

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : 10-3216CTR

1.2. Recommended use and restrictions on use

Recommended use : Adhesives
 Restrictions on use : Not to be used for any purpose other than the one the product was designed for

1.3. Supplier

Epoxies, Etc.
 21 Starline Way
 Cranston, RI 02921
 USA
 T 401-946-5564
www.epoxies.com

1.4. Emergency telephone number

Emergency number : VelocityEHS: +1 (800) 255-3924, +1 (813) 248-0585

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 2	H319	Causes serious eye irritation
Skin sensitization, Category 1	H317	May cause an allergic skin reaction
Hazardous to the aquatic environment – Chronic Hazard Category 3	H412	Harmful to aquatic life with long lasting effects

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Warning

Hazard statements (GHS US) :

H315 - Causes skin irritation
 H317 - May cause an allergic skin reaction
 H319 - Causes serious eye irritation
 H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (GHS US) :

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
 P264 - Wash hands, forearms and face thoroughly after handling.
 P272 - Contaminated work clothing must not be allowed out of the workplace.
 P273 - Avoid release to the environment.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P302+P352 - If on skin: Wash with plenty of water.
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

10-3216CTR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P321 - Specific treatment (see supplemental first aid instruction on this label).
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P363 - Wash contaminated clothing before reuse.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : Harmful dust may be released during cutting, milling or grinding process.

2.4. Unknown acute toxicity (GHS US)

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Amine*	CAS-No.: Trade Secret	≥ 60	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
Tetraethylenepentamine	CAS-No.: 112-57-2	≥ 1	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Corr. 1A, H314 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 2, H411
2,4,6-tris(dimethylaminomethyl)phenol	CAS-No.: 90-72-2	1 – 5	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319
Triethylenetetramine	CAS-No.: 112-24-3	< 1	Acute Tox. 4 (Dermal), H312 Skin Corr. 1B, H314 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Pentaethylenehexamine	CAS-No.: 4067-16-7	< 1	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Corr. 1A, H314 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Comments : Components not listed are either non-hazardous or are below reportable limits.

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Full text of hazard classes and H-statements : see section 16

10-3216CTR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation	: Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Eye irritation.
Symptoms/effects after ingestion	: None under normal conditions.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	: No fire hazard.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.
------------------	---

6.1.1. For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
----------------------	---

10-3216CTR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.
Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapors/spray.
Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.
Storage conditions : Keep cool. Protect from sunlight.
Packaging materials : Store always product in container of same material as original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Hand protection:

Wear suitable gloves resistant to chemical penetration. Neoprene or nitrile rubber gloves. Butyl-rubber protective gloves. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Refer to manufacturer's information. Gloves must be replaced after each use and whenever signs of wear or perforation appear

Eye protection:

Safety glasses

10-3216CTR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: According to product specification
Odor	: Amine-like
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10-3216CTR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

Triethylenetetramine (112-24-3)

LD50 oral rat	1716 mg/kg body weight (BASF test, Rat, Experimental value, Oral)
LD50 oral	2500 mg/kg
LD50 dermal rabbit	1465 mg/kg body weight (BASF test, Rabbit, Experimental value, Dermal)
LD50 dermal	550 mg/kg
ATE US (oral)	1716 mg/kg body weight
ATE US (dermal)	550 mg/kg body weight

Tetraethylenepentamine (112-57-2)

LD50 oral rat	3990 mg/kg
LD50 oral	2100 mg/kg
LD50 dermal rabbit	660 mg/kg
LD50 dermal	660 mg/kg
LC50 Inhalation - Rat	> 9.9 mg/l air (8 h, Rat, Male, Literature study, Inhalation)
ATE US (oral)	500 mg/kg body weight
ATE US (dermal)	660 mg/kg body weight

Pentaethylenehexamine (4067-16-7)

LD50 oral rat	1600 mg/kg Source: NLM;chemIDplus, TOMES;LOLI;
LD50 oral	1600 mg/kg
ATE US (oral)	1600 mg/kg body weight
ATE US (dermal)	1100 mg/kg body weight

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

LD50 oral rat	2169 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 oral	1000 mg/kg
LD50 dermal rat	1280 mg/kg

10-3216CTR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
LD50 dermal	1280 mg/kg
ATE US (oral)	1000 mg/kg body weight
ATE US (dermal)	1280 mg/kg body weight
Skin corrosion/irritation	: Causes skin irritation.
Triethylenetetramine (112-24-3)	
pH	10 (1 %, 20 °C)
Tetraethylenepentamine (112-57-2)	
pH	11.8 (2 %, 20 °C)
2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
pH	11 (10 %)
Serious eye damage/irritation	: Causes serious eye irritation.
Triethylenetetramine (112-24-3)	
pH	10 (1 %, 20 °C)
Tetraethylenepentamine (112-57-2)	
pH	11.8 (2 %, 20 °C)
2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
pH	11 (10 %)
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Triethylenetetramine (112-24-3)	
Viscosity, kinematic	No data available in the literature
Tetraethylenepentamine (112-57-2)	
Viscosity, kinematic	0.096 mm ² /s (20 °C)
2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
Viscosity, kinematic	No data available in the literature
Symptoms/effects after inhalation	: Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Eye irritation.
Symptoms/effects after ingestion	: None under normal conditions.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life with long lasting effects.

10-3216CTR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Triethylenetetramine (112-24-3)	
LC50 - Fish [1]	495 mg/l (96 h, Pimephales promelas, Fresh water, Literature study)
EC50 - Crustacea [1]	31.1 mg/l (Equivalent or similar to OECD 202, 48 h, Daphnia magna, Literature study)
ErC50 algae	27 mg/l
NOEC chronic algae	0.468 mg/l
Tetraethylenepentamine (112-57-2)	
LC50 - Fish [1]	420 mg/l (EU Method C.1, 96 h, Poecilia reticulata, Semi-static system, Fresh water, Experimental value, GLP)
EC50 - Crustacea [1]	24 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Experimental value, GLP)
ErC50 algae	6.8 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Selenastrum capricornutum, Experimental value)
Pentaethylenehexamine (4067-16-7)	
LC50 - Fish [1]	60000 mg/l Source: ECOSAR
EC50 - Crustacea [1]	8 mg/l
EC50 96h - Algae [1]	224.521 mg/l Source: ECOSAR
ErC50 algae	0.42 mg/l
NOEC chronic algae	0.072 mg/l
2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
LC50 - Fish [1]	175 mg/l (APHA, 96 h, Cyprinus carpio, Static system, Fresh water, Experimental value, Nominal concentration)
LC50 - Fish [2]	180 – 240 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 72h - Algae [1]	84 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 96h - Algae [1]	34.812 mg/l Source: ECOSAR
ErC50 algae	84 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, GLP)

12.2. Persistence and degradability

10-3216CTR	
Persistence and degradability	Not rapidly degradable
Triethylenetetramine (112-24-3)	
Persistence and degradability	Not readily biodegradable in water.
Tetraethylenepentamine (112-57-2)	
Persistence and degradability	Not readily biodegradable in water.
Pentaethylenehexamine (4067-16-7)	
Persistence and degradability	Not readily biodegradable in water.
2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
Persistence and degradability	Not readily biodegradable in water.

10-3216CTR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Amine	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

Triethylenetetramine (112-24-3)	
Partition coefficient n-octanol/water (Log Pow)	-2.65 (Estimated value, KOWWIN)
Bioaccumulative potential	Not bioaccumulative.

Tetraethylenepentamine (112-57-2)	
BCF - Other aquatic organisms [1]	3.2 l/kg (BCFBAF v3.01, Estimated value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	1.5 (Literature study)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Pentaethylenehexamine (4067-16-7)	
Partition coefficient n-octanol/water (Log Pow)	-1.6 (QSAR)
Bioaccumulative potential	Not bioaccumulative.

2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
Partition coefficient n-octanol/water (Log Pow)	-0.66 (Experimental value, EPA OPPTS 830.7550: Partition Coefficient (n-octanol/water), Shake Flask Method, 21.5 °C)
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

Triethylenetetramine (112-24-3)	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.885 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.

Tetraethylenepentamine (112-57-2)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.2 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Low potential for adsorption in soil.

Pentaethylenehexamine (4067-16-7)	
Mobility in soil	0.04756

2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.32 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.

12.5. Other adverse effects

No additional information available

10-3216CTR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated for transport			
14.2. Proper Shipping Name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

14.6. Special precautions for user

DOT
Not regulated

TDG
Not regulated

IMDG
Not regulated

IATA
Not regulated

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

10-3216CTR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

15.2. International regulations

CANADA

Triethylenetetramine (112-24-3)

Listed on the Canadian DSL (Domestic Substances List)

Tetraethylenepentamine (112-57-2)

Listed on the Canadian DSL (Domestic Substances List)

Pentaethylenehexamine (4067-16-7)

Listed on the Canadian DSL (Domestic Substances List)

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

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Triethylenetetramine (112-24-3)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Tetraethylenepentamine (112-57-2)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

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

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
Triethylenetetramine(112-24-3)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
Tetraethylenepentamine(112-57-2)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 10/28/2024

Full text of hazard classes and H-statements

H302	Harmful if swallowed
------	----------------------

10-3216CTR

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of hazard classes and H-statements	
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.