

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

1.1. Product identifier

Trade name or designation of the mixture	Tgard 300
Registration number	-
Synonyms	None.
Issue date	04-May-2018
Version number	02
Revision date	08-January-2020
Supersedes date	04-May-2018

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

Identified uses	Thermal interface material.
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

Manufacturer	Laird
Address	4707 Detroit Ave Cleveland, Ohio 44102 USA
Telephone number	+1-216-939-2300
Email	clv-customerservice@lairdtech.com

Manufacturer	Laird
Address	C3&C4 Building, HongTai Industry Park, NO.87 Tai Feng Road, TEDA, Tianjin, China
Telephone number	+86(0)22-66298160

Corporate Office	Laird PLC
Address	100 Pall Mall, London, SW1Y 5NQ United Kingdom
Telephone number	+44 (0)20 7468 4040

Emergency telephone number	Within USA and Canada: 1-800-424-9300 (Chemtrec). Other Countries: +1-703-527-3887.
Telephone hours	24 hours per day, 7 days per week. Collect calls accepted.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

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

The product is an article and therefore the classification requirements according to Regulation (EC) 1272/2008 as amended do not apply.

Hazard summary	Health injuries are not known or expected under normal use.
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2.2. Label elements

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

Hazard pictograms	None.
Signal word	None.
Hazard statements	The product is an article and therefore the classification requirements do not apply.

Precautionary statements

Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.

Supplemental label information None.

2.3. Other hazards This product does not meet vPvB / PBT criteria of Regulation (EC) No 1907/2006, Annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

The components are not hazardous or are below required disclosure limits.

Composition comments The ingredients in this product are fully encapsulated in silicone binder in its finished state, therefore no exposure to these materials is expected during normal use/handling of 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.

4.1. Description of first aid measures

Inhalation Not relevant, due to the form of the product.

Skin contact No adverse effects due to skin contact are expected.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Not likely, due to the form of the product.

4.2. Most important symptoms and effects, both acute and delayed Under normal conditions of intended use, this product is not expected to be a health risk.

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

SECTION 5: Firefighting measures

General fire hazards Contains one or more components that will burn if involved in a fire.

5.1. Extinguishing media

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture During fire, gases hazardous to health may be formed. This material may generate formaldehyde at temperatures greater than 150°C (300°F).

5.3. Advice for firefighters

Special protective equipment for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special fire fighting procedures Use water spray to cool unopened containers.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Keep unnecessary personnel away.

For emergency responders Wear appropriate protective equipment and clothing during clean-up.

6.2. Environmental precautions Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up Stop the flow of material, if this is without risk. Pick up and arrange disposal. Recover and recycle, if practical. Following product recovery, flush area with water.

6.4. Reference to other sections For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling No special precautions are necessary beyond normal good hygiene practices. See Section 8 for additional personal protection advice when handling this product. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities Store in original packaging. Store away from incompatible materials (see section 10 of the SDS).

7.3. Specific end use(s) Thermal interface material.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Recommended monitoring procedures	Follow standard monitoring procedures.
Derived no effect levels (DNELs)	Not available.
Predicted no effect concentrations (PNECs)	Not available.

8.2. Exposure controls

Appropriate engineering controls General ventilation normally adequate.

Individual protection measures, such as personal protective equipment

General information	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	Not normally needed. If contact is likely, safety glasses with side shields are recommended.
Skin protection	
- Hand protection	Not normally needed. For prolonged or repeated skin contact, use suitable protective gloves. Nitrile gloves are recommended.
- Other	No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.
Respiratory protection	Respiratory protection not required.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
Hygiene measures	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state	Solid.
Form	Pad.
Colour	Yellow
Odour	Odorless
Odour threshold	Not available.
pH	Not applicable.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not applicable.
Flash point	> 204.4 °C (> 400.0 °F) Pensky-Martens Closed Cup
Evaporation rate	Not applicable.
Flammability (solid, gas)	Contains one or more components that will burn if involved in a fire.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Relative density	Not available.
Solubility(ies)	Insoluble in water.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.

Viscosity	Not applicable.
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
9.2. Other information	
Density	2.71 g/cm ³ (25 °C (77 °F))
Percent volatile	< 1 % v/v

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Contact with incompatible materials.
10.5. Incompatible materials	Strong oxidising agents. Strong acids. Strong alkalis.
10.6. Hazardous decomposition products	Thermal decomposition or combustion may produce: Carbon oxides. Hydrocarbons. Fumes of metal oxides. Silicon oxide fumes. Hydrogen gas. Phenols. Cyanides. This material may generate formaldehyde at temperatures greater than 150°C (300°F).

SECTION 11: Toxicological information

General information	Health injuries are not known or expected under normal use.
Information on likely routes of exposure	
Inhalation	Due to the physical form of the product, the ingredients are not expected to present a hazard by inhalation.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Not likely, due to the form of the product.
Symptoms	Under normal conditions of intended use, this product is not expected to be a health risk.
11.1. Information on toxicological effects	
Acute toxicity	Not expected to be acutely toxic.
Skin corrosion/irritation	No adverse effects due to skin contact are expected.
Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.
Respiratory sensitisation	Based on available data, the classification criteria are not met.
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.
Specific target organ toxicity - single exposure	Based on available data, the classification criteria are not met.
Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Not relevant, due to the form of the product.
Mixture versus substance information	No information available.
Other information	This product has no known adverse effect on human health.

SECTION 12: Ecological information

12.1. Toxicity	Not relevant, due to the form of the product in its manufactured and shipped state.
12.2. Persistence and degradability	The product contains inorganic compounds which are not biodegradable.
12.3. Bioaccumulative potential	No data available on bioaccumulation.
Partition coefficient n-octanol/water (log Kow)	Not available.
Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	The product is insoluble in water.
12.5. Results of PBT and vPvB assessment	This product does not meet vPvB / PBT criteria of Regulation (EC) No 1907/2006, Annex XIII.

12.6. Other adverse 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

Residual waste 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).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

EU waste code The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Disposal methods/information Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Special precautions Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. - 14.6.: Not regulated as dangerous goods.

RID

14.1. - 14.6.: Not regulated as dangerous goods.

ADN

14.1. - 14.6.: Not regulated as dangerous goods.

IATA

14.1. - 14.6.: Not regulated as dangerous goods.

IMDG

14.1. - 14.6.: Not regulated as dangerous goods.

14.7. Transport in bulk Not applicable.

**according to Annex II of
MARPOL 73/78 and the IBC**

Code

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 and II, as amended

Not listed.

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

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 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, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) 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

Not listed.

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

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

National regulations

Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

ADN: European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways.
ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road.
IATA: International Air Transport Association.
IMDG Code: International Maritime Dangerous Goods Code.
MARPOL: International Convention for the Prevention of Pollution from Ships.
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.
TWA: Time Weighted Average Value.

References

EPA: AQUIRE database
IARC Monographs. Overall Evaluation of Carcinogenicity
NLM: Hazardous Substances Data Base

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 H-statements not written out in full under Sections 2 to 15

None.

Training information

Follow training instructions when handling this material.

Disclaimer

Laird cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.