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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name:	LOCTITE HC 3056FR AERO PART A GAL known as THERMOFOAM 3056FR PART A GAL	Kit Number:	AS9339000
Product type:	Adhesive for the Aerospace Industry	Item No. :	AA9339019 / IDH No. 937208
Company address:	Henkel Corporation 2850 Willow Pass Road Bay Point, California 94565	Region:	United States
		Contact Information:	Telephone: 925.458.8000 Fax : 925.458.8030. Emergency Telephone: 860.571.5100. Internet www.aerospace.henkel.us

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Epichlorohydrin-4,4'-isopropylidene diphenol resin 25068-38-6	10-30	None	None	None
Decabromodiphenyloxide 1163-19-5	10-30	None	None	5 mg/m ³ TWA, (WEEL)
Soda lime borosilicate glass 65997-17-3	10-30	1 fiber/cm ³ TWA respirable fibers: length > 5 µm, aspect ratio equal to or greater than 3:1, as determined by the membrane filter method at 400-450X magnification (4-mm objective), using phase-contrast illumination. 5 mg/m ³ TWA inhalable fraction	0.1 mg/m ³ TWA	None
Oxiranemethanamine N,N'-(methylenedi-4,1-phenylene)bis(N-(oxiranylmethyl) 28768-32-3	10-30	None	None	None
Oxirane,{2,4-dibromo-6-methylphenoxy) methyl- 75150-13-9	5-10	None	None	None
Brominated bisphenol A glycidyl ether 40039-93-8	5-10	None	None	None
Neopentyl glycol diglycidyl ether 17557-23-2	1-5	None	None	None
1,4-Butanediol diglycidyl ether 2425-79-8	1-5	None	None	None

3. HAZARDS IDENTIFICATION

Item No. : AA9339019 / IDH No. 937208

Product name: LOCTITE HC 3056FR AERO PART A GAL known as THERMOFOAM 3056FR PART A GAL

EMERGENCY OVERVIEW

HMIS:

Physical state: Paste
Color: Light green
Odor: Epoxy

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: Skin, Eyes, Inhalation

Potential Health Effects

Inhalation: May cause irritation to nose and throat. This product contains an ingredient that may be carcinogenic in its respirable form. However, since the ingredient is completely encapsulated by the epoxy resin, only if the cured product is dry sanded, ground, or abraded, might the carcinogenic material be released. In that case, wear a NIOSH approved respirator to protect against the potential release.

Skin contact: Brief contact with the uncured adhesive may irritate the skin or cause a rash. Repeated or prolonged skin contact may result in allergic sensitization.

Eye contact: Contact with eyes will cause irritation.

Ingestion: Not a relevant route of exposure.

Existing conditions aggravated by exposure: Determining whether product ingredients will aggravate a pre-existing medical condition requires case-by-case consideration of the exposed workers' medical condition and the nature of the exposures expected to occur in the specific workplace where the worker will be employed.

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: Remove contaminated clothing and shoes. Wash with soap and water. If a person feels unwell or symptoms of skin irritation appear, consult a physician.

Eye contact: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Ingestion: Drink water as a precaution. Get medical attention if symptoms develop and persist.

Notes to physician: Treat symptomatically and supportively.

5. FIRE-FIGHTING MEASURES

Flash point: Greater than 93°C (200°F)

Autoignition temperature: Not determined

Flammable/Explosive limits-lower %: Not determined

Flammable/Explosive limits-upper %: Not determined

Extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.

Special fire fighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. Cartridge respirators do not provide adequate protection for fire fighters or exotherm mitigation.

Unusual fire or explosion hazards: May liberate large quantities of dense, foul-smelling smoke which may contain unidentified toxic gasses.

Hazardous combustion products: Oxides of carbon and nitrogen, aldehydes, acids and undetermined organics.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions: No information available

Clean-up methods: Scrape up as much material as possible. Store in a closed container until ready for disposal.

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7. HANDLING AND STORAGE

- Handling:** For the Part A plus Part B adhesive mixture, follow curing schedule as recommended in product literature. Do not heat Part A at temperatures greater than 100 °C (212 °F). This material may self-react at higher temperatures and cause an exotherm. The exotherm has the potential for release of excessive energy and toxic gasses. Empty containers retain product residue, so obey hazard warnings and handle empty containers as if they were full.
- Storage:** Refrigerated storage is recommended to maintain product quality. For safe storage, store at or below 77°C (12 °F).
- Incompatible products:** Keep away from strong oxidizing agents, strong Lewis or mineral acids.

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

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Engineering controls:** Work should be done in an adequately ventilated area (i.e., ventilation sufficient to maintain concentrations below one half of the PEL and other relevant standards). Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination.
- Respiratory protection:** When workplace hazards warrant the use of a respirator, appropriate respirators must be used, and a program that follows 29 CFR 1910.134 must be followed.
- Skin protection:** Use impermeable gloves and protective clothing as necessary to prevent skin contact.
- Eye/face protection:** Wear appropriate goggles, face shields or other PPE which will be effective under the circumstances if the possibility of contact exists. A program meeting 29 CFR 1910.133 requirements must be followed when PPE is necessary.

See Section 2 for exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state:** Paste
Color: Light green
Odor: Epoxy
Vapor pressure: Nil
pH: Not available
Boiling point/range: Not determined
Melting point/range: Not determined
Specific gravity: .56
Vapor density: Greater than 1
Evaporation rate: Not determined
Solubility in water: Negligible.
Partition coefficient (n-octanol/water): Not determined
VOC content: <10 g/l (estimate) per SCAQMD Rule 1124 [EPA Test Method 24/304-91]

10. STABILITY AND REACTIVITY

- Stability:** Stable.
- Hazardous polymerization:** May occur.
- Hazardous decomposition products:** Oxides of carbon and nitrogen, aldehydes, acids and undetermined organics.
- Incompatibility:** Keep away from strong oxidizing agents, strong Lewis or mineral acids.
- Conditions to avoid:** Avoid mixing resin (Part A) and curing agent (Part B) in batches greater than 1 pound(s) (.454 kg) unless you plan to use immediately. Do not heat mixed adhesive unless curing surfaces to be bonded. Failure to observe these precautions may result in excessive heat build-up causing an exotherm. The exotherm has the potential for release of toxic gasses.

11. TOXICOLOGICAL INFORMATION

Carcinogen Status

Item No. : AA9339019 / IDH No. 937208

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THERMOFOAM 3056FR PART A GAL

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Epichlorohydrin-4,4'-isopropylidene diphenol resin 25068-38-6	No	No	No
Decabromodiphenyloxide 1163-19-5	No	No	No
Soda lime borosilicate glass 65997-17-3	Suspect Carcinogen	Group 2B	Yes
Oxiranemethanamine N,N' - (methylenedi-4,1-phenylene)bis(N-(oxiranylmethyl) 28768-32-3	No	No	No
Oxirane,(2,4-dibromo-6-methylphenoxy) methyl- 75150-13-9	No	No	No
Brominated bisphenol A glycidyl ether 40039-93-8	No	No	No
Neopentyl glycol diglycidyl ether 17557-23-2	No	No	No
1,4-Butanediol diglycidyl ether 2425-79-8	No	No	No

Literature Referenced Target Organ & Other Health Effects

Hazardous components	Health Effects/Target Organs
Epichlorohydrin-4,4'-isopropylidene diphenol resin 25068-38-6	Allergen, Irritant
Decabromodiphenyloxide 1163-19-5	Irritant, Thyroid
Soda lime borosilicate glass 65997-17-3	Allergen, Respiratory
Oxiranemethanamine N,N' - (methylenedi-4,1-phenylene)bis(N-(oxiranylmethyl) 28768-32-3	Allergen, Blood, Central nervous system, Gastrointestinal, Irritant, Kidney, Liver, Nervous System, Mutagen
Oxirane,(2,4-dibromo-6-methylphenoxy) methyl- 75150-13-9	No data
Brominated bisphenol A glycidyl ether 40039-93-8	Allergen, Irritant
Neopentyl glycol diglycidyl ether 17557-23-2	Allergen, Irritant, Blood, Immune system, Bone Marrow, Reproductive
1,4-Butanediol diglycidyl ether 2425-79-8	Allergen, Irritant

12. ECOLOGICAL INFORMATION

Ecological information:

No specific studies have been conducted by Henkel on the ecotoxicity or environmental fate of this material; however, commonly available data on the material indicate that uncontrolled releases to soil, groundwater, or surface waters could entail acute and/or chronic ecological effects, depending on the quantity and concentration of such releases. Releases of volatile components to the atmosphere are not believed to entail significant ecological consequences provided such releases are within the exposure levels set forth in this document. Accordingly, all appropriate measures should be taken to avoid uncontrolled releases to the environment, and any spills or other uncontrolled releases which may occur should be contained and cleaned up immediately in accordance with Section 6.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Legal disposition of wastes is the responsibility of the owner/generator of the waste. Applicable federal, state and/or local regulations must be followed during treatment, storage, or disposal of waste containing this product.

EPA hazardous waste number: Not a RCRA hazardous waste.

14. TRANSPORT INFORMATION

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

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

International Air Transportation (ICAO/IATA):

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

Water Transportation (IMO/IMDG):

Proper shipping name: Not restricted
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: Decabromodiphenyloxide (CAS# 1163-19-5).

CERCLA/SARA Section 302 EHS: None.
CERCLA/SARA Section 311/312: Immediate Health Hazard, Delayed Health Hazard
CERCLA/SARA 313: Decabromodiphenyloxide (CAS# 1163-19-5).

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/NDSL Status: All components are listed on or are exempt from listing on the Domestic Substances List.
WHMIS hazard class: D.2.B

16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: 2,3,11,15

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