



Revision Number: 002.0

Issue date: 11/20/2018

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: BERGQUIST HI FLOW THF 1500P known as Hi-Flow 650P
Product type: Thermal Interface Material
Restriction of Use: None identified
Company address: Henkel Corporation, One Henkel Way, Rocky Hill, Connecticut 06067
IDH number: 2167454
Region: United States
Contact information: Telephone: +1 (860) 571-5100
 MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711
 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887
 Internet: www.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER: MAY DAMAGE FERTILITY OR THE UNBORN CHILD.

HAZARD CLASS

REPRODUCTIVE TOXICITY

HAZARD CATEGORY

1B

PICTOGRAM(S)



Precautionary Statements

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, clothing, eye and face protection.
Response: IF exposed or concerned: Get medical attention.
Storage: Store locked up.
Disposal: Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Aluminium oxide - non fibrous form	1344-28-1	60 - 80
Polyimide polymer	Proprietary	5 - 10
Proprietary Ester	Proprietary	1 - 5
Boron oxide (B2O3)	1303-86-2	0.1 - 1
N,N-Dimethylacetamide	127-19-5	0.1 - 1

* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If symptoms develop and persist, get medical attention.
Skin contact:	Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. If symptoms develop and persist, get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Eye contact:	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Ingestion:	DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.
Symptoms:	See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. In case of fire, keep containers cool with water spray.
Unusual fire or explosion hazards:	Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.
Hazardous combustion products:	Oxides of carbon. Oxides of silicon. Formaldehyde. Aldehydes. Ketones. Toxic and irritating vapors.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Do not allow product to enter sewer or waterways.
Clean-up methods:	Scrape up as much material as possible. Store in a partly filled, closed container until disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

7. HANDLING AND STORAGE

Handling:	Use only with adequate ventilation. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Keep container closed.
Storage:	Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Keep away from heat, spark and flame. Protect from direct sunlight. Avoid moisture.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Aluminium oxide - non fibrous form	1 mg/m3 TWA Respirable fraction.	5 mg/m3 PEL Respirable fraction. 15 mg/m3 PEL Total dust. 50 MPPCF TWA Total dust. 15 MPPCF TWA Respirable fraction. 15 mg/m3 TWA Total dust. 5 mg/m3 TWA Respirable fraction.	None	None
Polyimide polymer	None	None	None	None
Proprietary Ester	None	None	None	None
Boron oxide (B2O3)	10 mg/m3 TWA	15 mg/m3 PEL Total dust.	None	None
N,N-Dimethylacetamide	10 ppm TWA (SKIN)	10 ppm (35 mg/m3) PEL (SKIN)	None	None

- Engineering controls:** Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
- Respiratory protection:** Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.
- Eye/face protection:** Safety goggles or safety glasses with side shields.
- Skin protection:** Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Solid
Color:	Gold
Odor:	Slight
Odor threshold:	Not available.
pH:	Not available.
Vapor pressure:	Not available.
Boiling point/range:	Not available.
Melting point/ range:	Not available.
Specific gravity:	2.2
Vapor density:	Not available.
Flash point:	Product is a solid.
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Flammability:	Not applicable
Evaporation rate:	Not available.
Solubility in water:	insoluble in water
Partition coefficient (n-octanol/water):	Not available.
VOC content:	Not available.
Viscosity:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous reactions:	None under normal processing.
Hazardous decomposition products:	Oxides of carbon. Oxides of silicon. Formaldehyde. Aldehydes. Ketones. Toxic fumes. Irritating vapors.
Incompatible materials:	Oxidizing agents. Acids. Bases. Peroxides. Chlorine.
Reactivity:	Not available.
Conditions to avoid:	Keep away from heat, ignition sources and incompatible materials. Protect from direct sunlight. Avoid moisture.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects/Symptoms

Inhalation:	May cause respiratory tract irritation.
Skin contact:	May cause skin irritation.
Eye contact:	May cause eye irritation.
Ingestion:	Not expected under normal conditions of use.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Aluminium oxide - non fibrous form	None	Irritant, Nuisance dust, Corrosive
Polyimide polymer	None	No Records
Proprietary Ester	Oral LD50 (Rat) = > 15 g/kg Dermal LD50 (Rabbit) = > 7.9 g/kg	Irritant, Central nervous system
Boron oxide (B2O3)	Oral LD50 (Mouse) = 3,163 mg/kg	Blood, Central nervous system, Gastrointestinal, Irritant, Kidney, Liver, Lung, Metabolic, Nuisance dust, Skin, Vascular
N,N-Dimethylacetamide	Oral LD50 (Rat) = 5,809 mg/kg Oral LD50 (Rat) = 4,390 mg/kg Oral LD50 (Mouse) = 4,620 mg/kg Dermal LD50 (Rabbit) = 2,240 mg/kg Dermal LD50 (Mouse) = 9,600 mg/kg	Behavioral, Blood, Central nervous system, Developmental, Irritant, Kidney, Liver, Pancreas, Reproductive, Spleen

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Aluminium oxide - non fibrous form	No	No	No
Polyimide polymer	No	No	No
Proprietary Ester	No	No	No
Boron oxide (B2O3)	No	No	No
N,N-Dimethylacetamide	No	No	No

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.
Hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

Water Transportation (IMO/IMDG)

Proper shipping name: Not regulated
Hazard class or division: None
Identification number: None
Packing group: None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification: None above reporting de minimis
CERCLA/SARA Section 302 EHS: None above reporting de minimis.
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health
CERCLA/SARA Section 313: None above reporting de minimis.
California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

Prepared by: Product Safety and Regulatory Affairs

Issue date: 11/20/2018

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

This Safety Data Sheet has been generated based on OSHA Hazard Communication Standard (29 CFR 1910.1200) and provides information in accordance with U.S. federal law only. No warranty or representation of any kind is given with respect to the substantive or export laws of any other jurisdiction or country. Please confirm that the information provided herein conforms to the substantive export or other law of any other jurisdiction prior to export. Please contact Henkel Product Safety and Regulatory Affairs for additional assistance.