

# Safety Data Sheet

Issue Date: 01-Apr-2026

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Version 1

## 1. IDENTIFICATION

### Product identifier

**Product Name** Elma-KS

### Other means of identification

**SDS #** TOVA-002

### Recommended use of the chemical and restrictions on use

**Recommended use** For industrial use.

### Details of the supplier of the safety data sheet

#### **Supplier Address**

Tovatech LLC  
2512 Summit Avenue  
Suite 305  
Plano, TX 75074  
908-402-7256

### Emergency telephone number

**Emergency Telephone** INFOTRAC 1-352-323-3500 (International)  
1-800-535-5053 (North America)

## 2. HAZARDS IDENTIFICATION

**Appearance** Light yellow up to light brown liquid

**Physical state** Liquid

**Odor** Similar to amine

### Classification

Serious eye damage/eye irritation

Category 2

### Label elements



### Signal word

Warning

### Hazard statements

Causes serious eye irritation.

### Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling.  
Wear eye protection/ face protection.

### Precautionary Statements - Response

IF IN EYES: 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.

**Other Information**

No information available.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical name	CAS No.	Weight-%
Triethanolamine	102-71-6	10-30
2-(2-aminoethoxy)ethanol	929-06-6	10-30
Diethanolamine	111-42-2	< 0.1

\*\*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.\*\*

**4. FIRST AID MEASURES****Description of first aid measures**

<b>General Advice</b>	Remove contaminated soaked clothing immediately. In the event of persistent symptoms, receive medical treatment.
<b>Eye Contact</b>	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.
<b>Skin Contact</b>	In case of contact with skin, wash off with water. Consult a doctor if skin irritation persists.
<b>Inhalation</b>	Remove to fresh air.
<b>Ingestion</b>	Give activated charcoal. Do not induce vomiting. refer to medical treatment. If swallowed, seek medical advice immediately and show the doctor packing or label. If swallowed, give water to drink.

**Most important symptoms and effects, both acute and delayed**

<b>Symptoms</b>	Causes serious eye irritation.
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**Indication of any immediate medical attention and special treatment needed**

<b>Notes to Physician</b>	Treat symptomatically.
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**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**Water. Foam. Carbon dioxide (CO<sub>2</sub>).

**Unsuitable Extinguishing Media** Not determined.

**Specific Hazards Arising from the Chemical**

Not determined.

**Hazardous combustion products** Nitrogen oxides (NO<sub>x</sub>). Carbon monoxide.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

<b>Personal Precautions</b>	Use personal protective equipment as required. High risk of slipping due to leakage/spillage of product.
<b>For Emergency Responders</b>	Use personal protective equipment as required. High risk of slipping due to leakage/spillage of product.

### Environmental precautions

<b>Environmental precautions</b>	Do not discharge into the drains/surface waters/groundwater. See Section 12 for additional Ecological Information.
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### Methods and material for containment and cleaning up

<b>Methods for Containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for Clean-Up</b>	Take up with absorbent material (eg sand, kieselguhr, universal binder). Flush away residues with water. After taking up the material, dispose according to regulation.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

<b>Advice on Safe Handling</b>	Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing and eye/face protection.
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### Conditions for safe storage, including any incompatibilities

<b>Storage Conditions</b>	Keep containers tightly closed in a dry, cool and well-ventilated place.
<b>Incompatible Materials</b>	Acids. Oxidizing agents. Nitric acid. Inorganic acid chlorides.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Triethanolamine 102-71-6	TWA: 5 mg/m <sup>3</sup>	-	-
Diethanolamine 111-42-2	TWA: 1 mg/m <sup>3</sup> inhalable fraction and vapor pSk	(vacated) TWA: 3 ppm (vacated) TWA: 15 mg/m <sup>3</sup>	TWA: 3 ppm; TWA: 15 mg/m <sup>3</sup> ;

### Appropriate engineering controls

<b>Engineering Controls</b>	Showers. Eyewash stations. Ventilation systems.
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### Individual protection measures, such as personal protective equipment

<b>Eye/Face Protection</b>	Tight sealing safety goggles. Refer to 29 CFR 1910.133 for eye and face protection regulations.
<b>Skin and Body Protection</b>	Chemical resistant protective gloves. Refer to 29 CFR 1910.138 for appropriate skin and body protection.

**Respiratory Protection** Refer to 29 CFR 1910.134 for respiratory protection requirements.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid		
<b>Appearance</b>	Light yellow up to light brown liquid	<b>Odor</b>	Similar to amine
<b>Color</b>	Light yellow up to light brown	<b>Odor Threshold</b>	Not determined
<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>	
<b>pH</b>	9.0-9.5		
<b>Melting point / freezing point</b>	No data available		
<b>Initial boiling point and boiling range</b>	149 °C / 300.2 °F		
<b>Flash point</b>	100 °C / 212 °F		
<b>Evaporation rate</b>	Not determined		
<b>Flammability (Solid, Gas)</b>	Not determined		
<b>Flammability Limit in Air</b>			
<b>Upper flammability or explosive limits</b>	15.1 vol. %		
<b>Lower flammability or explosive limits</b>	2 vol. %		
<b>Vapor Pressure</b>	0.014 hPa	(at 20°C/68°F)	
<b>Relative vapor density</b>	3.62		
<b>Relative Density</b>	1.07 g/cm <sup>3</sup>		
<b>Water Solubility</b>	Miscible in water		
<b>Solubility in other solvents</b>	Not determined		
<b>Partition Coefficient</b>	-1.89		
<b>Autoignition temperature</b>	No data available		
<b>Decomposition temperature</b>	>100°C (212°F)		
<b>Kinematic viscosity</b>	132 mm <sup>2</sup> /s	@ 40°C (104°F)	
<b>Dynamic viscosity</b>	955 mPa s	(@20°C/68°F)	
<b>Particle characteristics</b>	No data available		
<b>Explosive Properties</b>	No		
<b>Oxidizing Properties</b>	No		

## 10. STABILITY AND REACTIVITY

### Reactivity

Evolution of heat under influence of acids.

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

Reactions with acids and oxidizing agents.

### Conditions to Avoid

Heat and direct sunlight.

### Incompatible materials

Acids. Oxidizing agents. Nitric acid. Inorganic acid chlorides.

### Hazardous decomposition products

None known based on information supplied.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

<b>Eye Contact</b>	Avoid contact with eyes.
<b>Skin Contact</b>	Avoid contact with skin.
<b>Inhalation</b>	Do not inhale.
<b>Ingestion</b>	Do not ingest.

### Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Triethanolamine 102-71-6	= 4190 mg/kg ( Rat )	> 20000 mg/kg ( Rabbit )	-
2-(2-aminoethoxy)ethanol 929-06-6	= 3400 mg/kg ( Rat )	= 1260 mg/kg ( Rabbit )	> 8.7 mg/m <sup>3</sup> ( Rat ) 8 h
Diethanolamine 111-42-2	= 780 mg/kg ( Rat )	= 11.9 mL/kg ( Rabbit )	> 3.35 mg/L ( Rat ) 4 h

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Symptoms</b>	Please see section 4 of this SDS for symptoms.
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### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation.
<b>Carcinogenicity</b>	Contains trace amounts of Diethanolamine. Group 3 IARC components are "not classifiable as human carcinogens".

Chemical name	ACGIH	IARC	NTP	OSHA
Triethanolamine 102-71-6		Group 3 - Unclassifiable as to carcinogenicity in humans		
Diethanolamine 111-42-2	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans	Group 2B - Possibly carcinogenic to humans		Present

### Numerical measures of toxicity

The following ATE values have been calculated for the mixture

<b>ATEmix (oral)</b>	7,667.40 mg/kg
<b>ATEmix (dermal)</b>	5,756.05 mg/kg

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**Component Information**

Chemical name	Algae/aquatic plants	Fish	Crustacea
Triethanolamine 102-71-6	EC50: =216mg/L (72h, Desmodemus subspicatus) EC50: =169mg/L (96h, Desmodemus subspicatus)	LC50: 10600 - 13000mg/L (96h, Pimephales promelas) LC50: >1000mg/L (96h, Pimephales promelas) LC50: 450 - 1000mg/L (96h, Lepomis macrochirus)	
2-(2-aminoethoxy)ethanol 929-06-6	EC50: =160mg/L (72h, Desmodemus subspicatus)		EC50: =190mg/L (48h, Daphnia magna)
Diethanolamine 111-42-2	EC50: =7.8mg/L (72h, Desmodemus subspicatus) EC50: 2.1 - 2.3mg/L (96h, Pseudokirchneriella subcapitata)	LC50: 4460 - 4980mg/L (96h, Pimephales promelas) LC50: 1200 - 1580mg/L (96h, Pimephales promelas) LC50: 600 - 1000mg/L (96h, Lepomis macrochirus)	EC50: =55mg/L (48h, Daphnia magna)

**Persistence/Degradability**

Not determined.

**Bioaccumulation**

There is no data for this product.

**Mobility**

Chemical name	Partition coefficient
Triethanolamine 102-71-6	-2.53
2-(2-aminoethoxy)ethanol 929-06-6	-1.2
Diethanolamine 111-42-2	-2.46

**Other adverse effects**

Not determined

**13. DISPOSAL CONSIDERATIONS****Disposal methods****Disposal of Wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**14. TRANSPORT INFORMATION****Note**

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**DOT**

Not regulated

**IATA**

Not regulated

**IMDG**

Not regulated

## 15. REGULATORY INFORMATION

### International Inventories

Chemical name	TSCA	TSCA Inventory Status	DSL/NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Triethanolamine	X	ACTIVE	X	X	X	X	X	X	X
2-(2-aminoethoxy)ethanol	X	ACTIVE	X	X	X	X	X	X	X
Diethanolamine	X	ACTIVE	X	X	X	X	X	X	X

#### Legend:

*TSCA* - United States Toxic Substances Control Act Section 8(b) Inventory

*DSL/NDSL* - Canadian Domestic Substances List/Non-Domestic Substances List

*EINECS/ELINCS* - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

*ENCS* - Japan Existing and New Chemical Substances

*IECSC* - China Inventory of Existing Chemical Substances

*KECL* - Korean Existing Chemicals Inventory

*PICCS* - Philippines Inventory of Chemicals and Chemical Substances

*AICS* - Australian Inventory of Chemical Substances

### US Federal Regulations

#### CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	Reportable Quantity (RQ)
Diethanolamine 111-42-2	100 lb / 5.4 kg (final RQ)		RQ 100 lb final RQ RQ 45.4 kg final RQ

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

#### CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

### US State Regulations

#### California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical name	California Proposition 65
Diethanolamine - 111-42-2	Carcinogen

#### U.S. State Right-to-Know Regulations

This product contains the following State Right-to-Know chemicals:

Chemical name	New Jersey	Massachusetts	Pennsylvania
Triethanolamine 102-71-6	X	X	X
2-(2-aminoethoxy)ethanol 929-06-6	X	X	
Diethanolamine 111-42-2	X	X	X

**16. OTHER INFORMATION****NFPA**  
**HMIS**Health hazards -  
Health hazards -Flammability -  
Flammability -Instability -  
Physical hazards -Special hazards -  
Personal protection -

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Revision Note: New format

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**