

## SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of: Safety data sheet according to Regulation (EC) 2020/878

Revision date 08/07/2024 Revision Number 2

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

1.1. Product identifier

Product Name Thermally Conductive Oxime RTV

Product Code(s) TCOR, ETCOR75S, ZE

Safety data sheet number 01232

Pure substance/mixture Mixture

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

Recommended use Heat Dissipation

Uses advised against No specific uses advised against are identified

1.3. Details of the supplier of the safety data sheet

<u>Manufacturer</u> <u>Supplier</u>

ELECTROLUBE
MacDermid Alpha Electronics Solutions
ASHBY PARK, COALFIELD WAY,
ASHBY DE LA ZOUCH,

LEICESTERSHIRE LE65 1JR

UNITED KINGDOM

+44 (0)1530 419600

+44 (0)1530 416640 info@electrolube.com

HK WENTWORTH LIMITED

32 RUE DE TOURNENFILS 91540 MENNECY

**FRANCE** 

+33 (0) 1 82 88 47 94

info@electrolube.com

For further information, please contact

E-mail address info@electrolube.com

1.4. Emergency telephone number

Emergency Telephone POISON INFORMATION CENTRE (Beaumont Hospital, Republic of Ireland only) +353 (0)1

809 2166 (08:00 - 22:00)

Emergency Telephone - IN CASE OF EMERGENCY CALL: +44 1865 407333 (24hr, Provided by Carechem 24)

## **SECTION 2: Hazards identification**

## 2.1. Classification of the substance or mixture

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

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

#### 2.2. Label elements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

#### **Hazard statements**

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP] EUH210 - Safety data sheet available on request

#### 2.3. Other hazards

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

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors.

## SECTION 3: Composition/information on ingredients

#### 3.1 Substances

Not applicable

## 3.2 Mixtures

Chemical name	Weight-%	·		Classification according		M-Factor	M-Factor
		number	Index No)	to Regulation (EC) No.	concentration		(long-term)
				1272/2008 [CLP]	limit (SCL)		
	50 - <100	01-2119529248-35-00	215-691-6	[C]	-	-	-
1344-28-1		00					
Dimethyl Siloxane	30 - 60	No data available	-	[C]	-	-	-
63148-62-9							
Silane	1 - 5	No data available	232-263-4	[C]	-	-	-
7803-62-5							

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

## Full text of H- and EUH-phrases: see section 16

## **Acute Toxicity Estimate**

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50	Inhalation LC50 - 4	Inhalation LC50 - 4	Inhalation LC50 - 4
		mg/kg	hour - dust/mist - mg/L	hour - vapour - mg/L	hour - gas - ppm
Aluminium Oxide 1344-28-1	5000	No data available	No data available	No data available	No data available
Dimethyl Siloxane 63148-62-9	24000	No data available	No data available	No data available	No data available

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

<sup>[</sup>C] - Components with occupational exposure limits and/or biological occupational exposure limits requiring monitoring

## **SECTION 4: First aid measures**

## 4.1. Description of first aid measures

Inhalation Remove to fresh air.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.

Consult a doctor.

Skin contact Wash skin with soap and water. In the case of skin irritation or allergic reactions see a

doctor.

Ingestion Rinse mouth.

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

No information available. **Symptoms** 

**Effects of Exposure** None.

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

Note to doctors Treat symptomatically.

## SECTION 5: Firefighting measures

## 5.1. Extinguishing media

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the

surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

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

Specific hazards arising from the

chemical

No information available.

## 5.3. Advice for firefighters

Special protective equipment and

precautions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Use personal protection equipment.

## SECTION 6: Accidental release measures

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

**Personal precautions** Ensure adequate ventilation.

Use personal protection recommended in Section 8. For emergency responders

6.2. Environmental precautions

**Environmental precautions** See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## **SECTION 7: Handling and storage**

## 7.1. Precautions for safe handling

Advice on safe handling Ensure adequate ventilation.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

Storage class (TRGS 510) LGK 10.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

## SECTION 8: Exposure controls/personal protection

## 8.1. Control parameters

## **Exposure Limits**

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Aluminium Oxide	-	TWA: 5 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	TWA: 10.0 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>
1344-28-1		STEL 10 mg/m <sup>3</sup>		TWA: 1.5 mg/m <sup>3</sup>	TWA: 4 mg/m <sup>3</sup>
Silane	-	=	TWA: 5 ppm	-	TWA: 0.5 ppm
7803-62-5			TWA: 6.7 mg/m <sup>3</sup>		TWA: 0.67 mg/cm3
					STEL: 1 ppm
					STEL: 1.3 mg/m <sup>3</sup>
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Aluminium Oxide	-	TWA: 10.0 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	-
1344-28-1			TWA: 2 mg/m <sup>3</sup>	TWA: 4 mg/m <sup>3</sup>	
			STEL: 10 mg/m <sup>3</sup>	_	
			STEL: 4 mg/m <sup>3</sup>		
Silane	-	-	TWA: 0.5 ppm	TWA: 0.5 ppm	TWA: 0.5 ppm
7803-62-5			TWA: 0.7 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	TWA: 0.67 mg/m <sup>3</sup>

# TCOR, ETCOR75S, ZE - Thermally Conductive Oxime RTV

				STEL: 1 ppm STEL: 1.4 mg/m <sup>3</sup>			STEL: 1.5 ppm STEL: 2 mg/m <sup>3</sup>
Chemical name	Franc	:e	Germany TRGS	Germany DFG	Gree	ece	Hungary
Aluminium Oxide 1344-28-1	TWA: 10 r	mg/m³	TWA: 1.25 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>	TWA: 4 mg/m <sup>3</sup> TWA: 1.5 mg/m <sup>3</sup>	TWA: 10 TWA: 5	mg/m <sup>3</sup> mg/m <sup>3</sup>	TWA: 52 mg/m <sup>3</sup>
Silane 7803-62-5	TWA: 5 TWA: 7 n	ng/m³	-	-	TWA: 5	mg/m³	-
Chemical name	Irelan	-	Italy MDLPS	Italy AIDII	Lat		Lithuania
Aluminium Oxide 1344-28-1	TWA: 10 r TWA: 4 n STEL: 30 s	ng/m³ mg/m³ mg/m³	-	TWA: 1 mg/m³	TWA: 6	mg/m³	TWA: 5 mg/m³ TWA: 2 mg/m³
Silane 7803-62-5	TWA: 5 STEL: 15		-	TWA: 5 ppm TWA: 6.6 mg/m <sup>3</sup>	-		-
Chemical name	Luxemb	ourg	Malta	Netherlands	Norv	vay	Poland
Aluminium Oxide 1344-28-1	-		-	-	TWA: 10 STEL: 20	) mg/m³	TWA: 2.5 mg/m <sup>3</sup> TWA: 1.2 mg/m <sup>3</sup>
Silane 7803-62-5	-		-	-	TWA: 0 TWA: 0.7 STEL: 1 STEL: 2.	7 mg/m³ .5 ppm	-
Chemical name	Portug		Romania	Slovakia	Slove	enia	Spain
Aluminium Oxide 1344-28-1	TWA: 1 m	ng/m³	TWA: 2 mg/m <sup>3</sup> TWA: 3 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup> STEL: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>	TWA: 4 mg/m³ TWA: 1.5 mg/m³	-		TWA: 10 mg/m <sup>3</sup>
Dimethyl Siloxane 63148-62-9	-		TWA: 200 mg/m³ STEL: 300 mg/m³ P*	-	-		-
7803-62-5	Silane TWA: 5 ppm 7803-62-5		-	-	-		TWA: 5 ppm TWA: 6.7 mg/m <sup>3</sup>
	Chemical name		Sweden	Switzerlan			ited Kingdom
Aluminium Oxide 1344-28-1			NGV: 5 mg/m³ NGV: 2 mg/m³	TWA: 3 mg/ TWA: 10 mg STEL: 24 mg	J/m³	T\ ST	VA: 10 mg/m <sup>3</sup> VA: 4 mg/m <sup>3</sup> EL: 30 mg/m <sup>3</sup> EL: 12 mg/m <sup>3</sup>
Silane 7803-62-5			-	TWA: 0.5 p TWA: 0.7 mg		T' TW S	WA: 0.5 ppm A: 0.67 mg/m³ 5TEL: 1 ppm EL: 1.3 mg/m³

## Biological occupational exposure limits

Chemical name	European Union	Austria	Bulg	garia	Croatia	Czech Republic
Aluminium Oxide 1344-28-1	-	60 µg/g Creatinine (urine - Aluminum after end of work day, at the end of a work week/end of the shift) ( - )			-	-
Chemical name	Slovenia	Spain		Sw	itzerland	United Kingdom
Aluminium Oxide 1344-28-1	-	-		Aluminur shifts (f	eatinine (urine - n after several for long-term nosures))	-

<b>Revision date</b> 08/07/2024	Re	visior	n date	08/07	/2024
---------------------------------	----	--------	--------	-------	-------

0.21 µmol/mmol creatinine (urine - Aluminum after several shifts (for long-term
Shirts (for long-term
exposures))

## Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
Silane	-	-	0.67 mg/m <sup>3</sup> [4] [6]
7803-62-5			0.67 mg/m <sup>3</sup> [4] [7]

**Notes** 

[4] Systemic health effects.

[6] Long term. [7] Short term.

Derived No Effect Level (DNEL) - General Public .

## **Predicted No Effect Concentration (PNEC)**

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
Aluminium Oxide 1344-28-1	-	-	20 mg/L	-	-

8.2. Exposure controls

**Engineering controls** No information available.

Personal protective equipment

**Eye/face protection** No special protective equipment required.

**Skin and body protection**No special protective equipment required.

exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** No information available.

## **SECTION 9: Physical and chemical properties**

9.1. Information on basic physical and chemical properties

Physical state Liquid
Appearance Paste
Colour white

OdourNo information available.Odour thresholdNo information available

Property Values Remarks • Method

Melting point / freezing pointNo data availableNone knownInitial boiling point and boiling rangeNo data availableNone knownFlammabilityNo data availableNone knownFlammability Limit in AirNone known

Upper flammability or explosive No data available

limits

Lower flammability or explosive No data available

limits

Flash point No data available None known
Autoignition temperature No data available None known
Decomposition temperature
PH No data available None known
None known

No data available pH (as aqueous solution) None known No data available Kinematic viscosity None known None known No data available Dynamic viscosity None known Water solubility No data available Solubility(ies) No data available None known **Partition coefficient** No data available None known Vapour pressure No data available None known Relative density No data available None known

Bulk density 2.3 kg/l

Liquid Density No data available

Relative vapour density No data available None known

Particle characteristics

Particle Size No information available Particle Size Distribution No information available

## 9.2. Other information

9.2.1. Information with regards to physical hazard classes

Explosive properties Not considered to be explosive.

Oxidising properties Does not meet the criteria for classification as oxidizing.

9.2.2. Other safety characteristics

No information available

## SECTION 10: Stability and reactivity

10.1. Reactivity

**Reactivity** No information available.

10.2. Chemical stability

**Stability** Stable under normal conditions.

**Explosion data** 

Sensitivity to mechanical impact None. Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

**Incompatible materials**None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

## SECTION 11: Toxicological information

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

## Information on likely routes of exposure

## **Product Information**

**Inhalation** Specific test data for the substance or mixture is not available.

**Eye contact** Specific test data for the substance or mixture is not available.

**Skin contact** Specific test data for the substance or mixture is not available.

**Ingestion** Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

**Symptoms** No information available.

Acute toxicity

## **Numerical measures of toxicity**

Based on available data, the classification criteria are not met

## The following values are calculated based on chapter 3.1 of the GHS document

**ATEmix (oral)** 7,894.70 mg/kg

**Component Information** 

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Aluminium Oxide	> 5000 mg/kg (Rat)	-	-
Dimethyl Siloxane	> 24 g/kg (Rat)	-	-
Silane	-	-	> 9600 ppm (Rat) 4 h

## Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Skin corrosion/irritation**Based on available data, the classification criteria are not met.

**Serious eye damage/eye irritation** Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

STOT - single exposure Based on available data, the classification criteria are not met.

**STOT - repeated exposure**Based on available data, the classification criteria are not met.

**Aspiration hazard** No information available.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

**Endocrine disrupting properties**The substance/mixture does not contain components considered to have endocrine

disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

**Ecotoxicity** The environmental impact of this product has not been fully investigated.

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

**Bioaccumulation** There is no data for this product.

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB above the

threshold of declaration.

Revision	date	08/07/2024

Chemical name	PBT and vPvB assessment		
Aluminium Oxide	The substance is not PBT / vPvB		
Silane	PBT assessment does not apply		

## 12.6. Endocrine disrupting properties

**Endocrine disrupting properties** 

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## 12.7. Other adverse effects

No information available.

## **SECTION 13: Disposal considerations**

## 13.1. Waste treatment methods

Waste from residues/unused

products

Dispose of in accordance with local regulations. Dispose of waste in accordance with

environmental legislation.

Contaminated packaging Do not reuse empty containers.

## **SECTION 14: Transport information**

IATA	
14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	Not applicable

14.6 Special precautions for user

**Special Provisions** None

## **IMDG**

14.1	UN number or ID number	Not regulated
14.2	UN proper shipping name	Not regulated
14.3	Transport hazard class(es)	Not regulated
14.4	Packing group	Not regulated
14.5	Environmental hazards	Not applicable

14.6 Special precautions for user

**Special Provisions** None

14.7 Maritime transport in bulk No information available according to IMO instruments

## **RID**

14.1	UN number or ID number	Not regulated
14.2	UN proper shipping name	Not regulated
14.3	Transport hazard class(es)	Not regulated
14.4	Packing group	Not regulated
14.5	Environmental hazards	Not applicable

14.6 Special precautions for user

**Special Provisions** None

ADR

14.1 UN number or ID number
 14.2 UN proper shipping name
 14.3 Transport hazard class(es)
 14.4 Packing group
 14.5 Environmental hazards
 Not regulated Not regulated Not applicable

14.6 Special precautions for user

Special Provisions None

## **SECTION 15: Regulatory information**

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

#### National regulations

Germany

Water hazard class (WGK) non-hazardous to water (nwg)

## **European Union**

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

#### Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

## **Persistent Organic Pollutants**

Not applicable

## Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

## **International Inventories**

Contact supplier for inventory compliance status **TSCA DSL/NDSL** Contact supplier for inventory compliance status **EINECS/ELINCS** Contact supplier for inventory compliance status Contact supplier for inventory compliance status **ENCS** Contact supplier for inventory compliance status **IECSC** Contact supplier for inventory compliance status KECI Contact supplier for inventory compliance status **PICCS** Contact supplier for inventory compliance status AIIC **NZIoC** Contact supplier for inventory compliance status

## Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

#### 15.2. Chemical safety assessment

**Chemical Safety Report** 

Chemical safety assessments for substances in this mixture were not carried out

## **SECTION 16: Other information**

## Key or legend to abbreviations and acronyms used in the safety data sheet

## Legend

SVHC: Substances of Very High Concern for Authorisation:

## Legend SECTION 8: Exposure controls/personal protection

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

Ceiling Maximum limit value Sk\* Skin designation

+ Sensitisers

Classification procedure		
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used	
Acute oral toxicity	Calculation method	
Acute dermal toxicity	Calculation method	
Acute inhalation toxicity - gas	Calculation method	
Acute inhalation toxicity - vapour	Calculation method	
Acute inhalation toxicity - dust/mist	Calculation method	
Skin corrosion/irritation	Calculation method	
Serious eye damage/eye irritation	Calculation method	
Respiratory sensitisation	Calculation method	
Skin sensitisation	Calculation method	
Mutagenicity	Calculation method	
Carcinogenicity	Calculation method	
Reproductive toxicity	Calculation method	
STOT - single exposure	Calculation method	
STOT - repeated exposure	Calculation method	
Acute aquatic toxicity	Calculation method	
Chronic aquatic toxicity	Calculation method	
Aspiration hazard	Calculation method	
Ozone	Calculation method	

## Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA\_RAC)

European Chemicals Agency (ECHA) (ECHA\_API)

**Environmental Protection Agency** 

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

National Institute of Technology and Evaluation (NITE)

Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

U.S. National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme

Organisation for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Revision date 08/07/2024

**Reason for revision**Change in composition of the mixture (addition, deletion, substitution of component). SDS

sections updated: 3, 8, 11

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**