



Silver Fern Chemical, Inc.

SAFETY DATA SHEET

SILVER FERN
CHEMICAL INC

AMINOETHYLETHANOLAMINE (AEEA)

Revision Date: 11/18/2022
Date of first issue: 12/19/2012

SECTION 1. IDENTIFICATION

Product name : AMINOETHYLETHANOLAMINE (AEEA)

Recommended use of the chemical and restrictions on use

Recommended use : Chemical intermediate

Supplier's details

Distributed by Silver Fern Chemical, Inc
Address 2226 Queen Anne Avenue North
Seattle WA 98109, USA
Customer Service 1-866-282-3384; info@silverfernchemical.com

Emergency telephone **Infotrac 1-800-535-5053 (USA & Canada)**
Outside USA & Canada 1-352-323-350

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion Category 18
Serious eye damage Category 1
Skin sensitization Sub-category 1B
Reproductive toxicity Category 18
Effects on or via lactation
Short-term (acute) aquatic hazard Category 3

GHS label elements

Hazard pictograms



Signal Word Danger

Hazard Statements H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.



Silver Fern Chemical, Inc.

SAFETY DATA SHEET

SILVER FERN
CHEMICAL INC

AMINOETHYLETHANOLAMINE (AEEA)

Revision Date: 11/18/2022
Date of first issue: 12/19/2012

H360 May damage fertility or the unborn child.
H362 May cause harm to breast-fed children.
H402 Harmful to aquatic life.

Precautionary Statements

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing mist or vapors.
P263 Avoid contact during pregnancy/ while nursing.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
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.

Response:

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338 + P310 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/ doctor.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
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 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture

Substance



Silver Fern Chemical, Inc.

SAFETY DATA SHEET

SILVER FERN
CHEMICAL INC

AMINOETHYLETHANOLAMINE (AEEA)

Revision Date: 11/18/2022
Date of first issue: 12/19/2012

Substance name AMINOETHYLETHANOLAMINE (AEEA)
CAS-No. 111-41-1

Components

Chemical name	CAS-No.	Concentration % w/w
Aminoeth lethanolamine	111-41-1	>= 90 - <= 100

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice Immediate medical attention is required.
Move out of dangerous area.
Show this material safety data sheet to the doctor in attendance.

If inhaled If breathed in, move person into fresh air.
Consult a physician after significant exposure.

In case of skin contact Take off contaminated clothing and shoes immediately.
Rinse immediately with plenty of water.
Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
If skin irritation persists, call a physician.

In case of eye contact Rinse with plenty of water.
Get medical attention immediately. Continue to rinse during transport of patient.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
Small amounts splashed into eyes can cause irreversible tissue damage and blindness.

If swallowed Clean mouth with water and drink afterwards plenty of water.
Never give anything by mouth to an unconscious person.
Take victim immediately to hospital.
Do not induce vomiting! May cause chemical burns in mouth and throat.

Most important symptoms and effects, both acute and delayed The symptoms and effects are as expected from the hazards as shown in section 2. No specific product related symptoms are known.
May cause an allergic skin reaction.
Causes serious eye damage.
May damage fertility or the unborn child.



Silver Fern Chemical, Inc.

SAFETY DATA SHEET

SILVER FERN
CHEMICAL INC

AMINOETHYLETHANOLAMINE (AEEA)

Revision Date: 11/18/2022
Date of first issue: 12/19/2012

	May cause harm to breast-fed children. Causes severe burns.
Notes to physician	Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific hazards during fire fighting	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	Carbon oxides Nitrogen oxides (NOx)
Further information	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for fire-fighters	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENT AL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Use personal protective equipment. Wear respiratory protection. Ensure adequate ventilation. Evacuate personnel to safe areas. Only qualified personnel equipped with suitable protective equipment may intervene. Prevent unauthorized persons entering the zone.
Environmental precautions	Do not flush into surface water or sanitary sewer system. Discharge into the environment must be avoided.
Methods and materials for containment and cleaning up	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/ national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	Normal measures for preventive fire protection.
Advice on safe handling	Persons with a history of skin sensitization problems or



Silver Fern Chemical, Inc.

SAFETY DATA SHEET

SILVER FERN
CHEMICAL INC

AMINOETHYLETHANOLAMINE (AEEA)

Revision Date: 11/18/2022
Date of first issue: 12/19/2012

asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

For personal protection see section 8.
Avoid formation of aerosol.
Do not breathe vapors or spray mist.
Avoid contact with skin.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations .
Obtain special instructions before use.

Conditions for safe storage

Prevent unauthorized access.
Keep container tightly closed in a dry and well-ventilated place.
Reacts with copper, aluminum, zinc and their alloys

Further information on storage stability

No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures

Effective exhaust ventilation system
Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Respiratory protection

In the case of vapor or aerosol formation use a respirator with an approved filter.
Wear full face mask supplied with:
Gas cartridge K (ammonia, green).

Hand protection

Material	butyl-rubber
Break through time	> 30 min
Glove thickness	>= 0.2 mm
Directive	Protective gloves complying with EN 374.
Wearing time	< 30 min

Material	butyl-rubber
Break through time	> 240 min
Glove thickness	>= 0.6 mm
Directive	Protective gloves complying with EN 374.



Silver Fern Chemical, Inc.

SAFETY DATA SHEET

SILVER FERN
CHEMICAL INC

AMINOETHYLETHANOLAMINE (AEEA)

Revision Date: 11/18/2022
Date of first issue: 12/19/2012

Wearing time	< 240 min
Material	butyl-rubber
Break through time	> 480 min
Glove thickness	>= 0.8 mm
Directive	Protective gloves complying with EN 374.
Wearing time	< 480 min
Remarks	The data about break through time/strength of material are standard values! The exact break through time/strength of material has to be obtained from the producer of the protective glove.
Eye protection	Safety glasses with side-shields conforming to EN166
Skin and body protection	Protective suit
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday. Wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear liquid
Color	colorless
Odor	ammoniacal
Odor Threshold	No data available
pH	12 Concentration: 25 %
Melting point/freezing point	-36 °F / -38 °C (1,013 hPa)
Boiling point/boiling range	469 °F / 243 °C (1,013 hPa)
Flash point	270 °F / 132 °C (1,013 hPa)



Silver Fern Chemical, Inc.

SAFETY DATA SHEET

SILVER FERN
CHEMICAL INC

AMINOETHYLETHANOLAMINE (AEEA)

Revision Date: 11/18/2022
Date of first issue: 12/19/2012

Evaporation rate	No data available
Flammability (solid, gas)	Not applicable
Flammability (liquids)	Not classified as a flammability hazard
Upper explosion limit/ Upper flammability limit	No data available
Lower explosion limit/ Lower flammability limit	No data available
Vapor pressure	0.012 hPa (68 °F / 20 °C)
Relative vapor density	3.6
Relative density	1.026 (77 °F / 25 °C)
Density	1.024 g/cm ³ (77 °F / 25 °C)
Solubility(ies)	
Water solubility	soluble
Solubility in other solvents	Description: Soluble in ethanol.
Partition coefficient: n-octanol/water	log Pow: -1.46 (77 °F / 25 °C)
Autoignition temperature	> 302 °F / > 150 °C
Decomposition temperature	No data available
Viscosity	
Viscosity, dynamic	141 mPa.s (68 °F / 20 °C)
Viscosity, kinematic	No data available
Explosive properties	Not explosive
Oxidizing properties	: The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions.
Chemical stability	Stable under recommended storage conditions.



Silver Fern Chemical, Inc.

SAFETY DATA SHEET

SILVER FERN
CHEMICAL INC

AMINOETHYLETHANOLAMINE (AEEA)

Revision Date: 11/18/2022
Date of first issue: 12/19/2012

Possibility of hazardous reactions	Heating can release hazardous gases.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	Reacts with copper, aluminum, zinc and their alloys Strong acids and oxidizing agents Halogenated compounds
Hazardous decomposition products	Nitrogen oxides (NO _x)
Thermal decomposition	No data available

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Components:

Aminoethylethanolamine:

Acute oral toxicity LD50 (Rat): > 2,000 - 4,000 mg/kg

Acute dermal toxicity LD50 (Rabbit): > 2,000 mg/kg

Skin corrosion/irritation

Causes severe burns.

Components:

Aminoethylethanolamine:

Result : Causes burns.

Serious eye damage/eye irritation

Causes serious eye damage.

Components:

Aminoethylethanolamine:

Result : Risk of serious damage to eyes.

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.



Silver Fern Chemical, Inc.

SAFETY DATA SHEET

SILVER FERN
CHEMICAL INC

AMINOETHYLETHANOLAMINE (AEEA)

Revision Date: 11/18/2022
Date of first issue: 12/19/2012

Components:

Aminoethylethanolamine:

Result The product is a skin sensitizer, sub-category 1B.

Germ cell mutagenicity

Not classified based on available information.

Components:

Aminoethylethanolamine:

Genotoxicity in vitro Test Type: Ames test
Result: negative

Genotoxicity in vivo Test Type: Chromosome aberration test in vivo
Species: Mouse
Method: OECD Test Guideline 474
Result: No evidence of genotoxic effects in vivo.

Carcinogenicity

Not classified based on available information.

IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

May damage fertility or the unborn child.
May cause harm to breast-fed children.

Product:

Reproductive toxicity - Assessment Effects on or via lactation, Presumed human reproductive toxicant

Components:

Aminoethylethanolamine:

Reproductive toxicity - Assessment Effects on or via lactation, Presumed human reproductive toxicant

STOT-single exposure

Not classified based on available information.



Silver Fern Chemical, Inc.

SAFETY DATA SHEET

SILVER FERN
CHEMICAL INC

AMINOETHYLETHANOLAMINE (AEEA)

Revision Date: 11/18/2022
Date of first issue: 12/19/2012

STOT-repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks : No further data available.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Aminoethylethanolamine:

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates EC50 (Daphnia magna (Water flea)): > 10-100 mg/l
Exposure time: 48 h

Ecotoxicology Assessment

Acute aquatic toxicity Harmful to aquatic life.

Persistence and degradability

Product:

Biodegradability Result: Readily biodegradable.

Biochemical Oxygen Demand (BOD) Remarks: No data available

Components:

Aminoethylethanolamine:

Biodegradability Result: Readily biodegradable.
Method: OECD Test Guideline 301F

Biochemical Oxygen Demand (BOD) Remarks: No data available



Silver Fern Chemical, Inc.

SAFETY DATA SHEET

SILVER FERN
CHEMICAL INC

AMINOETHYLETHANOLAMINE (AEEA)

Revision Date: 11/18/2022
Date of first issue: 12/19/2012

Additional ecological information

Harmful to aquatic organisms.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues

The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Dispose of contents/container in accordance with local regulation.

Contaminated packaging

Empty remaining contents.
Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number

UN 2735

Proper shipping name

AMINES, LIQUID, CORROSIVE, N.O.S.
(Aminoethylethanolamine)

Class

8

Packing group

II

Labels

8

IATA-DGR

UN/ID No.

UN 2735

Proper shipping name

Amines, liquid, corrosive, n.o.s.
(Aminoethylethanolamine)

Class

8

Packing group

II

Labels

Corrosives

Packing instruction (cargo aircraft)

855

Packing instruction (passenger aircraft)

851

IMDG-Code

UN number

UN 2735

Proper shipping name

AMINES , LIQUID, CORROSIVE, N.O.S.
(Aminoethylethanolamine)

Class

8

Packing group

II

Labels

8



Silver Fern Chemical, Inc.

SAFETY DATA SHEET

SILVER FERN
CHEMICAL INC

AMINOETHYLETHANOLAMINE (AEEA)

Revision Date: 11/18/2022
Date of first issue: 12/19/2012

Ems Code : F-A, S-8
Marine pollutant : no

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

Not applicable for product as supplied.

Domestic regulation

49CFR

UN/ID/NA number	UN 2735
Proper shipping name	Amines, liquid, corrosive, n.o.s. (Aminoethylethanolamine)
Class	8
Packing group	II
Labels	CORROSIVE
ERG Code	153
Marine pollutant	no
Reportable Quantity	This product does not contain an environmentally hazardous substance per 49 CFR 172.101, Appendix A.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards

Respiratory or skin sensitization
Reproductive toxicity
Skin corrosion or irritation
Serious eye damage or eye irritation

SARA313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A+ B).



Silver Fern Chemical, Inc.

SAFETY DATA SHEET

SILVER FERN AMINOETHYLETHANOLAMINE (AEEA) CHEMICAL INC

Revision Date: 11/18/2022
Date of first issue: 12/19/2012

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals subject to disclosure and listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F). The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

Aminoethylethanolamine 111-41-1 >= 90 - <= 100 %

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Ethylenediamine 107-15-3 >= 0 - < 0.1 %

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Ethylenediamine 107-15-3 >= 0 - < 0.1 %

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

Maine Chemicals of High Concern

This product does not contain any chemicals that are listed as Maine Chemicals of High Concern.

California Prop. 65

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

The ingredients of this product are reported in the following inventories:

TCSI	On the inventory, or in compliance with the inventory
TSCA	All substances listed as active on the TSCA inventory
AIIC	On the inventory, or in compliance with the inventory
DSL	All components of this product are on the Canadian DSL
ENCS	On the inventory, or in compliance with the inventory
ISHL	On the inventory, or in compliance with the inventory
KECI	On the inventory, or in compliance with the inventory
PICCS	On the inventory, or in compliance with the inventory
IECSC	On the inventory, or in compliance with the inventory
NZIoC	Not in compliance with the inventory
TECI	On the inventory, or in compliance with the inventory



Silver Fern Chemical, Inc.

SAFETY DATA SHEET

SILVER FERN
CHEMICAL INC

AMINOETHYLETHANOLAMINE (AEEA)

Revision Date: 11/18/2022
Date of first issue: 12/19/2012

TSCA list

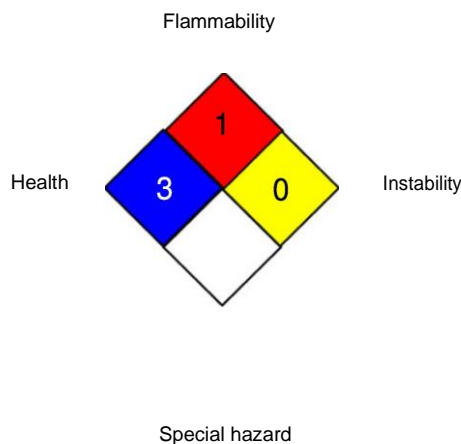
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



HMIS®IV:

HEALTH	*	4
FLAMMABILITY		1
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

AIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization;



Silver Fern Chemical, Inc.

SAFETY DATA SHEET

SILVER FERN AMINOETHYLETHANOLAMINE (AEEA) CHEMICAL INC

Revision Date: 11/18/2022
Date of first issue: 12/19/2012

KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration ; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PIGGS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RO - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA- Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 11/18/2022

This material safety datasheet only contains information relating to safety and does not replace any product information or product specification.

DISCLAIMER OF RESPONSIBILITY

The information on this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed, or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable.
< End of document >

Approved - TL 8-28-23