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DOCUMENT #: F/RPI/QC 7.7.3-02-00	PRODUCT NAME: Mono Ethanolamine		RPI ITEM NO: E16800

### **SECTION 1 - CHEMICAL IDENTIFICATION**

PRODUCT NAME: Mono Ethanolamine  
RPI CATALOG #: E16800  
SUPPLIER'S NAME: Research Products International Corp.  
SUPPLIERS ADDRESS: 410 N Business Center Drive Mount Prospect, IL 60056  
EMERGENCY CONTACT: 1-800-424-9300  
OTHER INFORMATION: 847-635-7330

### **SECTION 2 - HAZARDS IDENTIFICATION**

#### **2.1 Classification of the substance or mixture**

##### **GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

H227	Flammable liquids	Category 4
H302	Acute toxicity, Oral	Category 4
H312	Acute toxicity, dermal	Category 4
H314	Skin corrosion/irritation	Category 1
H318	Serious eye damage	Category 1
H332	Acute toxicity, inhalation	Category 4
H402	Acute aquatic toxicity	Category 3
H412	Chronic aquatic toxicity	Category 3

#### **2.2 GHS Label elements, including Hazard and Precautionary Statement(s)**

##### **Pictogram**



**Signal word: Danger**

##### **Hazard statement(s)**

H227	Combustible liquid
H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage
H332	Harmful if inhaled
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects.

##### **Prevention, Response, Storage and Disposal Precautionary Statement(s)**

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P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P260	Do not breathe dust or mist.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash skin thoroughly after handling
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
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.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
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 CENTER or doctor/ physician.
P321	Specific treatment (see supplemental first aid instructions on this label).
P330	Rinse mouth.
P362 + P364	Take off contaminated clothing and wash before reuse.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

### **SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS**

CAS Number: 141-43-5  
EINECS Number: 205-483-3  
Molecular Weight: 61.08 g/mol  
Formula: C<sub>2</sub>H<sub>7</sub>NO

### **SECTION 4 - FIRST-AID MEASURES**

#### **4.1 Description of first aid measures**

**General advice:** Consult a doctor and show this safety data sheet.

- i. **If inhaled:** Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.

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- ii. **In case of skin contact:** Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.
- iii. **In case of eye contact:** Flush with copious amounts of water for at least 15 minutes. Consult a doctor.
- iv. **If swallowed:** Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

**4.2 Most important symptoms and effects, both acute and delayed:** To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

**4.3 Indication of immediate medical attention and special treatment needed:** Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

#### **SECTION 5 - FIRE FIGHTING MEASURES**

##### **5.1 Extinguishing media**

**Suitable extinguishing media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

**5.2 Special hazards arising from the substance or mixture:** Carbon oxides, Nitrogen oxides (NO<sub>x</sub>).

**5.3 Precautions for fire-fighters:** Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

**5.4 Further information:** no data available

#### **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures:** Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

**6.2 Environmental precautions:** Do not let product enter drains.

**6.3 Methods and materials for containment and cleaning up:** Cover spillage with suitable absorbent material. Using non-spark tools, sweep up material and place in an appropriate container. Decontaminate spill site with 10% caustic solution and ventilate area until after disposal is complete. Hold all material for appropriate disposal as described under section 13 of SDS.

**6.4 Reference to other sections:** For required PPE see section 8. For disposal see section 13.

#### **SECTION 7 - HANDLING AND STORAGE**

##### **7.1 Precautions for safe handling:**

Use in a chemical fume hood, with air supplied by an independent system. Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

##### **7.2 Conditions for safe storage, including any incompatibilities:**

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. hygroscopic Handle and store under inert gas.

**7.3 Specific end use(s):** Use in a laboratory fume hood where possible. Refer to employer's COSHH risk assessment.

#### **SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION**

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### 8.1 Control parameters

#### Components with workplace control parameters

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethanolamine	TWA: 3 ppm STEL: 6 ppm	(Vacated) TWA: 3 ppm (Vacated) TWA: 8 mg/m <sup>3</sup> (Vacated) STEL: 6 ppm (Vacated) STEL: 15 mg/m <sup>3</sup> TWA: 3 ppm TWA: 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>
Component	Quebec	Mexico OEL (TWA)	Ontario TWAELV
Ethanolamine	TWA: 3 ppm TWA: 7.5 mg/m <sup>3</sup> STEL: 6 ppm STEL: 15 mg/m <sup>3</sup>	TWA: 3 ppm TWA: 8 mg/m <sup>3</sup> STEL: 6 ppm STEL: 15 mg/m <sup>3</sup>	TWA: 3 ppm STEL: 6 ppm

- ❖ ACGIH - American Conference of Governmental Industrial Hygienists
- ❖ OSHA - Occupational Safety and Health Administration
- ❖ NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health.

### 8.1 Control parameters

- i. **Appropriate engineering controls:** Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

### 8.2 Exposure Controls

- ii. **Appropriate engineering controls:** Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

### 8.3 Personal protective equipment

- i. **Eye/face protection:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- ii. **Skin protection:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166
- iii. **Body Protection:** Wear appropriate protective clothing. Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- iv. **Respiratory Protection:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
- v. **Control of environmental exposure:** Do not let product enter drains

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## **SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

### Information on basic physical and chemical properties

<b>Appearance</b>	Colorless clear liquid	<b>Vapor Pressure</b> (at 20 °C)	0.3 hPa (0.2 mmHg)
<b>Odor</b>	Fishy	<b>Vapor Density</b>	2.11 - (Air = 1.0)
<b>Odor Threshold</b>	No Data Available	<b>Relative Density at 25 °C</b>	1.012 g/mL
<b>pH</b>	No Data Available	<b>Water Solubility</b>	No Data Available
<b>Melting Point</b>	10.3 °C	<b>Partition Coefficient</b>	No Data Available
<b>Initial Boiling Point Range</b>	170 °C	<b>Auto-Ignition Temperature</b>	No Data Available
<b>Flash Point</b>	86 °C	<b>Decomposition Temperature</b>	No Data Available
<b>Evaporation Rate</b>	No Data Available	<b>Viscosity</b>	No Data Available
<b>Flammability (Solid, Gas)</b>	No Data Available	<b>Explosive Properties</b>	No Data Available
<b>Upper / Lower Flammability Or Explosive Limits</b>	No Data Available	<b>Oxidizing Properties</b>	No Data Available

## **SECTION 10 - STABILITY AND REACTIVITY**

**Stability:** Stable under recommended transport or storage conditions.

**Conditions to Avoid:** moisture air or water

**Incompatible Materials:** Strong acids and oxidizing agents, Iron, Copper, Brass, Rubber

## **SECTION 11 - TOXICOLOGICAL INFORMATION**

### Acute Toxicity

LD50 Oral	LD50 Dermal	LD50 Inhalation
1,720 mg/kg (Rat)	1,015 mg/kg (Rabbit)	10,000 mg/m3 (Rat)

## **SECTION 12 - ECOLOGICAL INFORMATION**

**Ecotoxicity:** Do not empty into drains. Contains a substance which is: Harmful to aquatic organisms. The product contains following substances which are hazardous for the environment.

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Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Ethanolamine	EC50: 15 mg/L/72h	Leusiscus idus: LC50: >200 mg/L/48h  Salmo gairdneri: LC50: 150 mg/L/96h	Pseudomonas putida: EC50: 110 mg/L/17 h  Nitrosomonas: EC50: 12200 mg/L/2 h  Photobacterium  Phosphoreum: EC50: 13.7mg/L/30 min	EC50: 65 mg/L/48h

**Persistence and degradability:** No data available

**Bioaccumulative potential:** No data available

**Results of PBT and vPvB assessment:** No data available

**Other adverse effects:** May be harmful to the aquatic environment.

**Chronic Toxicity:** There are no known carcinogenic chemicals in this product

#### Mobility in Soil

Component	log Pow
Ethanolamine	-1.91

#### **SECTION 13 - DISPOSAL CONSIDERATIONS**

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Dispose of container and unused contents in accordance with federal, state and local requirements.

#### **SECTION 14 - TRANSPORT INFORMATION**

	UN#	Proper Shipping Name	Hazard Class	Packaging Group
<b>DOT</b>	2491	ETHANOLAMINE	8	III
<b>TDG</b>	2491	ETHANOLAMINE	8	III
<b>IATA</b>	2491	ETHANOLAMINE	8	III
<b>IMDG/IMO</b>	2491	ETHANOLAMINE	8	III

#### **SECTION 15 - REGULATORY INFORMATION**

##### INTERNATIONAL INVENTORIES

TSCA	DSL	NDSL	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Listed	Listed	-	-		Listed	Listed	Listed	Listed	Listed

##### USA FEDERAL REGULATION

##### SARA 311/312 HAZARDOUS CATEGORIZATION

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release Of Pressure Hazard	Reactive Hazard
Yes	Yes	Yes	No	No

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**SARA 313:** Not Applicable.

**Clean Water Act/ Clean Air Act:** Not Applicable.

**TSCA 12(b):** Not Applicable

**OSHA:** Not Applicable

**California Proposition 65:** This product does not contain any Proposition 65 chemicals.

**HMIS Rating**

<b>Health hazard</b>	<b>Chronic Health Hazard</b>	<b>Flammability</b>	<b>Physical Hazard</b>
<b>3</b>	<b>*</b>	<b>2</b>	<b>0</b>

**NFPA Rating**

<b>Health Hazard</b>	<b>Fire Hazard</b>	<b>Reactivity Hazard</b>
<b>3</b>	<b>2</b>	<b>0</b>

**STATE RIGHT TO KNOW**

<b>Massachusetts</b>	<b>New Jersey</b>	<b>Pennsylvania</b>	<b>Illinois</b>	<b>Rhode Island</b>
Listed	Listed	Listed	Listed	Listed

**US DEPARTMENT OF TRANSPORTATION**

<b>REPORTABLE QUANTITY (RQ)</b>	<b>DOT MARINE POLLUTANT</b>	<b>DOT SEVER MARINE POLLUTANT</b>
<b>No</b>	<b>No</b>	<b>No</b>

**U.S. DEPARTMENT OF HOMELAND SECURITY:** This product does not contain any DHS chemicals.

**Canada:** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

**This SDS complies with the requirements of Regulation (EC).**

**SECTION 16 - OTHER INFORMATION**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Research Products International Corp. shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. This product is sold for laboratory research and development purposes use only.