

### SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name** : **PUMA<sup>®</sup> 2030**  
**Common Chemical Name** : 1,3,5-tris (3-(dimethylamino)propyl) hexahydro-1,3,5-triazine  
**Supplier** : ExpoMix Corporation  
 1099 Brown Street, Unit 203  
 Wauconda, IL 60084  
 USA  
 Ph: (847) 487-0730  
 Fx: (847) 487-0217  
**Emergency Telephone** : 800-424-9300 - CHEMTREC

### SECTION 2 - INGREDIENTS

Chemical Name	CAS	EINECS	Amount
s-triazine	15875-13-5	240-004-1	98%
<b>Chemical Family</b>	: Tertiary Amine		
<b>Empirical Formula</b>	: C18 H42 N6		
<b>Intended Use</b>	: Catalyst		

*Occupational Exposure Limit(s), if available, are listed in section 8.*

### SECTION 3 - HEALTH HAZARDS

<b>HMIS HEALTH</b>	<b>3</b>	<b>FLAMMABILITY</b>	<b>1</b>	<b>REACTIVITY</b>	<b>0</b>
--------------------	----------	---------------------	----------	-------------------	----------

**Hazards** : Harmful if in contact with skin. Corrosive to eyes. Corrosive to skin. Severe eye irritant. Severe skin irritant.  
**Routes of Exposure** : Eye and Skin contact. Ingestion. Skin absorption.  
**Exposure Standards** : Not established by OSHA (ACGIH). Maintain air contaminant concentrations in the workplace at the lowest possible levels. Minor components will migrate into the container headspace. Levels in excess can accumulate in non-vented container headspaces. Open drums in a well ventilated space.

**SECTION 3 - HEALTH HAZARDS (CONT.)**

---

**Human Health Hazards**

: Corrosive to the eyes and skin. Severe eye and skin irritant.  
Burns of the eye may cause blindness. Contact with undiluted product with the eyes and skin quickly causes severe irritation and pain and may cause burns, necrosis and permanent injury. Inhalation of aerosols and mists may severely damage contacted tissue and produce scarring. Product is absorbed through the skin and may cause nausea, headache and general discomfort.

Repeated and/or prolonged exposures may result in: adverse eye effects (such as conjunctivitis or corneal damage), adverse skin effects (such as rash, irritation or corrosion).

**Medical Conditions  
Generally Aggravated by  
Exposure  
Carcinogens Under OSHA  
ACGIH, NTP, IARC, Other**

: Asthma, chronic respiratory disease (e.g. Bronchitis, Emphysema), eye disease, skin disorders and allergy

: This product contains no carcinogens in concentrations of 0.1 percent or greater.

**SECTION 4 - FIRST AID**

---

**Effects and Symptoms****Ingestion**

: In the event of ingestion, administer 3-4 glasses of milk or water. Do NOT induce vomiting. Do NOT apply mouth-to-mouth respiration. Seek medical advice.

**Inhalation**

: Move patient to fresh air. If breathing has stopped or is labored give assisted respiration. Supplemental oxygen may be indicated. Seek medical advice. Prevent aspiration of vomit. Turn victim's head to the side.

**Skin Contact**

: Remove contaminated clothing and shoes. Remove product and immediately flush affected area with water for at least 15 minutes. Destroy contaminated leather apparel. Cover the affected area with a sterile dressing or clean sheeting and transport victim for medical care. Do not apply greases and ointments. Control shock, if present. Launder contaminated clothing prior to use.

**Eye Contact**

: Hold eye lids apart and immediately flush eyes with plenty of water for at least 15 minutes. Seek medical advice.

**SECTION 5 - FIRE AND EXPLOSION DATA**

---

- Extinguishing Media** : Ignition will give rise a Class B fire. In case of large fire use: alcohol foam, water spray.  
In case of small fire use: carbon dioxide, dry chemical, dry sand or limestone.
- Protection of Fire-Fighters** : Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.  
May generate toxic or irritating combustion products. Vapor may form explosive mixtures with air. Contact of liquid with skin must be prevented. May spread on the surface of water. Sudden reaction and fire may result if product is mixed with an oxidizing agent. May generate carbon monoxide gas, nitrogen oxide gases and ammonia gas.  
Retain expended liquids from fire fighting for later disposal.
- Fire Hazard Classification (OSHA/NFPA)** : Class IIIA

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

---

- Containment Techniques** : Stop the leak, if possible. Reduce vapor spreading with water spray. Shut off and remove all ignition sources. Construct a dike to prevent spreading. Protect workers with water spray.
- Personal Precautions** : Evacuate all personnel downwind from the spill. Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves. Evacuate the area.
- Environmental Precautions** : Do NOT release product to drain. Observe all Federal, State and local environmental regulations for appropriate product disposal.

---

**SECTION 6 - ACCIDENTAL RELEASE MEASURES (CONT.)**

---

**Methods for Cleaning up**

: If recovery is not feasible, absorb product with dry soil, sand or vermiculite and place it in an appropriate waste chemical container for disposal. Flush area with water spray. Transfer to containers by suction. Place in metal containers for recovery and disposal. Ventilate area and wash spill site after material pickup is complete. Clean-up personnel must be equipped with self contained breathing apparatus and butyl rubber protective clothing. For large spills, recover spilled material with a vacuum truck.

---

**SECTION 7 - HANDLING AND STORAGE**

---

**Handling**

: Avoid contact with skin or eyes. Avoid breathing of vapors. Handle product in a well ventilated work space and do not eat or drink. Keep containers closed when empty. Empty containers may contain explosive vapors. Flush empty containers with water to remove residual combustible or flammable liquid and vapors. Smoking in area is prohibited.

**Storage**

: Keep product away from acids, oxidants, heat, flames and sparks. Keep in cool, dry ventilated storage and in closed containers. Ground all containers during transfer. Store in steel containers. Do not store in reactive metal containers. Recommended suitable container materials include plastic, stainless and carbon steels.

**Other Precautions**

: Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations (OSHA).

**SECTION 8 - PERSONAL PROTECTION AND EXPOSURE CONTROLS**

---

<b>Engineering Measures</b>	: Explosion proof and provide area with 12-30 air changes per hour.
<b>Hygienic Measures</b>	: Provide readily accessible eye wash stations and safety showers. Wash at the end of each work shift and before eating, smoking or using the bathroom. Promptly remove clothing that becomes contaminated. Discard contaminated leather articles. Launder or discard contaminated clothing.
<b>Occupational Exposure Limits Personal Protective Equipment Respiratory System</b>	: No Data.  : Not required under normal conditions in a well-ventilated area. Use appropriate NIOSH/MSHA-approved respirator during repair and cleaning of equipment, and during transfer or discharge of the product.
<b>Skin and Body</b>	: Impervious clothing. Slicker suit. Rubber boots. Full rubber suit (rain gear). Butyl or latex.
<b>Hands</b>	: Neoprene rubber gloves. Impermeable gloves. Cuffed butyl rubber gloves. The breakthrough time of the selected glove(s) must be greater than the intended use period.
<b>Eyes</b>	: Full face shield with goggles underneath.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

---

**Guaranteed Values**

<b>s-triazine</b>	: 98% min.
<b>Water</b>	: 0.5% max.

**Typical Values**

<b>Physical State</b>	: Liquid at processing temperature
<b>Color</b>	: Colorless / Amber at processing temperature
<b>Odor</b>	: Ammonia-like
<b>Boiling Point</b>	: 141 °C (286 °F)
<b>Specific Gravity (Water = 1)</b>	: 0.95
<b>Solubility in Water</b>	: Completely (100%)
<b>Flash Point (Closed Cup)</b>	: 104 °C (220 °F)
<b>Vapor Pressure</b>	: 0.10 mmHg @ 21 °C (70 °F)

---

**SECTION 10 - STABILITY AND REACTIVITY**

---

<b>Stability</b>	: Stable
<b>Conditions to Avoid (if unstable)</b>	: Heat.
<b>Materials to Avoid</b>	: Mineral acids (i.e. sulfuric, phosphoric, etc.). Organic acids (i.e. acetic, citric etc.). Oxidizing agents (i.e. perchlorates, nitrates etc.). Sodium or Calcium Hypochlorite. Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Reaction with peroxides may result in violent decomposition of peroxide possibly creating an explosion. A reaction accompanied by large heat release occurs when the product is mixed with acids. Heat generated may be sufficient to cause vigorous boiling creating a hazard due to splashing or spattering of hot material.
<b>Hazardous Decomposition</b>	: Nitrogen Oxide can react with water vapor to form nitric acid (TLV = 2ppm). Carbon Monoxide, Carbon Dioxide, and Nitrogen Oxides in a fire. Ammonia when heated. Irritating and toxic fumes at elevated temperatures. Nitric acid in a fire. The decomposition of nitrogen gases (except nitrous oxide) is highly toxic.
<b>Hazardous Polymerization</b>	: Will not occur.

---

**SECTION 11 - TOXICOLOGICAL PROPERTIES**

---

**Acute Toxicity**

Oral (Rat) LD50: 2800 mg/kg  
Skin (Rabbit) LD50: >1000 mg/kg

I

**Target Organs**

Eye  
Skin

**Irritation Effects Data**

Corrosive to the skin of a rabbit.

**Chronic/Subchronic Data**

No delayed chronic or subchronic test data are known.

#### SECTION 12 - ECOLOGICAL INFORMATION

---

**Ecotoxicity Effects**

No Data

**Other Ecological Information**

No Data

#### SECTION 13 - DISPOSAL CONSIDERATIONS

---

**Methods of Disposal**

: Comply with all federal, state and local environmental regulations.

*Please refer to the relevant EU regulations, in particular the guidelines / decisions of the Council regarding handling of wastes (e.g. 75/442/EEC, 91/689/EEC, 94/67/EC, 94/904/EC) as implemented in National regulations.*

*Must be disposed of by special means, e.g. suitable incineration, in accordance with local regulations.*

#### SECTION 14 - TRANSPORT INFORMATION

---

**DOT Non-Bulk Shipping Name**

: Amines, liquid, corrosive, N.O.S.,  
Dimethylaminopropylhexahydrotriazine // 8 //  
UN2735 // PG III // NAERG Guide No.153

**DOT Bulk Shipping**

: Refer to Bill of Lading

**IMO Shipping Data**

: Refer to Bill of Lading

**ICAO/IATA Shipping Data**

: Amines, liquid, corrosive, N.O.S.,  
Dimethylaminopropylhexahydrotriazine // 8 //  
UN2735 // PG III // Shipment per 49 CFR 171.11 //  
NAERG Guide No. 153

---

**SECTION 15 - REGULATORY INFORMATION**

---

**US Federal Regulations****Toxic Substances Control Act (TSCA)**

All components are included in the EPA TSCA Chemical Substance Inventory.

**Toxic Substances Control Act (TSCA) 12(b) Component(s)**

None

**OSHA Hazard Communication Standard (29 CFR1910.1200) hazard class(es)**

Corrosive.

**EPA SARA Title III Section 312 (40CFR370) hazard class**

Immediate Health Hazard.

**EPA SARA Title III Section 313 (40CFR372) toxic chemicals above “de minimis” level**

None

**State Regulations**

**Proposition 65 Substances (component(s) known to the State of California to cause cancer and/or reproductive toxicity and subject to warning and discharge requirements under the “Safe Drinking Water and Toxic Enforcement Act of 1986”)**

Formaldehyde

**New Jersey Trade Secret Registry Number(s)**

None

**EC Regulations**

---

**SECTION 16 - OTHER INFORMATION**

---

The environmental, health and safety information contained herein is given in compliance with statutory obligations and relates only to the substance/preparation described in this material safety data sheet. This data sheet and the information it contains are not intended to supersede any terms and conditions of sale and does not constitute a specification, promise, representation, or warranty, whether express or implied, except to the extent required by applicable law. The environmental, health and safety information contained herein is believed to be accurate based on our current knowledge. It remains the responsibility of the customer to provide a safe workplace and to comply with all applicable laws and regulations.

Nothing contained herein is to be construed as a recommendation for use in violation of any patents or of applicable laws or regulations.