



Safety Data Sheet Morricite Hardener 23-2147

Version 1.0
Date: 04/21/2015

1. Product and Company Identification

Product Name : Morricite Hardener 23-2147 Part B
Material Number : 23-2147 -Part B
Product Use Description : Curing Agent, Epoxy
Manufacturer/ Importer/Distributor : Master Terrazzo Technologies
8000 Bristol Pike-Levittown, PA
P.O. Box 226
Bristol, PA 19007
Telephone : 1-215-949-1474
Fax : 1-215-949-9422
Emergency telephone Number : Chemtel-800-255-3924
Contract #MIS0004752

2. Hazard Identification

GHS classification

Acute toxicity - Oral Category 4
Acute toxicity - Dermal Category 4
Skin corrosion - Category 1B
Skin sensitization - Category 1

GHS label elements

Hazard pictograms/symbols



Signal Word: **Danger**

Hazard Statements:

H302+H312:Harmful if swallowed or in contact with skin.
H314:Causes severe skin burns and eye damage.
H317:May cause an allergic skin reaction.

Precautionary Statements:

Prevention	: P261: Avoid breathing dust/fume/gas/mist/vapors/spray. P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P272: Contaminated work clothing should not be allowed out of the workplace. P280: Wear protective gloves/protective clothing/eye protection/face protection.
Response	: P301+P312 :IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P301+P330+P331 :IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P303+P361+P353 :IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340 :IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305+P351+P338 :IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 :Immediately call a POISON CENTRE or doctor/physician. P333+P313 :If skin irritation or rash occurs: Get medical advice/attention. P363 :Wash contaminated clothing before reuse.
Storage	: P405: Store locked up.
Disposal	: P501: Disposal of contents/container to be specified in accordance with regulations.

Hazards not otherwise classified

Toxic in contact with skin.
Corrosive
Moderate respiratory irritant.
Severe skin irritant.
Severe eye irritant.
May cause sensitization by skin contact.

3. Composition/Information on Ingredients

Components	CAS Number	Concentration (Weight)
Aliphatic Amines Mixture	Trade Secret	60-90

CHEMICAL FAMILY: Amine

4. First Aid Measures

General advice	: Seek medical advice. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped trained personnel should begin cardiopulmonary resuscitation immediately.
Eye contact	: Rinse immediately with plenty of water also under the eyelids for at least 20 minutes. Remove contact lenses.

Skin contact	: Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Wash off immediately with plenty of water for at least 20 minutes. Cover wound with sterile dressing. Take off contaminated clothing and shoes immediately. NOTE TO PHYSICIANS: Application of corticosteroid cream has been effective in treating skin irritation.
Ingestion	: Do not induce vomiting without medical advice. Drink 1 to 3 glasses of water or milk. If a person vomits when lying on his back, place him in the recovery position. Prevent aspiration of vomit. Turn victim's head to the side. Inhalation : If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately. Move to fresh air.
Most important symptoms/effects - acute and delayed	: Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat. Eye disease. Skin disorders and Allergies. Adverse skin effects (such as rash, irritation or corrosion). Adverse eye effects (such as conjunctivitis or corneal damage). Adverse respiratory effects (such as cough, tightness of chest or shortness of breath). Asthma.

5. Fire-Fighting Measures

Suitable extinguishing media	: Alcohol-resistant foam. Carbon dioxide (CO ₂). Dry chemical. Dry sand. Limestone powder.
Specific hazards	: May generate ammonia gas. May generate toxic nitrogen oxide gases. Use of water may result in the formation of very toxic aqueous solutions. Do not allow run-off from fire fighting to enter drains or water courses. Incomplete combustion may form carbon monoxide. Downwind personnel must be evacuated. Burning produces noxious and toxic fumes.
Special protective equipment for fire-fighters	: Avoid contact with the skin. A face shield should be worn. Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.
Further information	: Do not allow run-off from fire fighting to enter drains or water courses.

6. Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures	: Use self-contained breathing apparatus and chemically protective clothing. Wear suitable protective clothing, gloves and eye/face protection. Evacuate personnel to safe areas.
Environmental precautions Methods for cleaning up	: Construct a dike to prevent spreading. Construct a dike to prevent spreading. : Approach suspected leak areas with caution. Contact Master Terrazzo Technologies for advice. Place in appropriate chemical waste container.

Additional advice : If possible, stop flow of product.

7. Handling and Storage

Handling

Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Suspected cancer causing nitrosamines could be formed. Avoid contact with skin and eyes. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations. Avoid breathing vapors and/or aerosols. Avoid contact with eyes. Use only in well-ventilated areas. Use personal protective equipment. When using, do not eat, drink or smoke.

Storage

Store in steel containers preferably located outdoors, above ground, and surrounded by dikes to contain spills or leaks. Do not store near acids. Keep containers tightly closed in a dry, cool and well-ventilated place.

Technical measures/Precautions

Do not store in reactive metal containers.

8. Exposure controls/ personal protection

Engineering measures

Provide readily accessible eye wash stations and safety showers.

Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits.

Personal protective equipment

Respiratory protection : Wear appropriate respirator when ventilation is inadequate.

Hand protection : Neoprene gloves.

Butyl-rubber

Nitrile rubber.

Impervious gloves.

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye protection : Full face shield with goggles underneath.

Chemical resistant goggles must be worn.

Skin and body protection : Impervious clothing.

Full rubber suit (rain gear).

Rubber or plastic boots.

Long sleeve shirts and trousers without cuffs.

Slicker Suit.

Environmental exposure controls : Construct a dike to prevent spreading.

Special instructions for protection and hygiene : Discard contaminated leather articles. Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Provide readily accessible eye wash stations and safety showers. Wash hands at the end of each workshift and before eating, smoking or using the toilet. Provide readily accessible eye wash stations and safety showers.

Exposure limit(s)

Triethylenetetramine	Time Weighted Average (TWA):WEEL	1 ppm	6 mg/m3
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9. Physical and Chemical Properties

Appearance : Liquid. Amber.

Odor : Fishy

Order threshold : No data available

pH : Alkaline

Melting point/ range : No data available

Boiling point/range : 531°F (277°C)

Flash point : >240°F (>115.56°C)

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Upper/ lower Explosion/ flammability limit : Not applicable

Vapor pressure : <0.01 mmHg at 70°F (21°C)

Water solubility : Negligible

Relative density : 0.96-0.97

Auto-ignition temperature : No data available

Decomposition Temperature : No data available

Viscosity : 50-100mPa.s at 77°F (25°C)

Density : 0.96-0.97 g/cm3 at 70°F (21°C)

10. Stability and Reactivity

Chemical Stability : Stable under normal conditions.

Conditions to avoid	: No data available.
Materials to avoid	: Sodium hypochlorite. Organic acids (i.e. acetic acid, citric acid etc.). Mineral acids. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. CAUTION! N-Nitrosamines, many of which are known to be potent carcinogens, may be formed when the product comes in contact with nitrous acid, nitrites or atmospheres with high nitrous oxide concentrations. Nitrous acid and other nitrosating agents. Oxidizing agents.
Hazardous decomposition Products	: Nitric acid Ammonia Nitrogen oxides (NOx). Nitrogen oxide can react with water vapors to form corrosive nitric acid. Carbon monoxide. Carbon dioxide (CO2). Nitrosamine.
Possibility of hazardous Reactions/Reactivity	: No data available

11. Toxicological Information

11.1 Information on toxicological effects

Likely routes of exposure

Effects on Eye	: Causes eye burns. May cause blindness. Severe eye irritation.
Effects on Skin	: Toxic in contact with skin. Causes skin burns.
Inhalation Effects	: Can cause severe eye, skin and respiratory tract burns. May cause nose, throat, and lung irritation. Inhalation of vapors and/or aerosols in high concentration may cause irritation of respiratory system.
Ingestion Effects	: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.
Symptoms	: Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat. Eye disease., Skin disorders and Allergies., Adverse skin effects (such as rash, irritation or corrosion)., Adverse eye effects (such as conjunctivitis or corneal damage)., Adverse respiratory effects (such as cough, tightness of chest or shortness of breath)., Asthma.

Acute toxicity

Acute Oral Toxicity : LD50 : 1,716 mg/kg Species : Rat.

Inhalation : No data is available on the product itself.

Acute Dermal Toxicity : LD50 : 1,465 mg/kg Species : Rabbit.

Skin corrosion/irritation : Severe skin irritation.

Serious eye damage/eye irritation : Severe eye irritation.

Sensitization. : May cause sensitization by skin contact. Sensitization has occurred in laboratory animals after repeated exposures.

Chronic toxicity or effects from long term exposures

Carcinogenicity : No data available.

Reproductive toxicity : No data is available on the product itself.

Germ cell mutagenicity : Results from a battery of short term genotoxicity tests on this material or its components indicate mutagenic activity.

Specific target organ systemic toxicity (single exposure): No data available.

Specific target organ systemic toxicity (repeated exposure): No data available.

Aspiration hazard : No data available.

Delayed and Immediate Effects and Chronic Effects from Short and Long Term Exposure

This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. Prolonged contact may result in chemical burns and permanent damage., Repeated or prolonged contact causes sensitization, asthma and eczemas. Eye disease., Skin disorders and Allergies., Adverse skin effects (such as rash, irritation or corrosion)., Adverse eye effects (such as conjunctivitis or corneal damage)., Adverse respiratory effects (such as cough, tightness of chest or shortness of breath)., Asthma.

12. Ecological Information

Ecotoxicity effects

Aquatic toxicity : No data is available on the product itself.

Toxicity to other organisms : No data available.

Persistence and degradability

Biodegradability : No data is available on the product itself.

Mobility : No data available.

Bioaccumulation : No data is available on the product itself.

13. Disposal Considerations

Waste from residues / unused: Contact supplier if guidance is required.
products

Contaminated packaging : Dispose of container and unused contents in accordance with federal, state, and local requirements.

14. Transport Information

DOT

UN/ID No. : UN2259
Proper shipping name : Triethylenetetramine
Class or Division : 8
Packing group : II
Label(s) : 8
Marine Pollutant : No

IATA

UN/ID No. : UN2259
Proper shipping name : Triethylenetetramine
Class or Division : 8
Packing group : II
Label(s) : 8
Marine Pollutant : No

IMDG

UN/ID No. : UN2259
Proper shipping name : TRIETHYLENETETRAMINE
Class or Division : 8
Packing group : II
Label(s) : 8
Marine Pollutant : No

TDG

UN/ID No. : UN2259
Proper shipping name : TRIETHYLENETETRAMINE
Class or Division : 8
Packing group : II
Label(s) : 8
Marine Pollutant : No

Further Information

The transportation information is not intended to convey all specific regulatory data relating to this material. For complete transportation information, contact a Master Terrazzo Technologies customer service representative.

15. Regulatory Information

Toxic Substance Control Act (TSCA) 12(b) Component(s):

None.

Country	Regulatory list	Notification
USA	TSCA	Included on Inventory.
EU	EINECS	Included on EINECS inventory or polymer substance, monomers included on EINECS inventory or no longer polymer.
Canada	DSL	Included on Inventory.
Australia	AICS	Included on Inventory.
Japan	ENCS	Included on Inventory.
South Korea	ECL	Included on Inventory.
China	SEPA	Included on Inventory.
Philippines	PICCS	Included on Inventory.

EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification

Acute Health Hazard Chronic Health Hazard

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level

None.

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other harm.

16. Other Information

HMIS Rating

Health : 3
 Flammability : 1
 Physical hazard : 0
 Prepared by : Master Terrazzo Technologies
 Telephone : 1-215-949-1474
 Chemtel-800-255-3924
 Preparation Date : 04/21/2015