

LMK Epoxy Adhesive for HDPE Part A

SAFETY DATA SHEET



MAINLINES | LATERALS | MANHOLES | GASKET SEALS | EQUIPMENT

Phone: (815) 433-1275 Email: info@lmktechnologies.com Web: lmktechnologies.com

Safety Data Sheet

Product Identifier: Epoxy Adhesive for HDPE Part A

SDS ID: MAN-011

Section 1 - IDENTIFICATION

Product Identifier:

Epoxy Adhesive for HDPE Part A

Recommended Use

adhesives / sealant

Restrictions on Use

None known.

Manufacturer Information

LMK Technologies
1779 Chessie Lane
Ottawa, IL 61350

Phone: (815) 433-1275

Emergency # (800) 424-9300

Section 2 - HAZARD(S) IDENTIFICATION

Classification in accordance with 29 CFR 1910.1200.

Acute Toxicity (Oral), Category 4 (68% unknown)

Acute Toxicity (Dermal), Category 4 (94% unknown)

Skin Corrosion / Irritation, Category 2

Eye Damage / Irritation, Category 1

Toxic to reproduction, Category 2

Specific Target Organ Toxicity - Repeated Exposure, Category 1 (kidneys and liver)

Hazardous to the Aquatic Environment - Acute Hazard, Category 3

Hazardous to the Aquatic Environment - Chronic Hazard, Category 3

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

DANGER

Hazard Statement(s)

Harmful if swallowed.

Harmful in contact with skin

Causes severe skin burns and eye damage

Suspected of damaging fertility or the unborn child

May cause damage to kidneys and liver through prolonged or repeated exposure.

Harmful to aquatic life with long lasting effects

Precautionary Statement(s)

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Do not breathe dust or mist. Wear protective gloves/clothing and eye/face protection. Do not eat, drink, or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment.

Safety Data Sheet

Product Identifier: Epoxy Adhesive for HDPE Part A

SDS ID: MAN-011

Response

IF exposed or concerned: Get medical advice/attention. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

Storage

Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component	Percent
471-34-1	Carbonic acid, calcium salt (1:1)	20-25
68410-23-1	Fatty acids, C18-unsaturated, dimers, reaction products with Polyethylenepolyamines	8-10
90-72-2	2,4,6-Tri(dimethylaminomethyl)phenol	3-7
1760-24-3	N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine	1-5
13463-67-7	Titanium dioxide	0.1-1

Section 4 - FIRST-AID MEASURES

Description of Necessary Measures

Inhalation

Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

Skin Contact

Wash with plenty of soap and water. Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician. Wash contaminated clothing before reuse.

Eye Contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

Ingestion

Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms/Effects

Acute

harmful if swallowed, harmful on contact with the skin, skin irritation and burns, eye burns, ear damage

Delayed

kidney damage, liver damage, reproductive effects

Indication of Immediate Medical Attention and Special Treatment Needed, If Needed

Treat symptomatically and supportively.

Section 5 - FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use carbon dioxide, regular dry chemical, regular foam or water.

Unsuitable Extinguishing Media

None known.

Safety Data Sheet

Product Identifier: Epoxy Adhesive for HDPE Part A

SDS ID: MAN-011

Special Hazards Arising from the Chemical

Hazardous Combustion Products

Combustion: Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons, oxides of nitrogen, oxides of silicon.

Special Protective Equipment and Precautions for Firefighters

May burn, but does not ignite readily.

Fire Fighting Measures

Move material from fire area if it can be done without risk. Cool containers with water. Avoid inhalation of vapors or combustion by-products. Use extinguishing agents appropriate for surrounding fire. Dike for later disposal. Stay upwind and keep out of low areas.

Protective Equipment and Precautions for Firefighters

Firefighters should wear full-face, self-contained breathing apparatus and impervious protective clothing. Firefighters should avoid inhaling any combustion products.

* * *Section 6 - ACCIDENTAL RELEASE MEASURES* * *

Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8. Keep unnecessary people away, isolate hazard area and deny entry. Only personnel trained for the hazards of this material should perform clean up and disposal.

Methods and Materials for Containment and Cleaning Up

Ventilate the area. Do not touch spilled material. Collect spilled material in appropriate container for disposal. Avoid release to the environment.

* * *Section 7 - HANDLING AND STORAGE* * *

Precautions for Safe Handling

Do not handle until all safety precautions have been read and understood. Do not breathe vapor or mist. Do not get in eyes, on skin, or on clothing. Do not eat, drink, or smoke when using this product. Always wear recommended personal protective equipment. Wash thoroughly after handling.

Conditions for Safe Storage, including any Incompatibilities

Store and handle in accordance with all current regulations and standards. Keep container tightly closed. Avoid contact with temperatures above 120 °F. Keep separated from incompatible substances.

Incompatibilities: strong acids, strong bases, strong oxidizing materials

* * *Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION* * *

Component Exposure Limits

Carbonic acid, calcium salt (1:1) (471-34-1)

NIOSH: 10 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable dust)

Titanium dioxide (13463-67-7)

ACGIH: 10 mg/m³ TWA

OSHA: 15 mg/m³ TWA (total dust)

Mexico 10 mg/m³ TWA LMPE-PPT (as Ti)
20 mg/m³ STEL [LMPE-CT] (as Ti)

Appropriate Engineering Controls

Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eyes/Face Protection

Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Safety Data Sheet

Product Identifier: Epoxy Adhesive for HDPE Part A

SDS ID: MAN-011

Skin Protection

Wear appropriate chemical resistant clothing.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Respiratory Protection

Use an approved respirator if exposure limits are exceeded or if irritation develops or persists.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid	Appearance:	solid form
Physical Form:	solid	Odor:	Not available
Odor Threshold:	Not available	pH:	Not available
Melting Point:	Not available	Boiling Point:	Not available
Flash Point:	Not available	Decomposition:	Not available
Evaporation Rate:	Not available	OSHA Flammability Class:	Not available
Vapor Pressure:	Not available	Vapor Density (air = 1):	Not available
Density:	Not available	Specific Gravity (water = 1):	1.0 – 1.3
Water Solubility:	Not available	Log KOW:	Not available
Coeff. Water/Oil Dist:	Not available	KOC:	Not available
Auto Ignition:	Not available	Viscosity:	Not available
VOC:	Not available	Volatility:	Not available
Molecular Formula:	Not available		

Section 10 - STABILITY AND REACTIVITY

Reactivity

No reactivity hazard is expected.

Chemical Stability

Stable at normal temperatures and pressure.

Possibility of Hazardous Reactions

Will not polymerize.

Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

Incompatible Materials

strong acids, strong bases, strong oxidizing materials

Hazardous Decomposition Products

Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons, oxides of nitrogen, oxides of silicon

Hazardous Decomposition

Combustion: Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons, oxides of nitrogen, oxides of silicon.

Section 11 - TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Carbonic acid, calcium salt (1:1) (471-34-1)

Oral LD50 Rat 6450 mg/kg

2,4,6-Tri(dimethylaminomethyl)phenol (90-72-2)

Oral LD50 Rat 1200 mg/kg; Dermal LD50 Rat 1280 mg/kg

Safety Data Sheet

Product Identifier: Epoxy Adhesive for HDPE Part A

SDS ID: MAN-011

N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine (1760-24-3)

Oral LD50 Rat 7460 µL/kg

Titanium dioxide (13463-67-7)

Oral LD50 Rat >10000 mg/kg

Information on Likely Routes of Exposure

Inhalation

May cause respiratory tract irritation or burns.

Ingestion

May be harmful if swallowed. May cause gastrointestinal irritation, burns, nausea, vomiting, or diarrhea.

Skin Contact

May be harmful in contact with skin. May cause burns.

Eye Contact

May cause burns and eye damage.

Immediate Effects

respiratory tract burns, skin burns, eye burns

Delayed Effects

kidney damage, liver damage

Medical Conditions Aggravated by Exposure

skin disorders, eye disorders

Irritation/Corrosivity Data

respiratory tract burns skin burns eye burns

Respiratory Sensitization

No information available for the product.

Dermal Sensitization

No information available for the product.

Germ Cell Mutagenicity

No information available for the product.

Carcinogenicity

Results of a DuPont epidemiology study showed that employees who had been exposed to titanium dioxide pigments were at no greater risk of developing lung cancer than were employees who had not been exposed to titanium dioxide pigments. No pulmonary fibrosis was found in any of the employees and no associations were observed between titanium dioxide pigment exposure and chronic respiratory disease or lung abnormalities. Based on the results of this study, DuPont concluded that titanium dioxide pigment will not cause lung cancer or chronic respiratory disease in humans at concentrations experienced in the workplace.

Component Carcinogenicity

Titanium dioxide (13463-67-7)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Monograph 93 [2010]; Monograph 47 [1989] (Group 2B (possibly carcinogenic to humans))

DFG: Category 3A (could be carcinogenic for man, inhalable fraction with the exception of ultra small particles)

OSHA: Present

Reproductive Toxicity

May damage fertility or the unborn child

Specific Target Organ Toxicity - Single Exposure

No target organs identified.

Specific Target Organ Toxicity - Repeated Exposure

kidneys, liver

Aspiration Hazard

No information available for the product.

Safety Data Sheet

Product Identifier: Epoxy Adhesive for HDPE Part A Part A

SDS ID: MAN-011

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Component Analysis - Aquatic Toxicity

No LOLI ecotoxicity data are available for this product's components.

Persistence and Degradability

No information available for the product.

Bioaccumulation

No information available for the product.

Mobility

No information available for the product.

Biodegradation

No information available for the product.

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose in accordance with all applicable federal, state/regional and local laws and regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D002.

Disposal of Contaminated Packaging

Dispose of properly. Recycle if possible.

Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components.

Section 14 - TRANSPORT INFORMATION

US DOT Information

Not regulated as a hazardous material.

TDG Information

Not regulated as dangerous goods.

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 311/312 (40 CFR 370.21), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.

SARA 311/312 Hazardous Categories

Acute Health: Yes Chronic Health: Yes Fire: No Pressure: No Reactive: No

State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Titanium dioxide	13463-67-7	No	Yes	Yes	Yes	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer.

Safety Data Sheet

Product Identifier: Epoxy Adhesive for HDPE Part A

SDS ID: MAN-011

Component Analysis - Inventory

Component	CAS	US	CA	EU	AU	PH	JP	KR	CN	NZ
Carbonic acid, calcium salt (1:1)	471-34-1	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
Fatty acids, C18-unsaturated, dimers, reaction products with Polyethylenepolyamines	68410-23-1	Yes	DSL	No	Yes	Yes	Yes	Yes	Yes	Yes
2,4,6-Tri(dimethylaminomethyl)phenol	90-72-2	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
N-[3-(Trimethoxysilyl)propyl]-1,2-ethanediamine	1760-24-3	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
Titanium dioxide	13463-67-7	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

Summary of Changes

New SDS: 1.00

NFPA Ratings: Health: 3 Fire: 1 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; RID - European Rail Transport; RTECS - Registry of Toxic Effects of Chemical Substances®; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States

Other Information

The information contained herein is based on data considered accurate which has been obtained from other companies and organizations.

End of Sheet MAN-011