. Other information

<b>Percent volatile</b>	Negligible
<b>Specific gravity</b>	> 1

## SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>10.2. Chemical stability</b>	Material is stable under normal conditions. When heated above 150°C in air, may release formaldehyde gas.
<b>10.3. Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use. Hazardous polymerisation does not occur.
<b>10.4. Conditions to avoid</b>	Avoid high temperatures. Avoid contact with incompatible materials. Protect from moisture. Do not use in areas without adequate ventilation.
<b>10.5. Incompatible materials</b>	Strong oxidising agents. Strong acids. Bases. Water.
<b>10.6. Hazardous decomposition products</b>	None known. Burning produces obnoxious and toxic fumes. In the event of fire the following can be released: Carbon oxides. Formaldehyde. Metal oxides. Silicon oxides.

## SECTION 11: Toxicological information

<b>General information</b>	Occupational exposure to the substance or mixture may cause adverse effects.
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### Information on likely routes of exposure

<b>Ingestion</b>	May cause irritation of the gastrointestinal tract.
<b>Inhalation</b>	Mild respiratory irritant.
<b>Skin contact</b>	May cause mild skin irritation.
<b>Eye contact</b>	Causes eye irritation.

<b>Symptoms</b>	Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May be mildly irritating to the skin and respiratory system. May cause redness and pain. High concentrations of vapors or mists may cause coughing and mild, temporary irritation. Inhalation of fumes may result in metal fume fever, a flu-like illness. Symptoms of metal fume fever may include fever, fatigue, vomiting, muscle aches and shortness of breath. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Avoid heating, which will result in the liberation of formaldehyde gas. Formaldehyde gas causes moderate to severe eye irritation. Formaldehyde causes severe respiratory irritation, lung inflammation and pulmonary edema. Formaldehyde may cause sensitisation by skin contact. Formaldehyde has shown limited evidence of a carcinogenic effect.
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### 11.1. Information on toxicological effects

<b>Acute toxicity</b>	According to the classification criteria of the European Union, this product is not considered as being an acutely toxic chemical. See below for individual ingredient acute toxicity data.
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<b>Components</b>	<b>Species</b>	<b>Test results</b>
Copper (CAS 7440-50-8)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rat	> 2000 mg/kg
<i>Inhalation</i>		
		No data in literature
<i>Oral</i>		
LD50	Rat	> 2500 mg/kg
Cyclopolydimethylsiloxane (CAS 69430-24-6)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 16 ml/kg
<i>Inhalation</i>		
LC50	Rat	No data in literature
<i>Oral</i>		
LD50	Rat	> 16 ml/kg
Polydimethylsiloxane (CAS 70131-67-8)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 11,59 mg/l, 4 Hours (mist)
<i>Oral</i>		
LD50	Rat	> 15400 mg/kg

Components	Species	Test results
Silver (CAS 7440-22-4)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Rat	No Data in Literature
<i>Oral</i>		
LD50	Rat	> 2000 mg/kg
Titanium dioxide (CAS 13463-67-7)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 10000 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 6,82 mg/l, 4 Hours Dust
<i>Oral</i>		
LD50	Rat	> 25000 mg/kg
Trimethoxymethylsilane (CAS 1185-55-3)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 9500 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 51,4 mg/l, 4 hours (Vapour)
<i>Oral</i>		
LD50	Rat	> 9500 mg/kg
<b>Byproducts</b>	<b>Species</b>	<b>Test results</b>
ACETIC ACID (CAS 64-19-7)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	1060 mg/kg
<i>Inhalation</i>		
LC50	Mouse	2810 ppm, 4 hours (vapour)
		6,95 mg/l, 4 Hours (vapour)
	Rat	4653 ppm, 4 hours (vapour)
		11,4 mg/l, 4 hours (vapour)
<i>Oral</i>		
LD50	Rat	3310 mg/kg
METHANOL (CAS 67-56-1)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Monkey	> 393 mg/kg
	Rabbit	15800 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 4,1 mg/l/4h (vapour)
<i>Oral</i>		
LD50	Human	300 - 1000 mg/kg (estimated human lethal dose)
	Rat	5628 mg/kg
<b>Decomposition</b>	<b>Species</b>	<b>Test results</b>
FORMALDEHYDE (CAS 50-00-0)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	300 mg/kg
<i>Inhalation</i>		
LC50	Rat	287 ppm, 4 hours (gas)

Decomposition	Species	Test results
Oral LD50	Human	317 - 475 mg/kg (estimated human lethal dose)
	Rat	800 mg/kg
<b>Skin corrosion/irritation</b>	According to the classification criteria of the European Union, the product is not considered as being a skin corrosive or irritant. Causes mild skin irritation.	
<b>Serious eye damage/eye irritation</b>	This mixture is classified as hazardous in accordance with Regulation (EC) No 1272/2008. Classification: Eye damage/irritation - Category 2. Causes serious eye irritation.	
<b>Respiratory sensitisation</b>	According to the classification criteria of the European Union, this product is not considered as being an allergic respiratory sensitiser. Not expected to be a respiratory sensitizer.	
<b>Skin sensitisation</b>	According to the classification criteria of the European Union, this product is not considered as being an allergic skin sensitiser. Not expected to be hazardous by OSHA criteria. Not expected to be a skin sensitizer.	
<b>Germ cell mutagenicity</b>	Contains no ingredient listed as a mutagen. Not expected to be mutagenic. Avoid heating, which will result in the liberation of formaldehyde gas. Formaldehyde may cause mutations to non-reproductive (somatic) cells, based on animal data.	
<b>Carcinogenicity</b>	Not classifiable as to carcinogenicity to humans. Contains: Titanium dioxide. Titanium dioxide is suspected of causing cancer by inhalation. However, the concentration of the hazardous ingredient(s) in this mixture is below the concentration cutoff required for classification. Avoid heating, which will result in the liberation of formaldehyde gas. Formaldehyde has shown limited evidence of a carcinogenic effect.	
<b>Reproductive toxicity</b>	Contains no ingredient listed as toxic to reproduction This product is not expected to cause reproductive or developmental effects.	
<b>Specific target organ toxicity - single exposure</b>	According to the classification criteria of the European Union, this product is not expected to cause target organ toxicity through single exposures.	
<b>Specific target organ toxicity - repeated exposure</b>	According to the classification criteria of the European Union, this product is not expected to cause target organ toxicity through repeated exposures.	
<b>Mixture versus substance information</b>	No information available.	
<b>Other information</b>	May slowly hydrolyze in the presence of water to: Acetic acid. Methanol. These hydrolysis products are hazardous. Silver in the form of a finely divided dust may cause discoloration in contact with skin, and argyrosis in case of inhalation.	
<b>Aspiration toxicity</b>	According to the classification criteria of the European Union, this product is not considered as being an aspiration hazard to humans.	

## SECTION 12: Ecological information

<b>12.1. Toxicity</b>	No data is available on the product itself. The product should not be allowed to enter drains, water courses or the soil. May slowly hydrolyze in the presence of water to: Acetic acid. Methanol. Upon completion of the curing process, these hydrolysis products are no longer released. See below for individual ingredient ecotoxicity data.
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Components	Species		Test results
Trimethoxymethylsilane (CAS 1185-55-3)			
Aquatic			
Acute			
Algae	EC50	Green Algae (Pseudokirchneriella subcapitata)	> 120 mg/l, 72 hours (hydrolysis product and/or parent compound)
Crustacea	EC50	Water flea (Daphnia magna)	> 122 mg/l, 48 hours (hydrolysis product and/or parent compound)
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	> 110 mg/l, 96 hours (hydrolysis product and/or parent compound)
Chronic			
Algae	NOEC	Green Algae (Pseudokirchneriella subcapitata)	120 mg/l, 72 hours (hydrolysis product and/or parent compound)

Byproducts		Species		Test results
ACETIC ACID (CAS 64-19-7)				
Aquatic				
Acute				
Crustacea	EC50	Water flea (Daphnia magna)	65 mg/l, 48 hours	
Fish	LC50	Zebra danio (Danio rerio)	> 300,82 mg/l, 96 hours	
Chronic				
Crustacea	NOEC	Water flea (Daphnia magna)	37,9 mg/l, 21 day	
METHANOL (CAS 67-56-1)				
Aquatic				
Crustacea	EC50	Water flea (Daphnia magna)	> 10000 mg/l, 48 hours	
Acute				
Algae	EC50	Green algae (Scenedesmus quadricauda)	> 1000 mg/l, 96 hours	
Fish	LC50	Fathead minnow (Pimephales promelas)	15400 mg/l, 96 hours	
Decomposition		Species		Test results

FORMALDEHYDE (CAS 50-00-0)			
<b>Aquatic</b>			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	5,8 mg/l, 48 hours
Fish	LC50	Striped bass (Morone saxatilis)	6,7 mg/l, 96 hours
<i>Chronic</i>			
Fish	NOEC	Japanese rice fish (Oryzias latipes)	> 48 mg/l, 28 days
<b>12.2. Persistence and degradability</b>	No data is available on the degradability of this product.		
<b>12.3. Bioaccumulative potential</b>	The product itself has not been tested. See the following data for ingredient information.		
<b>Partition coefficient n-octanol/water (log Kow)</b>	Not available.		
ACETIC ACID	-0,17		
METHANOL	-0,77		
FORMALDEHYDE	0,35		
<b>Bioconcentration factor (BCF)</b>	Not available.		
ACETIC ACID	3,2		
FORMALDEHYDE	3		
<b>12.4. Mobility in soil</b>	The product itself has not been tested.		
<b>12.5. Results of PBT and vPvB assessment</b>	Contains no substances, at reportable levels, considered to be persistent, bioaccumulating nor toxic (PBT).		
<b>12.6. Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.		

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

<b>Residual waste</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.
<b>EU waste code</b>	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Disposal methods/information</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Special precautions</b>	Dispose in accordance with all applicable regulations.

## SECTION 14: Transport information

### ADR

Not regulated as dangerous goods.

## **RID**

Not regulated as dangerous goods.

## **ADN**

Not regulated as dangerous goods.

## **IATA**

Not regulated as dangerous goods.

## **IMDG**

Not regulated as dangerous goods.

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

## **General information**

This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code. See ECOLOGICAL INFORMATION, Section 12.

## **SECTION 15: Regulatory information**

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

#### **EU regulations**

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I**

Not listed.

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II**

Not listed.

**Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended**

Not listed.

**Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry**

Copper (CAS 7440-50-8)

**Regulation (EC) No. 1907/2006, REACH Article 59(1) Candidate List as currently published by ECHA**

Not listed.

#### **Authorisations**

**Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended**

Not listed.

#### **Restrictions on use**

**Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended**

METHANOL (CAS 67-56-1)

**Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work**

Not listed.

**Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding**

Not listed.

#### **Other EU regulations**

**Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances**

Not listed.

**Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work**

ACETIC ACID (CAS 64-19-7)

METHANOL (CAS 67-56-1)

**Directive 94/33/EC on the protection of young people at work**

ACETIC ACID (CAS 64-19-7)

METHANOL (CAS 67-56-1)

#### **Other regulations**

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

**National regulations** Young people under 18 years old are not allowed to work with this product according to the EU Directive 94/33/EC on the protection of young people at work.  
Follow national regulation for work with chemical agents.  
German legislation on water endangering substances VwVwS: Water contaminating class - 1 (self classified)

**15.2. Chemical safety assessment** No Chemical Safety Assessment has been carried out.

## SECTION 16: Other information

**List of abbreviations** ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road  
CAS: Chemical Abstract Services  
EC: European Community  
EEC: European Economic Community  
EINECS: European Inventory of Existing Commercial chemical Substances  
EN: European Standard  
EU: European Union  
HSDB® - Hazardous Substances Data Bank  
IATA: International Air Transport Association  
IMDG: International Maritime Dangerous Goods  
LC: Lethal Concentration  
LD: Lethal Dose  
NOEC: No observable effect concentration  
OECD: Organisation for Economic Co operation and Development  
OEL: National occupational exposure limits  
PPE: Personal Protective Equipment  
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail  
RTECS: Registry of Toxic Effects of Chemical Substances  
SCBA: self-contained breathing apparatus  
SDS: Safety Data Sheet  
STEL: Short Term Exposure Limit  
TWA: Time Weighted Average

**References** Canadian Centre for Occupational Health and Safety, CCInfoWeb Databases, 2014  
(Chempendium, RTECs, HSDB, INCHEM)  
European Chemicals Agency, Classification Legislation, 2014.  
European Chemicals Bureau, Existing Chemicals Work Area, EINECS Information System, 2014.  
Material Safety Data Sheet from manufacturer.  
OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2014.

**Information on evaluation method leading to the classification of mixture** The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

**Full text of any statements or R-phrases and H-statements under Sections 2 to 15**

R11 Highly flammable.  
R36 Irritating to eyes.  
R36/37/38 Irritating to eyes, respiratory system and skin.  
R40 Limited evidence of a carcinogenic effect.  
H225 Highly flammable liquid and vapour.  
H319 Causes serious eye irritation.  
H351 Suspected of causing cancer.

**Revision information** Product and Company Identification: Product Codes  
Composition / Information on Ingredients: Ingredients  
Physical & Chemical Properties: Multiple Properties  
Toxicological Information: Toxicological Data  
Regulatory Information: United States  
GHS: Classification  
REACH: Registration Substance

**Training information** Follow training instructions when handling this material.

**Disclaimer** Prepared by: ICC The Compliance Center Inc. 1-888-442-9628  
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