

Output(TM) H/S Thermal Conductive Adh  
 12991

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Output(TM) H/S Thermal Conductive Adh  
 Item No.: 12991  
 Product Type: Tough acrylic

2. COMPOSITION, INFORMATION ON INGREDIENTS

Ingredients	CAS No.	%
ALUMINUM	7429-90-5	45-50
Heterocyclic methacrylate	2455-24-5	25-30
Polyethylene based rubber	68037-39-8	10-15
METHACRYLIC ACID	79-41-4	3-5
Alkyl methacrylate	688-84-6	1-3
SILICA, AMORPHOUS, FUMED, CRYSTALLINE-FREE	112945-52-5	1-3
Substituted silane	2530-83-8	0.1-1
CUMENE HYDROPEROXIDE*	80-15-9	0.1-0.5
Epoxy resin	25068-38-6	0.1-0.5

\* This component is listed as a SARA Section 313 Toxic Chemical.

Ingredients which have exposure limits

Exposure Limits (TWA) Ingredients	ACGIH (TLV)	OSHA (PEL)	OTHER
ALUMINUM	10 mg/m3 dust	15 mg/m3 dust 5 mg/m3 respir.	None
METHACRYLIC ACID	20 ppm TWA 70 mg/m3	20 ppm TWA skin 70 mg/m3 skin	4 ppm skin 10 ppm skinSTEL
Alkyl methacrylate	None	None	25ppm
SILICA, AMORPHOUS, FUMED, CRYSTALLINE-FREE	10 mg/m3 TWA	6 mg/m3 TWA	3 mg/m3 TWA resp. dust
CUMENE HYDROPEROXIDE	None	None	1ppm (6mg/m3) Skin(WHEEL)
Exposure Limits (STEL) Ingredients	ACGIH (TLV)	OSHA (PEL)	

3. HAZARDS IDENTIFICATION

Toxicity: Liquid is an eye and skin irritant.  
 Vapors may irritate eye, nose and throat.  
 Estimated oral LD50 more than 5000 mg/kg.

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## MATERIAL SAFETY DATA SHEET

Page 02 of 05

Product Name: Output(TM) H/S Thermal Conductive Adh  
Item No.: 12991

## 3. HAZARDS IDENTIFICATION

(continued)

Estimated dermal LD50 more than 2000 mg/kg.  
Primary Routes of Entry: None known  
Signs and Symptoms of Exposure: Irritation of eyes, skin, nose or throat. May cause dermatitis on, prolonged contact in sensitive individuals.  
Existing Conditions Aggravated by Exposure: Acrylic acid: Upper respiratory and lung diseases, dermatitis

Ingredients	Literature Referenced Target Organ and Other Health Effects	Carcinogen		
		NTP	IARC	OSHA
ALUMINUM	CNS IRR LUN	NO	NO	NO
Heterocyclic methacrylate	ALG IRR	NO	NO	NO
Polyethylene based rubber	NTO	NO	NO	NO
METHACRYLIC ACID	ALG COR IRR	NO	NO	NO
Alkyl methacrylate	ALG IRR	NO	NO	NO
SILICA, AMORPHOUS, FUMED, CRYSTALLINE-FREE	NUI	NO	N/A	NO
Substituted silane	ALG IRR	NO	NO	NO
CUMENE HYDROPEROXIDE	ALG CNS COR IRR MUT	NO	NO	NO
Epoxy resin	ALG IRR	NO	NO	NO

## Abbreviations

N/A Not Applicable  
CNS Central nervous system  
IRR Irritant  
MUT Mutagen  
NUI Nuisance dust  
ALG Allergen  
COR Corrosive  
LUN Lung  
NTO No Target Organs

## 4. FIRST AID MEASURES

Ingestion: Do not induce vomiting. Keep individual calm. Obtain medical attention.  
Inhalation: Remove to fresh air. If symptoms persist, obtain medical attention.  
Skin Contact: Wash thoroughly with soap and water. If symptoms persist, obtain medical attention.  
Eye Contact: Flush at least 15 minutes with water. Obtain medical attention.

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## MATERIAL SAFETY DATA SHEET

Page 03 of 05

Product Name: Output(TM) H/S Thermal Conductive Adh  
Item No.: 12991

## 5. FIRE FIGHTING MEASURES

Flash Point: More than 200°F Method: Tag Closed Cup  
Recommended  
Extinguishing Agents: Carbon dioxide, foam, dry chemical. Do not use water.  
Special Firefighting Procedures: Not available  
Hazardous Products formed by Fire or Thermal Decomp Irritating organic vapors, aluminum  
Unusual Fire or Explosion Hazards: If ignited, burns with unusual heat evolution. In a fire, reaction with water is possible.

Explosive Limits:  
(% by volume in air) Lower 30% Aluminum metal  
(% by volume in air) Upper Not available

## 6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case of spill or leak: Scrape up as much as possible. Store in a partly filled, closed container until disposal. Residue may be cleaned with solvent.

## 7. HANDLING AND STORAGE

Safe Storage: Store below 100°F  
(Contact Loctite Customer Service 1-800-243-4874 for shelf life information)  
Handling: Avoid prolonged skin contact. Keep away from eyes  
Avoid breathing vapors.

## 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes: Safety glasses or goggles.  
Skin: Rubber or plastic gloves.  
Ventilation: Sufficient to maintain vapor concentration below TLV  
Respiratory: Not available  
See Section 2 for Exposure Limits.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Grey, high viscosity liquid  
Odor: Mild  
Boiling Point: More than 300°F  
pH: Does not apply  
Solubility in Water: Low  
Specific Gravity: 2.32 at 70°F

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## MATERIAL SAFETY DATA SHEET

Page 04 of 05

Product Name: Output(TM) H/S Thermal Conductive Adh  
Item No.: 12991

## 9. PHYSICAL AND CHEMICAL PROPERTIES

(continued)

Volatile Organic Compound  
(EPA Method 24) 34.9%; 810 grams per liter  
Vapor Pressure: Less than 5 mm at 80°F  
Vapor Density: Not available  
Evaporation Rate  
(Ether = 1) Not available

## 10. STABILITY AND REACTIVITY

Stability: Stable  
Hazardous Polymerization: Will not occur  
Incompatibility: Strong oxidizers, acids, or bases  
Conditions to Avoid: Not available  
Hazardous Decomposition  
Products (non-thermal): None

## 11. TOXICOLOGICAL INFORMATION

See Section 3.

## 12. ECOLOGICAL INFORMATION

No data available

## 13. DISPOSAL CONSIDERATIONS

Recommended methods of  
disposal: Incinerate following EPA and local regulations.  
EPA Hazardous Waste  
Number NH - Not a RCRA Hazardous Waste Material

## 14. TRANSPORTATION INFORMATION

DOT (49 CFR 172)

Domestic Ground Transport  
Proper Shipping Name: Unrestricted  
Hazard Class or  
Division: Unrestricted  
Identification Number: None  
Marine Pollutant: None

IATA

Proper Shipping Name: Unrestricted  
Class or Division: Unrestricted  
UN or ID Number: None

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## MATERIAL SAFETY DATA SHEET

Page 05 of 05

Product Name: Output(TM) H/S Thermal Conductive Adh  
Item No.: 12991

## 15. REGULATORY INFORMATION

CA Proposition 65: WARNING: This product contains chemicals known to  
the State of California to cause cancer  
and birth defects or other reproductive  
harm.  
Carbon Tetrachloride, Chloroform  
Toluene

## 16. OTHER INFORMATION

Estimated NFPA(R) Code:  
Health Hazard: 2  
Fire Hazard: 1  
Reactivity Hazard: 1  
Specific Hazard: No water

Estimated HMIS(R) Code:  
Health Hazard: 2  
Flammability Hazard: 1  
Reactivity Hazards: 1  
Personal Protection: See Section 8.

NFPA is a registered trademark of the National Fire Protection Assn.  
HMIS is a registered trademark of the National Paint and Coatings Assn.

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