


Revision Number: 002.0

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1. PRODUCT AND COMPANY IDENTIFICATION

Product name: LOCTITE EA 9321 AERO PART B PT Product type/use: Adhesive for the Aerospace Industry Restriction of Use: None identified Company address: Henkel Corporation One Henkel Way Rocky Hill, Connecticut 06067	IDH number: 1055238 Item number: AB9362015 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
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2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER:	CAUSES SEVERE SKIN BURNS AND EYE DAMAGE. MAY CAUSE AN ALLERGIC SKIN REACTION. TOXIC IF INHALED. MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED.
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HAZARD CLASS	HAZARD CATEGORY
ACUTE TOXICITY INHALATION	3
SKIN CORROSION	1B
SERIOUS EYE DAMAGE	1
RESPIRATORY SENSITIZATION	1
SKIN SENSITIZATION	1

PICTOGRAM(S)


Precautionary Statements

Prevention:	Do not breathe dust or fumes. Wash affected area thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, clothing, eye and face protection. In case of inadequate ventilation wear respiratory protection.
Response:	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs: Get medical attention. If experiencing respiratory symptoms: Call a poison center or physician. Wash contaminated clothing before reuse.
Storage:	Store in a well-ventilated place. Keep container tightly closed. 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*
Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine	68082-29-1	30 - 60
Aluminium oxide - non fibrous form	1344-28-1	10 - 30
Diethylenetriamine	111-40-0	5 - 10
Silica, amorphous, fumed, cryst.-free	112945-52-5	1 - 5
Amines, polyethylenepoly-, triethylenetetramine fraction	90640-67-8	1 - 5
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	1760-24-3	1 - 5

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

4. FIRST AID MEASURES

Inhalation:	If inhaled, immediately remove the affected person to fresh air. If symptoms develop and persist, get medical attention.
Skin contact:	Remove contaminated clothing and footwear. Wash affected area immediately with soap and water. If symptoms develop and persist, get medical attention.
Eye contact:	In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
Ingestion:	DO NOT induce vomiting unless directed to do so by medical personnel. If symptoms develop and persist, get medical attention.
Symptoms:	See Section 11.
Notes to physician:	Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Wear full protective clothing. Wear self-contained breathing apparatus.
Unusual fire or explosion hazards:	May liberate large quantities of dense, foul-smelling smoke which may contain unidentified toxic gasses.
Hazardous combustion products:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Oxides of nitrogen.

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:	Prevent further leakage or spillage. Wear appropriate protective equipment and clothing during clean-up. Do not allow product to enter sewer or waterways.
Clean-up methods:	Scrape up spilled material and place in a closed container for disposal. Dispose of according to Federal, State and local governmental regulations.

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 B 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. Do not cut, grind, weld, or drill on or near this container. Empty containers retain product residue, so obey hazard warnings and handle empty containers as if they were full.

Storage:

For safe storage, store between 0 °C (32°F) and 25 °C (77°F)
Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials.

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
Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine	None	None	None	None
Aluminium oxide - non fibrous form	1 mg/m3 TWA Respirable fraction. 3 mg/m3 TWA Respirable particles. 10 mg/m3 TWA Inhalable particles.	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
Diethylenetriamine	1 ppm TWA (SKIN)	None	None	None
Silica, amorphous, fumed, cryst.-free	3 mg/m3 TWA Respirable particles. 10 mg/m3 TWA Inhalable particles.	20 MPPCF TWA 0.8 mg/m3 TWA 50 MPPCF TWA Total dust. 5 mg/m3 TWA Respirable fraction. 15 mg/m3 TWA Total dust. 15 MPPCF TWA Respirable fraction.	None	None
Amines, polyethylenepoly-, triethylenetetramine fraction	None	None	None	None
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	None	None	None	None

Engineering controls:

Ventilation should effectively remove and prevent buildup of any dust generated from the handling of this product.

Respiratory protection:

When dusts or thermal processing fumes are generated and ventilation is not sufficient to effectively remove them, appropriate NIOSH/MSHA approved respiratory protection must be provided.

Eye/face protection:

Safety goggles or safety glasses with side shields.

Skin protection:

Wear impervious gloves for prolonged contact. Use of impervious apron and boots are recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Solid
Color:	Amber
Odor:	Ammonia
Odor threshold:	Not available.
pH:	Not applicable, Product is non-soluble (in water).
Vapor pressure:	< 0.1 hPa (20 °C (68°F))
Boiling point/range:	> 200 °C (> 392°F)
Melting point/ range:	< -40 °C (< -40°F)
Specific gravity:	1.22
Vapor density:	Not applicable, Product is a solid.
Flash point:	Not applicable
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not applicable
Flammability:	The product is not flammable.
Evaporation rate:	Not determined
Solubility in water:	low solubility
Partition coefficient (n-octanol/water):	Not available.
VOC content:	< 10 g/l per SCAQMD Rule 1124 [EPA Test Method 24/304-91] (estimated)
Viscosity:	Not available.
Decomposition temperature:	> 200 °C

10. STABILITY AND REACTIVITY

Stability:	Stable at normal conditions.
Hazardous reactions:	May occur.
Hazardous decomposition products:	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Oxides of nitrogen.
Incompatible materials:	Keep away from strong oxidizing agents, strong Lewis or mineral acids.
Reactivity:	Not available.
Conditions to avoid:	Avoid mixing resin (Part A) and curing agent (Part B) 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.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure:	Skin, Inhalation, Eyes
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Potential Health Effects/Symptoms

Inhalation: Inhalation of dusts of this product may cause severe irritation and burns to the respiratory tract.
Skin contact: This product is severely irritating to the skin and may cause burns. This product may cause an allergic skin reaction. This product may be harmful if it is absorbed through the skin.
Eye contact: This product is severely irritating to the eyes and may cause eye burns.
Ingestion: Ingestion causes burns of the upper digestive and respiratory tracts.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine	None	No Records
Aluminium oxide - non fibrous form	Inhalation LC50 (Rat, 4 h) = > 0.888 mg/l Inhalation LC50 (Rat, 4 h) = > 2.3 mg/l	Irritant, Nuisance dust, Corrosive
Diethylenetriamine	Oral LD50 (Rat) Approximate 1,140 mg/kg Oral LD50 (Rat) = 1,080 mg/kg Oral LD50 (Rat) = 2.33 g/kg	Allergen, Irritant, Eyes
Silica, amorphous, fumed, cryst.-free	None	No Data
Amines, polyethylenepoly-, triethylenetetramine fraction	None	No Data
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Inhalation LC50 (Rat, 4 h) = > 1.49 - < 2.44 mg/l	Irritant, Allergen

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Fatty acids, C18 unsaturated, dimers, polymers with tall oil fatty acids and triethylenetetramine	No	No	No
Aluminium oxide - non fibrous form	No	No	No
Diethylenetriamine	No	No	No
Silica, amorphous, fumed, cryst.-free	No	No	No
Amines, polyethylenepoly-, triethylenetetramine fraction	No	No	No
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	No	No	No

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.

14. TRANSPORT INFORMATION

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

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

Proper shipping name: Amines, solid, corrosive, n.o.s. (Diethylenetriamine, Triethylenetetramine)
Hazard class or division: 8
Identification number: UN 3259
Packing group: III

International Air Transportation (ICAO/IATA)

Proper shipping name: Amines, solid, corrosive, n.o.s. (Diethylenetriamine, Triethylenetetramine)
Hazard class or division: 8
Identification number: UN 3259
Packing group: III

Water Transportation (IMO/IMDG) Proper shipping name:	AMINES, SOLID, CORROSIVE, N.O.S. (Diethylenetriamine, Triethylenetetramine, C18 Fatty acid dimer, tall oil fatty acid, triethylenetetramine polymer)
Hazard class or division:	8
Identification number:	UN 3259
Packing group:	III
Marine pollutant:	C18 Fatty acid dimer, tall oil fatty acid, triethylenetetramine polymer

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status:	All components are listed as active or are exempt from listing on the Toxic Substances Control Act (TSCA) 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 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.
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16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: Not available.

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