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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Hysol QMI2569 (155g)
Product type: Die Attach Adhesive
Company address:
Henkel Corporation
15051 East Don Julian Road
Industry, California 91746

Item No. : 441637 / IDH No. 1431714
Region: United States
Contact Information:
Telephone: 626.968.6511
Emergency Telephone: 860.571.5100
Internet: www.electronics.henkel.us

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Silver 7440-22-4	60-100	0.1 mg/m ³ TWA	0.01 mg/m ³ TWA	None
Frits, chemicals 65997-18-4	10-30	0.002 mg/m ³ TWA 0.01 mg/m ³ TWA 0.02 mg/m ³ TWA 0.05 mg/m ³ TWA 0.2 mg/m ³ TWA 0.5 mg/m ³ TWA 5 mg/m ³ TWA 10 mg/m ³ STEL	30 µg/m ³ Action Level as Pb. Poison - see 29 CFR 1910.1025 50 µg/m ³ TWA as Pb	None
Ester alcohol Proprietary	1-5	None	None	None
Ester Proprietary	1-5	None	None	None
Alpha terpineol 98-55-5	1-5	None	None	100 ppm TWA
2,6-Dimethyl-4-heptanol 108-82-7	1-5	None	None	None

3. HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW**

Physical state: Paste
Color: Silver
Odor: High molecular weight organics.

HMIS:

HEALTH: 2*
FLAMMABILITY: 1
PHYSICAL HAZARD: 0
Personal Protection: See Section 8

WARNING: COMBUSTIBLE LIQUID AND VAPOR.
MAY CAUSE ALLERGIC SKIN REACTION.
MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.
HARMFUL OR FATAL IF SWALLOWED.
CAN ENTER LUNGS AND CAUSE DAMAGE.

Relevant routes of exposure: Skin, Inhalation, Eyes, Ingestion

Potential Health Effects

Item No. : 441637 / IDH No. 1431714

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Inhalation:	May cause respiratory tract irritation. May cause central nervous system depression. Inhalation may result in metal fume fever. Metal fume fever has flu-like symptoms including fever, chills, perspiration, cough, nasal irritation, chest pain, nausea, head ache, vomiting and muscular weakness. This product contains Frits, a fused metal oxide mixture that contains Lead. Lead overexposure may cause sleep disturbance, head and body aches, wrist joint paralysis, decreased muscle coordination and strength, constipation, abdominal pain, nausea, vomiting, decreased appetite, pale skin, a blue line at the gum margin, anemia and decreased fertility.
Skin contact:	May cause severe skin irritation. May cause allergic skin reaction. Repeated or prolonged skin contact may result in argyria (a non-toxic, cosmetic blue-gray discoloration of the skin and mucous membranes that is irreversible). Burning sensation. Itching. Redness.
Eye contact:	May cause severe eye irritation. May cause eye injury. Pain and discomfort. Stinging. Excess tearing. Redness.
Ingestion:	Harmful or fatal if swallowed. May cause gastrointestinal tract irritation if swallowed. Aspiration may occur during swallowing or vomiting, resulting in lung damage. Symptoms of lead poisoning include abdominal pain, nausea, vomiting, and headache. Lead is a cumulative poison and continuous exposure to small amounts over time can raise the body's content to toxic levels.
Existing conditions aggravated by exposure:	Eye, skin, and respiratory disorders. Skin allergies. Liver disorders. Repeated or prolonged exposure to lead and its compounds may produce general health deterioration by an accumulation in one or more human organs.

See Section 11 for additional toxicological information.

4. FIRST AID MEASURES

Inhalation:	Remove 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:	Remove contaminated clothing and shoes. Immediately flush skin with plenty of water (using soap, if available). Get medical attention if symptoms develop and persist. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Eye contact:	Check for and remove any contact lenses. 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. Call a physician immediately. If vomiting occurs, prevent aspiration by keeping the patient's head below the knees.

5. FIRE-FIGHTING MEASURES

Flash point:	81.11°C (178°F) 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. Use water spray to keep fire exposed containers cool.
Unusual fire or explosion hazards:	Water or foam may cause frothing.
Hazardous combustion products:	Oxides of carbon. Oxides of nitrogen. Lead Oxides. Aldehydes. Carboxylic acids. Hydrocarbons.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions:	Prevent product from entering drains or open waters.
Clean-up methods:	Ensure adequate ventilation. Wear suitable protective clothing, gloves and eye/face protection. Scrape up as much material as possible. Store in a closed container until ready for disposal.

7. HANDLING AND STORAGE

Handling:	Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Do not taste or swallow. Do not breathe mist or vapors. Keep container closed. Wash thoroughly after handling.
Storage:	Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.
Incompatible products:	Refer to Section 10.

For information on product shelf life contact Henkel Customer Service at (626) 968-6511

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls:	Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.
Respiratory protection:	Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
Skin protection:	Use impermeable gloves and protective clothing as necessary to prevent skin contact.
Eye/face protection:	Chemical splash goggles or safety glasses with side shields.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Paste
Color:	Silver
Odor:	High molecular weight organics.
Vapor pressure:	Not available
pH:	Not applicable
Boiling point/range:	Not available
Melting point/range:	Not available
Specific gravity:	3.8
Vapor density:	Not available
Evaporation rate:	Not available
Solubility in water:	Not available
Partition coefficient (n-octanol/water):	Not available
VOC content:	Not available

10. STABILITY AND REACTIVITY

Stability:	Stable at normal conditions
Hazardous polymerization:	None under normal processing.
Hazardous decomposition products:	Oxides of carbon. Oxides of nitrogen. Lead oxides. Aldehydes. Carboxylic acids. Hydrocarbons.
Incompatibility:	Strong oxidizing agents. Strong acids and strong bases. Ammonia. Peroxides. Halogenated compounds. Silver acetylene and ethylenimine form explosive compounds with silver. If silver is treated with nitric acid in the presence of ethyl alcohol, silver fulminate can be formed which can be detonated. Bromoazide explodes on contact with silver foil.
Conditions to avoid:	Storage with incompatible materials. Heat, flames, sparks and other sources of ignition.

11. TOXICOLOGICAL INFORMATION

Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Silver 7440-22-4	No	No	No
Frits, chemicals 65997-18-4	Known Carcinogen Suspect Carcinogen	Group 1 Group 2A	Yes
Ester alcohol Proprietary	No	No	No
Ester Proprietary	No	No	No
Alpha terpineol 98-55-5	No	No	No
2,6-Dimethyl-4-heptanol 108-82-7	No	No	No

Literature Referenced Target Organ & Other Health Effects

Hazardous components	Health Effects/Target Organs
Silver 7440-22-4	Skin, Respiratory, Irritant, Eyes, Allergen
Frits, chemicals 65997-18-4	No data
Ester alcohol Proprietary	No Target Organs
Ester Proprietary	No data
Alpha terpineol 98-55-5	Allergen, Central nervous system, Irritant
2,6-Dimethyl-4-heptanol 108-82-7	No data

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: D011 Silver , D008 Lead

14. TRANSPORT INFORMATION

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

Proper shipping name: Combustible liquids, n.o.s. (Diisobutyl Carbinol , Alpha terpineol)
Hazard class or division: Combustible liquid
Identification number: NA 1993
Packing group: III
Exceptions: Unrestricted (Not more than 450 Liters)

International Air Transportation (ICAO/IATA):

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

WaterTransportation (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.
CERCLA/SARA Section 302 EHS:	None.
CERCLA/SARA Section 311/312:	Immediate Health Hazard, Delayed Health Hazard, Fire
CERCLA/SARA 313:	This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Silver (CAS# 7440-22-4). Frits(CAS# 65997-18-4)-Lead compounds.
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, B.3

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: 14

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