



Revision Date: 12/01/2004

Issue date: 12/01/2004

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Output(TM) H/S Thermal Conductive Adh
Product type: Acrylics
Company address:
Henkel Corporation
1001 Trout Brook Crossing
Rocky Hill, Connecticut 06067

Item No. : 12991
Region: United States
Contact Information:
Telephone: 860.571.5100
Emergency telephone: 860.571.5100
Internet: www.loctite.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Aluminum 7429-90-5	30-60	10 mg/m ³ TWA metal dust 5 mg/m ³ TWA as Al	15 mg/m ³ TWA (total), 5 mg/m ³ (respirable)	None
Tetrahydrofurfuryl methacrylate 2455-24-5	10-30	None	None	None
Chlorosulphonated polyethylene 68037-39-8	10-30	None	None	None
Methacrylic acid 79-41-4	1-5	20 ppm TWA	None	None
Alkyl methacrylate 688-84-6	1-5	None	None	None
Silica, amorphous, fumed, crystalline-free 112945-52-5	1-5	6 mg/m ³ TWA	10 mg/m ³ TWA	3 mg/m ³ TWA respirable dust
Ethylene glycol 107-21-1	0.1-1	100 mg/m ³ Ceiling aerosol only	None	None
Talc 14807-96-6	0.1-1	2 mg/m ³ TWA respirable fraction, particulate matter containing no asbestos and < 1% crystalline silica	= 20 mppcf TWA	50 ppm
Cumene hydroperoxide 80-15-9	0.1-1	None	None	1 ppm (6 mg/m ³) Skin (WEEL)

3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW****HMIS:**

Physical state: Liquid
Color: Grey
Odor: Mild

HEALTH: 2*
FLAMMABILITY: 1
PHYSICAL HAZARD: 1
Personal Protection: See Section 8

WARNING: MAY CAUSE ALLERGIC SKIN REACTION.
MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Inhalation, Skin contact, Eye contact, Ingestion

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Potential Health Effects

Inhalation:	May cause respiratory tract irritation. Vapors may cause headaches, nausea, dizziness and respiratory tract irritation.
Skin contact:	May cause skin irritation. May cause allergic skin reaction.
Eye contact:	May cause irritation.
Ingestion:	Not expected to be harmful by ingestion.

Existing conditions aggravated by exposure: Eye, skin, and respiratory disorders.

See Section 11 for additional toxicological information.

4. FIRST AID MEASURES

Inhalation:	Remove to fresh air. If symptoms develop and persist, get medical attention.
Skin contact:	Wash with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if symptoms occur.
Eye contact:	Flush with copious amounts of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Get medical attention.
Ingestion:	Do not induce vomiting. Keep individual calm. Obtain medical attention.

5. FIRE-FIGHTING MEASURES

Flash point:	Greater than 93°C (200°F) Tagliabue closed cup
Autoignition temperature:	Not available
Flammable/Explosive limits-lower %:	Not available
Flammable/Explosive limits-upper %:	Not available
Extinguishing media:	Foam, dry chemical or carbon dioxide.
Special fire fighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
Unusual fire or explosion hazards:	Vapors may accumulate in low or confined areas, travel considerable distance to source of ignition, and flash back.
Hazardous combustion products:	Oxides of carbon. Alcohols. Aldehydes. Toxic fumes. Acrid smoke and fumes. Irritating organic vapors.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions:	Prevent product from entering drains or open waters.
Clean-up methods:	Remove all ignition sources. Ensure adequate ventilation. Soak up with inert absorbent. Store in a closed container until ready for disposal.

7. HANDLING AND STORAGE

Handling:	Avoid contact with eyes, skin and clothing. Avoid breathing vapor and mist. Wash thoroughly after handling. During use and until all vapors are gone: Keep area ventilated - do not smoke; extinguish all flames, pilot lights, and heaters; turn off stoves, electrical tools and appliances, and any other sources of ignition. Make sure containers are properly grounded before use or transfer of material.
Storage:	Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use. For safe storage, store at or below 32°C (90°F).
Incompatible products:	Refer to Section 10.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls:	Use local exhaust ventilation to maintain airborne concentrations below established exposure limits.
Respiratory protection:	Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
Skin protection:	Chemical resistant, impermeable gloves. Nitrile gloves.
Eye/face protection:	Safety goggles or safety glasses with side shields.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Grey
Odor:	Mild
Vapor pressure:	Less than 5 mm Hg at 23°C (80°F)
pH:	Not applicable
Boiling point/range:	Greater than 200°C (392°F)
Melting point/range:	Not available
Specific gravity:	2.32
Vapor density:	Not available
Evaporation rate:	Faster than ether
Solubility in water:	Completely miscible
Partition coefficient (n-octanol/water):	Not available
VOC content:	34.9%; 810 grams/liter

10. STABILITY AND REACTIVITY

Stability:	Stable.
Hazardous polymerization:	May occur.
Hazardous decomposition products:	Oxides of carbon. Aldehydes. Alcohols. Irritating organic vapors. Toxic fumes.
Incompatibility:	Oxidizing agents. Reducing agents. Acids. Bases. Free radical initiators. Oxygen scavengers. Heavy metals. Perchlorates. Peroxides.
Conditions to avoid:	Heat, fumes, sparks and other sources of ignition. See "Handling and Storage" (Section 7) and "Incompatibility" (Section 10). Do not mix in batches greater than 100 grams (0.220 pounds) unless you plan to use immediately.

11. TOXICOLOGICAL INFORMATION

Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Aluminum 7429-90-5	No	No	No
Tetrahydrofurfuryl methacrylate 2455-24-5	No	No	No
Chlorosulphonated polyethylene 68037-39-8	No	No	No
Methacrylic acid 79-41-4	No	No	No
Alkyl methacrylate 688-84-6	No	No	No
Silica, amorphous, fumed, crystalline-free 112945-52-5	No	No	No
Ethylene glycol 107-21-1	No	No	No
Talc 14807-96-6	No	No	No
Cumene hydroperoxide 80-15-9	No	No	No

Literature Referenced Target Organ & Other Health Effects

Hazardous components	Health Effects/Target Organs
Aluminum 7429-90-5	Central nervous system, Irritant, Lung
Tetrahydrofurfuryl methacrylate 2455-24-5	Allergen, Irritant
Chlorosulphonated polyethylene 68037-39-8	No Target Organs
Methacrylic acid 79-41-4	Allergen, Corrosive, Irritant
Alkyl methacrylate 688-84-6	Allergen, Irritant
Silica, amorphous, fumed, crystalline-free 112945-52-5	Nuisance dust
Ethylene glycol 107-21-1	Blood, Bone Marrow, Central nervous system, Developmental, Eyes, Irritant, Kidney, Liver, Metabolic
Talc 14807-96-6	Some evidence of carcinogenicity, Lung, Irritant
Cumene hydroperoxide 80-15-9	Allergen, Central nervous system, Corrosive, Irritant, Mutagen

12. ECOLOGICAL INFORMATION

Ecological information: Not available

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

EPA hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

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

Proper shipping name: Unrestricted
Hazard class or division: None
Identification number: None
Packing group: None

International Air Transportation (ICAO/IATA):

Proper shipping name: Unrestricted
Hazard class or division: None
Identification number: None

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Product name: Output(TM) H/S Thermal Conductive Adh

Packing group: None

WaterTransportation (IMO/IMDG):

Proper shipping name: Unrestricted
Hazard class or division: None
Identification number: None
Packing group: None
Marine pollutant: 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: 4-Methoxyphenol (150-76-5).

CERCLA/SARA Section 302 EHS: None.
CERCLA/SARA Section 311/312: Immediate Health Hazard, Delayed Health Hazard
CERCLA/SARA 313: None.

California Proposition 65: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDL Status: All components are listed on or are exempt from listing on the Domestic Substances List.
WHMIS hazard class: D.2.A, D.2.B

16. OTHER INFORMATION

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

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