



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

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LOCTITE TCF 1000 TC known as 19G THERMSTRATE TC-175-125RB

SDS No. : 266744
V004.4

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

1.1. Product identifier

LOCTITE TCF 1000 TC known as 19G THERMSTRATE TC-175-125RB

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

Intended use:

Phase Change Thermal Interface Material (PCTIM)

1.3. Details of the supplier of the safety data sheet

Henkel Ireland
Operations and Research Limited
Tallaght Business Park
Dublin 24

Ireland

Phone: +353 (14046444)

Fax-no.: +353 (14519926)

ua-productsafety.uk@uk.henkel.com

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

||| The substance or mixture is not hazardous according to Regulation (EC) No 1272/2008 (CLP).

2.2. Label elements

Label elements (CLP):

||| The substance or mixture is not hazardous according to Regulation (EC) No 1272/2008 (CLP).

Supplemental information

EUH210 Safety data sheet available on request.

2.3. Other hazards

None if used properly.

Self classification: product testing according to Classification, Labelling and Packaging Regulation EC/1272/2008, Annex 1, Part 4.

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

wax

Base substances of preparation:

fatty acid derivatives

Filler

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

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
zinc oxide 1314-13-2	215-222-5 01-2119463881-32	>= 20- < 25 %	Aquatic Acute 1 H400 Aquatic Chronic 1 H410

For full text of the H - statements and other abbreviations see section 16 "Other information".

Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures**4.1. Description of first aid measures****Inhalation:**

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

Skin contact:

Wipe off with paper towel or cloth.

Rinse with running water and soap.

Obtain medical attention if irritation persists.

Eye contact:

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

Ingestion:

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

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

Prolonged or repeated contact may cause skin irritation.

Prolonged or repeated contact may cause eye irritation.

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

See section: Description of first aid measures

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media:**

Carbon dioxide, foam, powder

Fine water spray

Extinguishing media which must not be used for safety reasons:

Do not use water on fires where molten metal is present.

5.2. Special hazards arising from the substance or mixture

May produce fumes when heated to decomposition. Fumes may contain carbon monoxide and other toxic fumes.

In the event of a fire, carbon monoxide (CO), carbon dioxide (CO₂) and nitrogen oxides (NO_x) can be released.

5.3. Advice for firefighters

Wear self-contained breathing apparatus.

Additional information:

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid skin and eye contact.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Scrape up spilled material and place in a closed container for disposal.

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

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid skin and eye contact.

See advice in section 8

Avoid open flames.

Hygiene measures:

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

Good industrial hygiene practices should be observed.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool place in closed original container.

7.3. Specific end use(s)

Phase Change Thermal Interface Material (PCTIM)

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for

Great Britain

None

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
zinc oxide 1314-13-2	aqua (freshwater)					20,6 µg/L	
zinc oxide 1314-13-2	aqua (marine water)					6,1 µg/L	
zinc oxide 1314-13-2	STP					100 µg/L	
zinc oxide 1314-13-2	sediment (freshwater)				117,8 mg/kg		
zinc oxide 1314-13-2	sediment (marine water)				56,5 mg/kg		
zinc oxide 1314-13-2	soil				35,6 mg/kg		

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
zinc oxide 1314-13-2	Workers	Inhalation	Long term exposure - systemic effects		5 mg/m ³	
zinc oxide 1314-13-2	Workers	Dermal	Long term exposure - systemic effects		83 mg/kg bw/day	
zinc oxide 1314-13-2	general population	Inhalation	Long term exposure - systemic effects		2,5 mg/m ³	
zinc oxide 1314-13-2	general population	Dermal	Long term exposure - systemic effects		83 mg/kg bw/day	
zinc oxide 1314-13-2	general population	oral	Long term exposure - systemic effects		0,83 mg/kg bw/day	

Biological Exposure Indices:

None

8.2. Exposure controls:

Engineering controls:

Ensure good ventilation/extraction.

Respiratory protection:

Ensure adequate ventilation.

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

Filter type: A

Hand protection:

Chemical-resistant protective gloves (EN 374).

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

nitrile rubber (NBR; >= 0.4 mm thickness)

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

nitrile rubber (NBR; >= 0.4 mm thickness)

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

Eye protection:

Eye protection should be used where there is any risk of splashing.

Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.

Skin protection:

Protective clothing that covers arms and legs.

apron

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Appearance	waxy, solid white, grey
Odor	odorless
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Initial boiling point (1.013 hPa)	> 100 °C (> 212 °F)
Flash point	221 °C (429.8 °F); Cleveland open cup
Decomposition temperature	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Density (20 °C (68 °F))	0,92 g/cm ³
Bulk density	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Insoluble
Solidification temperature	No data available / Not applicable
Melting point	60 °C (140 °F)
Flammability	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Explosive limits	No data available / Not applicable
Partition coefficient: n-octanol/water	No data available / Not applicable
Evaporation rate	No data available / Not applicable
Vapor density	No data available / Not applicable
Oxidising properties	No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity**10.1. Reactivity**

Reaction with strong oxidants.

Reaction with strong acids.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

Avoid contact with acids and oxidizing agents.

10.5. Incompatible materials

See section reactivity

10.6. Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapors.
At higher temperature carbon oxides and nitrogen oxides may be generated.
Metallic oxides
See section 5.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****General toxicological information:**

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Oral toxicity:

This material is considered to have low toxicity if swallowed.

Inhalative toxicity:

Inhalation of vapors in high concentration may cause irritation of respiratory system

Skin irritation:

Prolonged or repeated contact may cause skin irritation.

Eye irritation:

Prolonged or repeated contact may cause eye irritation.

Acute oral toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
zinc oxide 1314-13-2	LD50	> 5.000 mg/kg	oral		rat	

Acute inhalative toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
zinc oxide 1314-13-2	LC50	> 5,7 mg/l		4 h	rat	

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
zinc oxide 1314-13-2	not irritating		rabbit	

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
zinc oxide 1314-13-2	slightly irritating		rabbit	

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
zinc oxide 1314-13-2	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
zinc oxide 1314-13-2	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		

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

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

12.1. Toxicity**Ecotoxicity:**

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

Self classification: product testing according to Classification, Labelling and Packaging Regulation EC/1272/2008, Annex 1, Part 4.

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
zinc oxide 1314-13-2	LC50	> 1.000 mg/l	Fish		Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)
zinc oxide 1314-13-2	EC50	0,17 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
	NOEC	0,017 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)

12.2. Persistence and degradability**Persistence and Biodegradability:**

The product is not biodegradable.

12.3. Bioaccumulative potential / 12.4. Mobility in soil**Mobility:**

The product is insoluble and sinks in water.

Bioaccumulative potential:

No data available for the product.

12.5. Results of PBT and vPvB assessment

Hazardous components CAS-No.	PBT/vPvB
zinc oxide 1314-13-2	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Product disposal:
Waste incineration with the approval of the responsible local authority.

Disposal of uncleaned packages:
Use packages for recycling only when totally empty.
Packaging that cannot be cleaned are to be disposed of in the same manner as the product.

Waste code

06 04 05 - wastes containing other heavy metals

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

SECTION 14: Transport information

- 14.1. UN number**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.2. UN proper shipping name**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.3. Transport hazard class(es)**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.4. Packaging group**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.5. Environmental hazards**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.6. Special precautions for user**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 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

VOC content < 3 %
(1999/13/EC)

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

National regulations/information (Great Britain):

Remarks The Health & Safety at Work Act 1974.
The Control of Substances Hazardous to Health Regulations. L5:General
Approved Code of Practice to the COSHH Regulations. HS(G)97:A Step by Step
Guide to the COSHH Regulations. HS(G)193: COSHH essentials: Easy steps to
control chemicals.

SECTION 16: Other information

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

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Further information:

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

Label elements (DPD):

The product is not subject to classification according to the calculation methods of the "General Classification Guideline for Preparations of the EC" as issued in the last version.

Additional labeling:

Safety data sheet available for professional user on request.

Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.