

CHO-THERM® 1641

SDS Revision Date (dd/mm/yyyy): 23/09/2015

Page 1 of 14

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier : **CHO-THERM® 1641**

Product Code(s) : 25500-1641-W1; 65-00-1641-0000; 65-00-1641-0000 NP; 65-01-1641-0000;
65-01-1641-0000 NP; 65-01-1641-NP; 65-03-1641-0000 SPCT; 69-11-25500-1641

SDS No. : PHC-047 EU

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

: Thermally conductive, silicone compound.
Use pattern: professional use.
No restrictions on use known.
No restrictions on use known.

1.3 Details of the supplier of the safety data sheet:

Parker Hannifin France

SAS-Etablissement de Saint Ouen l'Aumone-PA du vert
Galant-6/8 avenue du Vert
Galant-95310 Saint Ouen l'Aumone-France

Chomerics Europe
Parker Hannifin Ltd., Seal Group
Unit 6 Century Point
Halifax Road, High Wycombe
Bucks, HP12 3SL
United Kingdom

E-Mail: parker.france@parker.com

Website: www.parkerfrance.fr

Telephone : +33 (01) 34 32 39 00 (France); +44 (0) 1494 455 400 (UK)

1.4 Emergency Telephone Number

: 001-352-323-3500 (INFOTRAC - U.S.)

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Paste - grey. Mild odour.

Most important hazards:

Causes serious eye irritation. Occupational exposure to the substance or mixture may cause adverse effects. For further information, please refer to section 11 of the SDS.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. See Section 12 for more environmental information.

This mixture is classified as hazardous in accordance with Regulation (EC) No 1272/2008. Classification:

Eye damage/irritation - Category 2; H319

2.2 Label elements

Hazard pictogram(s)



CHO-THERM® 1641

SDS Revision Date (dd/mm/yyyy): 23/09/2015

Page 2 of 14

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

Signal word:

Warning!

Hazard statements:

H319 - Causes serious eye irritation.

Precautionary statements:

P264 - Wash hands and face thoroughly after handling.

P280 - Wear eye/face protection.

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.

P501 - Dispose of contents/container in accordance with local regulation.

2.3 Other hazards

Other hazards which do not result in classification:

May slowly hydrolyze in the presence of water to Methanol and Acetic acid. Methanol and Acetic acid are dangerous. Upon completion of the curing process, these hydrolysis products are no longer released. When heated above 150°C in air, may release formaldehyde gas. Burning produces obnoxious and toxic fumes. May be mildly irritating to skin and respiratory system. Inhalation of fumes may result in metal fume fever, a flu-like illness. May cause gastrointestinal irritation. Prolonged overexposure may cause slight kidney effects, such as increased organ weight. Silver in the form of a finely divided dust may cause discoloration in contact with skin, and argyrosis in case of inhalation.

PBT assessment:

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

Chemical nature - Mixture of: Inorganic substances in powdered form; silane compounds.

The following substances shall be indicated according to legislation:

Chemical name	CAS #	EC No.	Concentration	CLP Classification
Aluminium oxide	1344-28-1	215-691-6	65.0 - 75.0	Not hazardous. Substances for which there are Community workplace exposure limits.
Siloxanes and silicones, di-Me, hydroxy-terminated	70131-67-8	Polymer	15.0 - 30.0	Eye Irrit. 2; H319 (self classified)
Trimethoxymethylsilane	1185-55-3	214-685-0	1.0 - 3.0	Flam. Liq. 2; H225 Eye Irrit. 2; H319 (self classified)
Possible decomposition products in case of hydrolysis are:				
Methanol	67-56-1	200-659-6	Not known.	Flam. Liq. 2; H225 *Acute Tox. 3; H301 *Acute Tox. 3; H311 *Acute Tox. 3; H331 STOT SE 1; H370
acetic acid	64-19-7	200-580-7	Not known.	Flam. Liq. 3; H226 Skin Corr. 1A; H314

CHO-THERM® 1641

SDS Revision Date (dd/mm/yyyy): 23/09/2015

Page 3 of 14

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

The following ingredient may be released from the product only when heated above 150°C:

Formaldehyde	50-00-0	200-001-8	Not known.	Carc. 2; H351 Muta. 2; H341 *Acute Tox. 3; H301 *Acute Tox. 3; H311 *Acute Tox. 3; H331 Skin Corr. 1B; H314 Skin Sens. 1; H317
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The above CLP Acute toxicity Classifications for the following chemicals are 'Minimum Classifications': Methanol; formaldehyde.

For the full text of the H phrases not mentioned in this Section or in Section 2, see Section 16.

SECTION 4. FIRST-AID MEASURES

4.1 Description of first aid measures

- Ingestion* : Do NOT induce vomiting. Never give anything by mouth to a person who is unconscious or is having convulsions. When symptoms persist or in all cases of doubt, seek medical advice.
- Inhalation* : Move to fresh air. If breathing is irregular or stopped, administer artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. When symptoms persist or in all cases of doubt, seek medical advice.
- Skin contact* : IF ON SKIN: Gently wash with plenty of soap and water. Wash contaminated clothing before reuse. When symptoms persist or in all cases of doubt, seek medical advice.
- 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.

4.2 Most important symptoms and effects, both acute and delayed

- : Causes serious eye irritation. Symptoms may include redness, pain, tearing and conjunctivitis.
May be mildly irritating to skin and respiratory system. May cause coughing and breathing difficulties. Repeated exposure may cause skin dryness or cracking.
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 diarrhea.
Prolonged overexposure may cause slight kidney effects, such as increased organ weight.
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 slowly hydrolyze in the presence of water to Methanol and Acetic acid. Methanol and Acetic acid are dangerous.

4.3 Indication of any immediate medical attention and special treatment needed

- : Provide general supportive measures and treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

- Suitable extinguishing media* : Carbon dioxide (CO₂); Dry chemical; Alcohol resistant foam.
- Unsuitable extinguishing media* : May react with water. Do not use water if possible.

CHO-THERM® 1641

SDS Revision Date (dd/mm/yyyy): 23/09/2015

Page 4 of 14

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

5.2 Special hazards arising from the substance or mixture

- : Not classified as flammable. However, may burn if exposed to extreme heat and flame. May react with water, generating heat. May slowly hydrolyze in the presence of water to Methanol and Acetic acid. 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; Metal oxides; formaldehyde; Silicon oxides

5.3 Advice for firefighters

Protective equipment for fire-fighters

- : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode.

Special fire-fighting procedures

- : Move containers from fire area if safe to do so. Cool closed containers exposed to fire with water spray. Do not get water inside containers. Do not allow run-off from fire fighting to enter drains or water courses. Dike for water control.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

- : Keep people away from and upwind of spill/leak. Restrict access to area until completion of clean-up. Wear appropriate protective equipment.

6.2 Environmental precautions

- : Avoid release to the environment. Prevent product from entering drains, sewers, waterways and soil.

6.3 Methods and material for containment and cleaning up

- : Ventilate the area. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. For spilled liquids: absorb spill with inert, non-combustible material such as sand, then place into suitable containers. Pick up and transfer to properly labeled containers. Contaminated absorbent material may pose the same hazards as the spilled product. Contact the proper local authorities.

6.4 Reference to other sections

- : Refer to protective measures listed in sections 7 and 8. Refer to Section 13 for disposal of contaminated material.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

- : Ensure adequate ventilation. Wear suitable protective equipment during handling. Wear eye/face protection. Avoid breathing vapors, fumes or dust. Avoid contact with skin, eyes and clothing. Keep away from extreme heat and direct flame. Protect from moisture. Keep away from incompatibles. Keep containers tightly closed when not in use. Wash thoroughly after handling. Empty containers retain residue (liquid and/or vapour) and can be dangerous.

7.2 Conditions for safe storage, including any incompatibilities

- : Store in cool/well-ventilated place. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Do not store near any incompatible materials (see Section 10). Keep containers dry and tightly closed to avoid moisture absorption and contamination.

7.3 Specific end use(s)

- : Sealant. Thermally conductive, silicone compound.

CHO-THERM® 1641

SDS Revision Date (dd/mm/yyyy): 23/09/2015

Page 5 of 14

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control Parameters

<u>Exposure Limits:</u>			
<u>Chemical Name</u>	<u>Exposure Limits</u>	<u>Type</u>	<u>Notes</u>
acetic acid	10 ppm (25 mg/m ³) (TWA)	European Union (OEL)	None.
	5 ppm (13 mg/m ³) (TWA)	Finland (OEL)	None.
	10 ppm (25 mg/m ³) (STEL)		
	10 ppm (25 mg/m ³) (TWA)	France (OEL)	None.
	10 ppm (25 mg/m ³) (TWA)	Germany (OEL)	(exposure factor 2)
	25 mg/m ³ (TWA)	Hungary (OEL)	None.
	25 mg/m ³ (STEL)		
	15 mg/m ³ (TWA)	Poland (OEL)	None.
Aluminium oxide	30 mg/m ³ (STEL)		
	10 ppm (25 mg/m ³) (TWA)	Spain (OEL)	None.
	15 ppm (37 mg/m ³) (STEL)		
	10 mg/m ³ (TWA)	France (OEL)	None.
	6 mg/m ³ (respirable dust) (TWA)	Hungary (OEL)	None.
Formaldehyde	2.5 mg/m ³ (inhalable); 1.2 mg/m ³ (respirable dust) (TWA)	Poland (OEL)	None.
	10 mg/m ³ (TWA)	Spain (OEL)	None.
	0.3 ppm (0.37 mg/m ³) (TWA)	Finland (OEL)	None.
	1 ppm (1.2 mg/m ³) (STEL)		
	0.5 ppm (TWA)	France (OEL)	None.
	1 ppm (STEL)		
	0.6 mg/m ³ (TWA)	Hungary (OEL)	Potential for cutaneous absorption
Methanol	0.6 mg/m ³ (STEL)		
	0.5 mg/m ³ (TWA)	Poland (OEL)	Skin notation
	1 mg/m ³ (STEL)		
	0.3 ppm (0.37 mg/m ³) (STEL)	Spain (OEL)	None.
	2 ppm (2.5 mg/m ³) (TWA)	The United Kingdom (The United Kingdom (WELs))	None.
	2 ppm (2.5 mg/m ³) (STEL)		
	200 ppm (260 mg/m ³) (TWA)	European Union (OEL)	Possibility of significant uptake through the skin
	200 ppm (270 mg/m ³) (TWA)	Finland (OEL)	Potential for cutaneous absorption
	250 ppm (330 mg/m ³) (STEL)		
	200 ppm (260 mg/m ³) (TWA)	France (OEL)	Risk of cutaneous absorption
	1000 ppm (1300 mg/m ³) (STEL)		
	200 ppm (270 mg/m ³) (exposure factor 4) (TWA)	Germany (OEL)	Skin notation

CHO-THERM® 1641

SDS Revision Date (dd/mm/yyyy): 23/09/2015

Page 6 of 14

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

	260 mg/m ³ (TWA)	Hungary (OEL)	Potential for cutaneous absorption
	200 ppm (260 mg/m ³) (TWA)	Italy (OEL)	Skin - Potential for cutaneous absorption
	100 mg/m ³ (TWA) 300 mg/m ³ (STEL)	Poland (OEL)	Skin notation
	200 ppm (266 mg/m ³) (TWA)	Spain (OEL)	Skin - Potential for cutaneous absorption
	200 ppm (266 mg/m ³) (TWA) 250 ppm (333 mg/m ³) (STEL)	The United Kingdom (The United Kingdom (WELs))	Potential for cutaneous absorption
Siloxanes and silicones, di-Me, hydroxy-terminated	None known.	European Union (OEL)	None.
Trimethoxymethylsilane	None known.	European Union (OEL)	None.

Biological Exposure Indices:

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

Methanol (CAS # 67-56-1)

15 mg/L, Determinant: Methanol (Background noise on non-exposed subjects, Non-specific (observed after the exposure to other subjects)), Specimen: Urine

Germany. *TRGS 903, BAT List (Biological Limit Values)*

Methanol (CAS # 67-56-1)

30 mg/L, Determinant: Methanol, Specimen: Urine

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

Methanol (CAS # 67-56-1)

15 mg/L, Determinant: Methanol, Specimen: Urine

Derived No Effect Level (DNEL): No information available.

Predicted No Effect Concentration (PNEC): No information available.

8.2 Exposure controls

Ventilation and engineering measures

- : Provide adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. In case of insufficient ventilation wear suitable respiratory equipment.

Respiratory protection

- : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. 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. If this concentration is exceeded, self-contained breathing apparatus must be used. Advice should be sought from respiratory protection specialists.

Skin protection

- : Gloves impervious to the material are recommended. 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. Wear sufficient clothing to prevent skin contact.

Eye / face protection

- : Wear eye/face protection. Chemical splash goggles are recommended. A full face shield may also be necessary. See also EN 166.

Other protective equipment

- : Ensure that eyewash stations and safety showers are close to the workstation location. Other equipment may be required depending on workplace standards.

CHO-THERM® 1641

SDS Revision Date (dd/mm/yyyy): 23/09/2015

Page 7 of 14

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

General hygiene considerations

- : Avoid breathing vapors, fumes or dust. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	: Paste - grey
Odour	: mild
Odour threshold	: No information available.
pH	: No information available.
Flash point	: > 93.3°C
Flashpoint (Method)	: closed cup
Lower flammable limit (% by vol.)	: No information available.
Upper flammable limit (% by vol.)	: No information available.
Flammability (solid, gas)	: Not applicable.
Auto-ignition temperature	: No information available.
Decomposition temperature	: No information available.
Oxidizing properties	: None known.
Explosive properties	: Not explosive
Initial boiling point and boiling range	: No information available.
Melting/Freezing point	: No information available.
Relative density	: > 1
Solubility in water	: Insoluble. May react with water.
Other solubility(ies)	: No information available.
Vapour pressure	: No information available.
Vapour density	: No information available.
Partition coefficient: n-octanol/water	: No information available.
Viscosity	: No information available.
Evaporation rate (BuAe = 1)	: No information available.

9.2 Other Information

Volatiles (% by weight)	: No information available.
Volatile organic Compounds (VOC's)	: No information available.
Other physical/chemical comments	: No additional information.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity	: May react with water. May slowly hydrolyze in the presence of water to Methanol and Acetic acid. Upon completion of the curing process, these hydrolysis products are no longer released.
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CHO-THERM® 1641

SDS Revision Date (dd/mm/yyyy): 23/09/2015

Page 8 of 14

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

- 10.2 Chemical stability** : When heated above 150°C in air, may release formaldehyde gas. Stable under normal conditions.
- 10.3 Possibility of hazardous reactions** : Hazardous polymerization does not occur.
- 10.4 Conditions to avoid** : Direct sources of heat. Do not use in areas without adequate ventilation. Avoid contact with incompatible materials. Avoid excessive moisture.
- 10.5 Incompatible materials** : Strong oxidizing agents; Strong acids; Strong bases; Water
- 10.6 Hazardous decomposition products** : None known.
Burning produces obnoxious and toxic fumes. In the event of fire the following can be released: Carbon oxides; Metal oxides; formaldehyde; Silicon oxides

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological effects:

- Acute toxicity** : According to the classification criteria of the European Union, this product is not considered as being an acutely toxic chemical.
- Skin corrosion/Irritation** : According to the classification criteria of the European Union, this product is not considered as being a skin corrosive or irritant.
- Serious eye damage/irritation** : This mixture is classified as hazardous in accordance with Regulation (EC) No 1272/2008.
Classification:
Eye damage/irritation - Category 2. Causes serious eye irritation.
- Respiratory or skin sensitisation** : According to the classification criteria of the European Union, this product is not considered as being an allergic respiratory sensitiser.
According to the classification criteria of the European Union, this product is not considered as being an allergic skin sensitiser.
Avoid heating, which will result in the liberation of formaldehyde gas. Formaldehyde may cause sensitisation by skin contact.
- Germ cell mutagenicity** : Contains no ingredient listed as a mutagen.
Avoid heating, which will result in the liberation of formaldehyde gas. Formaldehyde may cause mutations to non-reproductive (somatic) cells, based on animal data.
- Carcinogenicity** : Contains no ingredient listed as a carcinogen
Avoid heating, which will result in the liberation of formaldehyde gas. Formaldehyde has shown limited evidence of a carcinogenic effect.
- Reproductive toxicity** : Contains no ingredient listed as toxic to reproduction.
- STOT-single exposure** : According to the classification criteria of the European Union, this product is not expected to cause target organ toxicity through a single exposure.
- STOT-repeated exposure** : According to the classification criteria of the European Union, this product is not expected to cause target organ toxicity through repeated exposures.
- Aspiration hazard** : According to the classification criteria of the European Union, this product is not considered as being an aspiration hazard to humans.
- Toxicological data** : There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

CHO-THERM® 1641

SDS Revision Date (dd/mm/yyyy): 23/09/2015

Page 9 of 14

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

<u>Chemical name</u>	<u>LC₅₀(4hr)</u> <u>inh, rat</u>	<u>LD₅₀</u>	
		<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Aluminium oxide	>2.3 mg/L (dust) (no deaths)	> 2000 mg/kg (No mortality)	No information available.
Siloxanes and silicones, di-Me, hydroxy-terminated	> 11.59 mg/L (mist)	> 15 400 mg/kg	> 2000 mg/kg
Trimethoxymethylsilane	> 51.4 mg/L (vapour)	11 745 mg/kg	> 10 mL/kg
Possible decomposition products in case of hydrolysis are:			
Methanol	> 5000 ppm/6H (4,1 mg/L/4H (vapour)	5628 mg/kg (rat) The estimated human lethal dose is: 300 - 1000 mg/kg	> 393 mg/kg (Monkey) 15 800 mg/kg (rabbit)
acetic acid	11.4 mg/L	3310 mg/kg	1060 mg/kg
The following ingredient may be released from the product only when heated above 150°C:			
Formaldehyde	287 ppm	800 mg/kg (rat) The estimated human lethal dose is: 317 - 475 mg/kg	300 mg/kg

Routes of exposure : Eye contact; Skin contact; Inhalation; Ingestion

Effects of acute exposure : *Inhalation*: Mild respiratory irritant. May cause coughing and breathing difficulties. 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.

Skin contact: May cause mild skin irritation. Direct skin contact may cause temporary redness.

Eye contact: Causes serious eye irritation. Symptoms may include redness, pain, tearing and conjunctivitis.

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Potential Chronic Health Effects

: Prolonged overexposure may cause slight kidney effects, such as increased organ weight. Silver in the form of a finely divided dust may cause discoloration in contact with skin, and argyrosis in case of inhalation.

Other important hazards : Avoid heating, which will result in the liberation of formaldehyde gas. Formaldehyde is an eye and throat irritant and acute toxicant. Formaldehyde causes severe respiratory irritation, lung inflammation and pulmonary edema. May slowly hydrolyze in the presence of water to Methanol and Acetic acid. Methanol and Acetic acid are dangerous.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity : No data is available on the product itself. Should not be released into the environment.

See the following tables for individual ingredient ecotoxicity data.

CHO-THERM® 1641

SDS Revision Date (dd/mm/yyyy): 23/09/2015

Page 10 of 14

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

Ecotoxicity data:

<u>Ingredients</u>	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Aluminium oxide	1344-28-1	> 100 mg/L Brown trout	No information available.	None.
Siloxanes and silicones, di-Me, hydroxy-terminated	70131-67-8	No information available.	No information available.	No information available.
Trimethoxymethylsilane	1185-55-3	> 110 mg/L (Rainbow trout)	No information available.	None.
Methanol	67-56-1	15 400 mg/L (Bluegill sunfish)	446.7 mg/L/28-day (Fathead minnow) (QSAR)	None.
Formaldehyde	50-00-0	6,7 mg/L (Striped bass)	≥ 48 mg/L/28-day (Japanese ricefish)	None.
acetic acid	64-19-7	> 300.82 mg/L (Zebra fish)	No information available.	None.

<u>Ingredients</u>	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Aluminium oxide	1344-28-1	> 100 mg/L (Daphnia magna)	No information available.	None.
Siloxanes and silicones, di-Me, hydroxy-terminated	70131-67-8	No information available.	No information available.	No information available.
Trimethoxymethylsilane	1185-55-3	> 122 mg/L (Daphnia magna)	No information available.	None.
Methanol	67-56-1	> 10 000 mg/L (Daphnia magna)	208 mg/L (QSAR)	None.
Formaldehyde	50-00-0	5,8 mg/L (Daphnia magna)	No information available.	None.
acetic acid	64-19-7	65 mg/L (Daphnia magna)	37.9 mg/L	None.

<u>Ingredients</u>	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Aluminium oxide	1344-28-1	> 100 mg/L/72hr (Green algae)	No information available.	None.
Siloxanes and silicones, di-Me, hydroxy-terminated	70131-67-8	No information available.	No information available.	No information available.
Trimethoxymethylsilane	1185-55-3	> 120mg/L/72hr (Green algae)	No information available.	None.
Methanol	67-56-1	22 000 mg/L/96hr (Green algae)	No information available.	None.
Formaldehyde	50-00-0	14,7 mg/L/24hr (Green algae)	No information available.	None.
acetic acid	64-19-7	No information available.	No information available.	None.

12.2 Persistence and degradability

- : The product itself has not been tested.
- Contains the following chemicals which are not readily biodegradable: Aluminium oxide; Trimethoxymethylsilane.

CHO-THERM® 1641

SDS Revision Date (dd/mm/yyyy): 23/09/2015

Page 11 of 14

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

12.3 Bioaccumulation potential

: The product itself has not been tested. See the following data for ingredient information.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Trimethoxymethylsilane (CAS 1185-55-3)	- 0.67	3.16
Methanol (CAS 67-56-1)	- 0.82 to - 0.64	< 10 (common carp)
Formaldehyde (CAS 50-00-0)	0.35	3
acetic acid (CAS 64-19-7)	- 0.17	3.2

12.4 Mobility in soil : The product itself has not been tested.

12.5 Results of PBT and vPvB assessment

: This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

12.6 Other Adverse Environmental effects


: 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:

- Handling for Disposal** : Handle in accordance with good industrial hygiene and safety practice. Refer to protective measures listed in sections 7 and 8. This material and its container must be disposed of in a safe way.
- Methods of Disposal** : Empty containers retain residue (liquid and/or vapour) and can be dangerous. 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.
Dispose of in accordance with the European Directives on waste and hazardous waste. Waste must be classified and labelled prior to recycling or disposal. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14. TRANSPORTATION INFORMATION

<i>Regulatory Information</i>	14.1 UN Number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing Group	<i>Label</i>
ADR/RID	None.	Not regulated	Not regulated	None	
EU ADR/RID Classification Code	Not applicable.				
EU ADR / RID Hazard Identification Number	Not applicable.				
ADR/RID Additional information	Not classified as dangerous for conveyance in the meaning of the regulations for the transport of dangerous goods by road and rail.				



CHO-THERM® 1641

SDS Revision Date (dd/mm/yyyy): 23/09/2015

Page 12 of 14

SAFETY DATA SHEET

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended.

ICAO/IATA	None.	Not regulated.	Not regulated	None	
ICAO/IATA Additional information	None.				
IMDG	None.	Not regulated.	Not regulated	None	
IMDG Additional information	None.				

14.5 Environmental hazards : This product does not meet the criteria for an environmentally hazardous mixture, according to the IMDG Code. See Section 12 for more environmental information.

14.6 Special precautions for user

: Appropriate advice on safety must accompany the package. Keep containers dry and tightly closed to avoid moisture absorption and contamination.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: Not applicable.

SECTION 15. REGULATORY INFORMATION

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

: Classification according to Regulation (EC) No. 1272/2008 on the classification of hazardous mixtures.

Authorisations

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

None of the components are specifically listed.

Restrictions on use

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

None of the components are specifically listed.

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

None.

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

Trimethoxymethylsilane (CAS # 1185-55-3)

Polydimethylsiloxane (CAS # 70131-67-8)

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

None of the components are specifically listed.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006, as amended [including Regulation (EU) 2015/830].

Follow national regulation for work with chemical agents.

German legislation on water endangering substances VwVwS - Water contaminating class (Germany): 1 (self classified)



CHO-THERM® 1641

SDS Revision Date (dd/mm/yyyy): 23/09/2015

Page 13 of 14

SAFETY DATA SHEET

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15.2 Chemical safety assessment

: A chemical safety assessment has not been carried out by the Manufacturer of this product.

SECTION 16. OTHER INFORMATION

Legend

: ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE: Acute Toxicity Estimate
CAS: Chemical Abstract Services
CLP: Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
EC: European Community
EC50: Effective Concentration 50%.
EEC: European Economic Community
EN: European Standard
ERG: Emergency Response Guidebook
EU: European Union
HSDB: Hazardous Substances Data Bank
IATA: International Air Transport Association
IBC: Intermediate Bulk Container
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
PEL: Permissible exposure limit
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail
RTECS: Registry of Toxic Effects of Chemical Substances
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
TWA: Time Weighted Average
WEL: Workplace Exposure Limit

Information Source

- : 1. Material Safety Data Sheet from manufacturer.
2. Canadian Centre for Occupational Health and Safety, CCInfoWeb Databases, 2015 (Chempendium, RTECs, HSDB, INCHEM).
3. European Chemicals Agency, Classification Legislation, 2015.
4. OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2015

Preparation Date (dd/mm/yyyy)

: 28/07/2015

Reviewed Date SDS (dd/mm/yyyy)

: 23/09/2015

Revision No.

: 2

Revision Information

: Minor formatting change.



CHO-THERM® 1641

SDS Revision Date (dd/mm/yyyy): 23/09/2015

Page 14 of 14

SAFETY DATA SHEET

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- H-Phrases (Full text)** :
- H225 - Highly flammable liquid and vapour.
 - H226 - Flammable liquid and vapour.
 - H301 - Toxic if swallowed.
 - H311 - Toxic in contact with skin.
 - H314 - Causes severe skin burns and eye damage.
 - H317 - May cause an allergic skin reaction.
 - H319 - Causes serious eye irritation.
 - H331 - Toxic if inhaled.
 - H341 - Suspected of causing genetic defects <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.
 - H351 - Suspected of causing cancer <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.
 - H370 - Causes damage to organs (a,b,c).

Other special considerations for handling

- : Provide adequate information, instruction and training for operators.

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