

# Safety Data Sheet

## PICRIC ACID-ACETONE, 0.5%

### Section 1 - Chemical Product and Company Identification

**SDS Name:** Picric Acid-Acetone, 0.5%

**Catalog Numbers:** SO-672

**Company Identification:** Transene Company, Inc., DBA ROWLEY BIOCHEMICAL, Inc.  
10 ELECTRONICS AVENUE  
DANVERS, MA 01923

**For information, call:** 978-739-4883

**Emergency Number:** 800-424-9300

**For CHEMTREC assistance, call:** 800-424-9300

### Section 2 - Hazards Identification

#### GHS Classifications Category

H225-Flammable liquids: 2

H301-Acute toxicity, oral: 3

H316-Skin corrosion/irritation: 3

H317-Sensitisation, skin: 1

H319-Serious eye damage/eye irritation: 2A

H336-Specific target organ toxicity, single exposure; Narcotic effects: 3

H371-Specific target organ toxicity, single exposure: 2

H373-Specific target organ toxicity, repeated exposure: 2

#### Pictogram or Hazard Symbols and Hazard Statement(s):



Signal word: Danger

## **Hazard Statements:**

H225-Highly flammable liquid and vapour  
H301-Toxic if swallowed  
H316-Causes mild skin irritation  
H317-May cause an allergic skin reaction  
H319-Causes serious eye irritation  
H336-May cause drowsiness or dizziness  
H371-May cause damage to organs  
H373-May cause damage to organs through prolonged or repeated exposure (target organs: kidney, liver, spleen, and blood)

## **Precautionary Statements:**

P210-Keep away from heat/sparks/open flames/hot surfaces.-No smoking.  
P233-Keep container tightly closed.  
P240-Ground/Bond container and receiving equipment.  
P241-Use explosion-proof electrical/ventilating/lighting/equipment.  
P242-Use only non-sparking tools.  
P243-Take precautionary measures against static discharge.  
P260-Do not breathe dust/fume/gas/mist/vapours/spray.  
P261-Avoid breathing dust/fume/gas/mist/vapours/spray.  
P264-Wash thoroughly after handling.  
P270-Do not eat, drink, or smoke when using this product.  
P271-Use only outdoors or in a well-ventilated area.  
P272-Contaminated work clothing should not be allowed out of the workplace.  
P280-Wear protective gloves/eye protection/face protection.  
P301+P310-If swallowed: Immediately call a Poison Center or doctor/physician.  
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.  
P309+P311-If exposed or if you feel unwell: Call a Poison Center or doctor/physician.  
P312-Call a Poison Center/doctor/physician if you feel unwell.  
P314-Get medical advice/attention if you feel unwell.  
P330-Rinse mouth.  
P332+P313-If skin irritation occurs: Get medical advice/attention.  
P333+P313-If skin irritation or rash occurs: Get medical advice/attention.  
P337+P313-If eye irritation persists: Get medical advice/attention.  
P363-Wash contaminated clothing before reuse.  
P370+P378-In case of fire: Use dry chemical, carbon dioxide, dry sand, water spray, or alcohol-resistant foam to extinguish.  
P403+P233-Store in a well-ventilated place. Keep container tightly closed.  
P403+P235-Store in a well-ventilated place. Keep cool.  
P405-Store locked up.  
P501-Dispose of contents/container in accordance with local/regional/national/international regulations.

### Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
88-89-1	Picric Acid	0.5 w/v
67-64-1	Acetone	balance

### Section 4 - First Aid Measures

**Eye Exposure:** In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Seek immediate medical attention.

**Dermal Exposure:** In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Seek medical advice.

**Oral Exposure:** If swallowed, seek immediate medical advice. Do NOT induce vomiting. Clean mouth with water and afterwards drink water. Never give anything by mouth to an unconscious person.

**Inhalation Exposure:** If inhaled, remove to fresh air. If not breathing give artificial respiration. Seek immediate medical attention. Inhalation of vapors irritates the respiratory tract. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea, and vomiting.

### Section 5 - Fire Fighting Measures

**General Information:** Containers can build up pressure if exposed to heat and/or fire. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire.

**Extinguishing Media:** Use dry chemical, carbon dioxide, dry sand, water spray or alcohol-resistant foam. Use water spray to cool fire-exposed unopened containers. Do NOT use straight streams of water.

**Hazardous Combustion Products:** Carbon oxides, nitrogen oxides, formaldehyde, methanol, irritating toxic fumes and gases.

**Flash Point:** Not available

**Auto ignition Temperature:** Not available

**Explosion Limits, Lower:** Not available

**Upper:** Not available

**NFPA Rating:** (estimated) Health: 2; Flammability: 3; Instability: 0

NOTE: Static discharge could act as an ignition source.

Note: Picric acid can explode on contact when dry. **Do not allow this material to dry out.** Do not let dry picric acid (crystals) form in container or on the cap threads of the container. A severe explosion hazard when shocked or exposed to heat. Dried out picric acid may explode if exposed to heat, flame, friction, or shock. May form shock-sensitive mixtures on contact with metals. Can violently decompose at elevated temperatures.

## Section 6 - Accidental Release Measures

### **Procedure(s) of Personal Precaution(s):**

Wear personal protective equipment. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Ensure adequate ventilation. Keep away from heat. Eliminate all sources of ignition. Take precautionary measures against static discharge.

**Methods for Cleaning up:** Absorb with sand, earth, or vermiculite. Carefully absorb with material that is dampened with water and containerize for proper disposal. Never allow spilled material to dry. Eliminate all sources of ignition. Use spark-proof tools and explosion-proof equipment. Do not release to the environment. Do not release to drains.

## Section 7 - Handling and Storage

Use care when handling. Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale vapors. Store capped in a cool, dry, well-ventilated place. Keep away from incompatible materials, ignition sources, or open flame. Protect from heat. Store away from direct sunlight. Use only non-sparking tools. Take precautionary measures against static discharges. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

NOTE: Static discharge could act as an ignition source.

Note: Picric acid can explode on contact when dry. **Do not allow this material to dry out.** Do not let dry picric acid (crystals) form in container or on the cap threads of the container. A severe explosion hazard when shocked or exposed to heat. Dried out picric acid may explode if exposed to heat, flame, friction, or shock. May form shock-sensitive mixtures on contact with metals. Can violently decompose at elevated temperatures.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

### **Personal Protective Equipment**

**Eyes:** 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.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

#### Exposure Limits:

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Picric Acid CAS#88-89-1	0.1 mg/m3 TWA	0.1 mg/m3 TWA 0.3 mg/m3 STEL	0.1 mg/m3 TWA
Acetone CAS#67-64-1	250 ppm TWA 500 ppm TWA 750 ppm STEL	250 ppm TWA 590 mg/m3 TWA 2500 ppm IDLH	1000 ppm TWA 2400 mg/m3 TWA

**OSHA Vacated PELs:** Acetone: 750 ppm TWA; 1800 mg/m3 TWA; 2400 mg/m3 STEL; 1000 ppm STEL

#### Section 9 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:** Yellow

**Odor:** Fruity. Mint-like. Fragrant. Ethereal.

**Vapor Pressure:** Not available

**Odor threshold:** Not available

**Vapor Density:** Not available

**pH:** Not available

**Relative density:** Not available

**Melting point/freezing point:** Not available

**Solubility:** Completely miscible in water

**Boiling Point:** Not available

**Flash point:** Not available

**Evaporation Rate:** Not available

**Flammability (solid, gas):** Not applicable

**Partition coefficient: n-octanol/water:** Not available

**Auto-ignition temperature:** Not available

**Decomposition temperature:** Not available

**Viscosity:** Not available

**Specific Gravity/Density:** Not available

NOTE: Static discharge could act as an ignition source.

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures. Heat and sunlight can contribute to instability. Do not allow solution to evaporate. An explosive mixture results when picric acid crystallizes. Do not let dry picric acid (crystals) form in container or on the cap threads of the container. **Dry picric acid is explosive.**

**Conditions to Avoid:** Incompatible materials, heat, flame, sparks. Keep away from open flames, hot surfaces, and sources of ignition. Do not allow solution to evaporate. Do not let dry picric acid (crystals) form in container or on the cap threads of container. Dry picric acid is explosive!

**Incompatibilities with Other Materials:** Strong oxidizing agents, strong reducing agents, strong bases, peroxides, halogenated compounds, alkali metals, amines, phosphorous oxychloride, metals, copper, lead, zinc, heavy metal salts, plaster, concrete, ammonia, albumin, gelatin, and uranium perchlorate.

**Hazardous Decomposition Products:** Carbon oxides, nitrogen oxides, formaldehyde, methanol, irritating toxic fumes and gases.

Note: Picric acid can explode on contact when dry. **Do not allow this material to dry out.** Do not let dry picric acid (crystals) form in container or on the cap threads of the container. A severe explosion hazard when shocked or exposed to heat. Dried out picric acid may explode if exposed to heat, flame, friction, or shock. May form shock-sensitive mixtures on contact with metals. Can violently decompose at elevated temperatures.

## Section 11 - Toxicological Information

**CAS# 88-89-1: Picric Acid: RTECS#: TJ7875000**

LD50 Oral: 200 mg/kg (rat)

LD50 Dermal: Not available

LC50 Inhalation: Not available

**Carcinogenicity:** Picric Acid CAS#88-89-1 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop 65.

**CAS#67-64-1 Acetone: RTECS#: AL3150000**

LD50 Oral: 5,800 mg/kg (rat)

LD50 Oral: 3 gm/kg (mouse)

LD50 Oral: 5340 mg/kg (rabbit)

LD50 Dermal: 7426 mg/kg (guinea pig)

LC50 Inhalation: 50100 mg/m<sup>3</sup> 8h (rat)

LC50 Inhalation: 44 gm/m<sup>3</sup> 4h (mouse)

**Carcinogenicity:** Acetone CAS#67-64-1 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop 65.

**Epidemiology:** Not available

**Teratogenicity:** Not available

**Reproductive Effects:** Not available

**Developmental Effects:** Not available

**Neurotoxicity:** Not available

**Mutagenicity:** Not available

**Specific Target Organ Toxicity, Single Exposure:** Respiratory system, central nervous system, kidneys, skin, blood, eyes, and liver.

**Specific Target Organ Toxicity, Repeated Exposure:** Kidney, liver, spleen, and blood.

**The toxicological properties of this material have not been thoroughly investigated.**

Note: Picric acid causes skin irritation and it may be absorbed through the skin. It has been shown to cause symptoms when absorbed through the skin; like those when ingested. Will cause eye irritation and may result in corneal injury leading to blindness. Toxic if swallowed. May cause gastrointestinal tract irritation with abdominal pain, nausea, vomiting, and diarrhea. May affect behavior/central nervous system (vertigo, headache, stupor, tremor, convulsions), cardiovascular system, metabolism, kidneys/urinary system (anuria, oliguria, renal lesions, hemorrhagic nephritis), liver (acute hepatitis, jaundice). Prolonged or repeated skin contact may cause allergic or sensitization dermatitis. Causes serious eye irritation. May cause conjunctivitis in the eyes and yellow staining of the skin and eyes. May cause corneal injury. May cause a strange visual effect known as "yellow-tainted vision."

## Section 12 - Ecological Information

**Ecotoxicity:** Do not release to the environment. Do not release to drains.

**CAS#67-64-1 Acetone:**

LC50, freshwater fish: 5540 mg/L 96h (oncorhynchus mykiss)

LC50, freshwater fish: 1100 mg/L 96h (albumus alburnus)

LC50, freshwater fish: 11300 mg/L 96h (leuciscus idus)

LC50, freshwater fish: 6100 mg/L 24h (salmo gairdneri)

EC50, water flea: 8800 mg/L 48h (daphnia magna)

**Persistence and degradability:** Readily biodegradable.

**Bio-accumulative potential:** Does not bio-accumulate.

**Mobility:** Will likely be mobile in the environment due to its volatility.

## Section 13 - Disposal Considerations

**DISPOSAL:** Dispose of in accordance with all federal, state, and local regulations.

## Section 14 – Transport Information

### **DOT**

Proper shipping name: Acetone

UN1090

PG II

Hazard class 3 (flammable)

## Section 15 - Regulatory Information

### **Canada Regulatory Information**

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the SDS contains all the information required by the CPR.

## Section 16 - Additional Information

**SDS Creation Date:** 10-15-12

**Revision #1.** 11-4-14 RC

**Revision #2.** 6-29-15

**Revision #3.** 8-31-18

**Revision #4.** 4-13-22

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