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Version 1

## 1. PRODUCT AND COMPANY IDENTIFICATION

### Product Identifier

**Product Name** Trion TB15 USABlueBook Professional Struvite Remover

### Other means of identification

**SDS #** TRION TB15

**UN/ID No** UN2491

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

**Recommended Use** Non-ammoniated polymer solvent.  
**Uses Advised Against** For industrial and institutional use only.

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

#### **Supplier Address**

Trion Chemicals  
 P.O. Box 410  
 St. Charles, IL 60174  
[www.trionchemicals.com](http://www.trionchemicals.com)

### Emergency Telephone Number

**Company Phone Number** 855-513-1314 (to reorder)  
**Emergency Telephone (24 hr)** INFOTRAC 1-800-535-5053 (North America)  
 1-352-323-3500 (International)

## 2. HAZARDS IDENTIFICATION

**Appearance** Hazy, colorless liquid

**Physical state** Liquid

**Odor** Slight amine

### Classification

Skin corrosion/irritation	Category 1 Sub-category C
Serious eye damage/eye irritation	Category 1

### Signal Word

**Danger**

### Hazard statements

Causes severe skin burns and eye damage.



### Precautionary Statements - Response

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. If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician. If swallowed: Rinse mouth. Do not induce vomiting.

#### **Precautionary Statements - Storage**

Store locked up.

#### **Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant.

#### **Other hazards**

Harmful to aquatic life with long lasting effects.

### **3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS No	Weight-%
Monoethanolamine	141-43-5	7-13
Proprietary	Proprietary	<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**

#### **First Aid Measures**

<b>General Advice</b>	Immediately call a poison center or doctor/physician.
<b>Eye Contact</b>	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.
<b>Skin Contact</b>	Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.
<b>Ingestion</b>	Rinse mouth. Do not induce vomiting.

#### **Most important symptoms and effects**

<b>Symptoms</b>	Causes severe skin burns and eye damage.
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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 spray (fog). Foam. Carbon dioxide (CO2). Dry chemical.

**Unsuitable Extinguishing Media** Not determined.

#### **Specific Hazards Arising from the Chemical**

None known.

**Hazardous Combustion Products** When ignited, as in a fire, this product may produce carbon dioxide, carbon monoxide and nitrogen oxides.

**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. Use water spray or mist to cool fire exposed containers.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal Precautions** Use personal protective equipment as required.

**Methods and material for containment and cleaning up**

**Methods for Containment** Prevent further leakage or spillage if safe to do so.

**Methods for Clean-Up** Small spills: Flush away spills of up to one gallon to nearest sewer. Large spills: For larger quantities, provide adequate ventilation. Dike spill and collect on suitable absorbent. Place in corrosion resistant container for disposal.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on Safe Handling** Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing and eye/face protection.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Store locked up. Store tightly sealed in a cool, dry, well-ventilated area away from incompatible materials.

**Incompatible Materials** Do not mix this product with other cleaning chemicals, especially strong acids and oxidizing agents such as bleach.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Monoethanolamine 141-43-5	STEL: 6 ppm TWA: 3 ppm	TWA: 3 ppm TWA: 6 mg/m <sup>3</sup> (vacated) TWA: 3 ppm (vacated) TWA: 8 mg/m <sup>3</sup> (vacated) STEL: 6 ppm (vacated) STEL: 15 mg/m <sup>3</sup>	IDLH: 30 ppm TWA: 3 ppm TWA: 8 mg/m <sup>3</sup> STEL: 6 ppm STEL: 15 mg/m <sup>3</sup>
Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Proprietary	TWA: 1 ppm	TWA: 1 ppm TWA: 1.4 mg/m <sup>3</sup> (vacated) TWA: 1 ppm (vacated) TWA: 1.4 mg/m <sup>3</sup>	IDLH: 75 ppm TWA: 1 ppm TWA: 1.4 mg/m <sup>3</sup>

**Appropriate engineering controls**

**Engineering Controls** Apply technical measures to comply with the occupational exposure limits.

**Individual protection measures, such as personal protective equipment**

**Eye/Face Protection** Safety goggles are recommended.

<b>Skin and Body Protection</b>	Chemical resistant gloves are recommended.
<b>Respiratory Protection</b>	None required if good ventilation is maintained. If TLV is exceeded, use a NIOSH/MSHA approved self-contained breathing apparatus.
<b>General Hygiene Considerations</b>	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>Odor</b>	Slight amine
<b>Appearance</b>	Hazy, colorless liquid	<b>Odor Threshold</b>	Not determined
<b>Color</b>	Colorless		
<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>	
<b>pH</b>	11-12.5		
<b>Melting Point/Freezing Point</b>	Not determined		
<b>Boiling Point/Boiling Range</b>	100 °C / 212 °F		
<b>Flash Point</b>	95.5°C / 204°F		
<b>Evaporation Rate</b>	~1	(Water = 1)	
<b>Flammability (Solid, Gas)</b>	Liquid-Not applicable		
<b>Flammability Limits in Air</b>			
<b>Upper Flammability Limits</b>	17%		
<b>Lower Flammability Limit</b>	5.5%		
<b>Vapor Pressure</b>	Not determined		
<b>Vapor Density</b>	Not determined		
<b>Relative Density</b>	0.988	(Water = 1)	
<b>Water Solubility</b>	Completely soluble		
<b>Solubility in other solvents</b>	Not determined		
<b>Partition Coefficient</b>	Not determined		
<b>Auto-ignition Temperature</b>	Not determined		
<b>Decomposition Temperature</b>	Not determined		
<b>Kinematic Viscosity</b>	Not determined		
<b>Dynamic Viscosity</b>	Not determined		
<b>Explosive Properties</b>	Not determined		
<b>Oxidizing Properties</b>	Not determined		
<b>VOC Content</b>	10.3%		

## 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions.

### Chemical Stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

Under normal conditions of storage and use, hazardous polymerization will not occur.

### Conditions to Avoid

Incompatible Materials.

### Incompatible Materials

Do not mix this product with other cleaning chemicals, especially strong acids and oxidizing agents such as bleach.

### Hazardous Decomposition Products

When strongly heated, as in a fire, this product may produce carbon dioxide, carbon monoxide and oxides of nitrogen. Incomplete combustion may yield aldehydes and ketones.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

<b>Eye Contact</b>	Causes severe eye damage.
<b>Skin Contact</b>	Causes severe skin burns.
<b>Inhalation</b>	Do not inhale.
<b>Ingestion</b>	Do not ingest.

### Component Information

Chemical Name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Monoethanolamine 141-43-5	= 1720 mg/kg ( Rat )	= 1 mL/kg ( Rabbit ) = 1000 mg/kg ( Rabbit )	-
Proprietary	= 1518 mg/kg ( Rat )	= 2000 mg/kg ( Rabbit ) = 4060 mg/kg ( Rat )	= 2 g/m <sup>3</sup> ( Rat ) 4 h
Proprietary	= 1310 mg/kg ( Rat ) = 2590 mg/kg ( Rat )	= 1780 µL/kg ( Rabbit ) = 2 mL/kg ( Rabbit )	-
Proprietary	= 20 g/kg ( Rat )	= 20800 mg/kg ( Rabbit )	-

### Information on physical, chemical and toxicological effects

**Symptoms** Please see section 4 of this SDS for symptoms.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Carcinogenicity** Group 3 IARC components are "not classifiable as human carcinogens".

Chemical Name	ACGIH	IARC	NTP	OSHA
Proprietary	A3	Group 3		

#### Legend

*ACGIH (American Conference of Governmental Industrial Hygienists)*

*A3 - Animal Carcinogen*

*IARC (International Agency for Research on Cancer)*

*Group 3 IARC components are "not classifiable as human carcinogens"*

### Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document.

<b>ATEmix (oral)</b>	14,271.00 mg/kg
<b>ATEmix (dermal)</b>	9,127.00 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	7.32 mg/L

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Not determined.

### Persistence/Degradability

Not determined.

### Bioaccumulation

Not determined.

**Mobility**

Not determined.

**Other Adverse Effects**

Not determined.

**13. DISPOSAL CONSIDERATIONS****Waste Treatment Methods**

<b>Disposal of Wastes</b>	Disposal should be in accordance with applicable regional, national and local laws and regulations.
<b>Contaminated Packaging</b>	Disposal should be in accordance with applicable regional, national and local laws and regulations.

**California Hazardous Waste Status**

Chemical Name	California Hazardous Waste Status
Proprietary	Toxic Corrosive Ignitable Reactive

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

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

**DOT**

<b>UN/ID No</b>	UN2491
<b>Proper Shipping Name</b>	Ethanolamine solution
<b>Hazard Class</b>	8
<b>Packing Group</b>	III

**IATA**

<b>UN/ID No</b>	UN2491
<b>Proper Shipping Name</b>	Ethanolamine solution
<b>Hazard Class</b>	8
<b>Packing Group</b>	III

**IMDG**

<b>UN/ID No</b>	UN2491
<b>Proper Shipping Name</b>	Ethanolamine solution
<b>Hazard Class</b>	8
<b>Packing Group</b>	III
<b>Marine Pollutant</b>	This material may meet the definition of a marine pollutant

**15. REGULATORY INFORMATION****International Inventories**

Chemical Name	TSCA	DSL/NDSL	EINECS/E LINCS	ENCS	IECSC	KECL	PICCS	AICS
Monoethanolamine	X	X	X	Present	X	Present	X	X
Proprietary	X	X	X	Present	X	Present	X	X
Proprietary	X	X	X	Present	X		X	X
Proprietary	X	X	X	Present	X		X	X

Proprietary	X	X	X	Present	X	Present	X	X
Proprietary	X	X	X	Present	X	Present	X	X
Proprietary	X	X	X	Present	X	Present	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 and Evaluated Chemical Substances
- PICCS* - Philippines Inventory of Chemicals and Chemical Substances
- AICS* - Australian Inventory of Chemical Substances

**US Federal Regulations**

**CERCLA**

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Proprietary		1000 lb	

**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 does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

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

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Monoethanolamine 141-43-5	X	X	X
Proprietary	X	X	X
Chemical Name	New Jersey	Massachusetts	Pennsylvania
Proprietary	X		X

**16. OTHER INFORMATION**

<b><u>NFPA</u></b>	<b>Health Hazards</b> Not determined	<b>Flammability</b> Not determined	<b>Instability</b> Not determined	<b>Special Hazards</b> Not determined
<b><u>HMIS</u></b>	<b>Health Hazards</b> 3	<b>Flammability</b> 1	<b>Physical hazards</b> 0	<b>Personal Protection</b> N+P

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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**