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## **ETHYL ACRYLATE- MATERIAL SAFETY DATA SHEET**

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### **24 Hour EMERGENCY CONTACT**

**U.S- CHEMTREC 1-800-424-9300**

**CANADA- CANUTEC 613-996-6666**

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## **1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

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### **Matheson Tri-Gas, Inc.**

*The telephone numbers listed below are emergency numbers, please contact your local branch for routine inquiries.*

#### **USA**

959 Route 46 East  
Parsippany, New Jersey  
07054-0624 USA  
**Phone: 973-257-1100**

#### **CANADA**

530 Watson Street  
Whitby, Ontario  
L1N 5R9 Canada  
**Phone: 905-668-3570**

**SUBSTANCE: ETHYL ACRYLATE**

**SYMBOL:** C<sub>5</sub>H<sub>8</sub>O<sub>2</sub>

**TRADE NAMES/SYNONYMS:**

ETHYL PROPENOATE; 2-PROPENOIC ACID, ETHYL ESTER; ETHYLACRYLATE; ACRYLIC ACID, ETHYL ESTER; ETHOXYCARBONYLETHYLENE; ETHYL 2-PROPENOATE; ETHYL ACRYLIC ESTER; ACRYLIC ACID ETHYL ESTER; ETHYL ACRYLATE; ACRYESTER E; RCRA U113; UN 1917; C5H8O2; MAT08770; RTECS AT0700000

**CHEMICAL FAMILY:** carboxylic acids, esters

**CREATION DATE:** Jan 24 1989

**REVISION DATE:** Mar 16 1999

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## 2. COMPOSITION, INFORMATION ON INGREDIENTS

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**COMPONENT:** ETHYL ACRYLATE, INHIBITED

**CAS NUMBER:** 140-88-5

**EC NUMBER (EINECS):** 205-438-8

**PERCENTAGE:** >99

**COMPONENT:** HYDROQUINONE

**CAS NUMBER:** 123-31-9

**EC NUMBER (EINECS):** 204-617-8

**PERCENTAGE:** 0.10000

**COMPONENT:** 4-METHOXYPHENOL

**CAS NUMBER:** 150-76-5

**EC NUMBER (EINECS):** 205-769-8

**PERCENTAGE:** 0.00130-0.02000

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## 3. HAZARDS IDENTIFICATION

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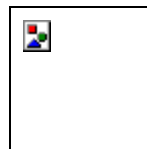
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**NFPA RATINGS (SCALE 0-4):** HEALTH=3 FIRE=3 REACTIVITY=2

**EC CLASSIFICATION (ASSIGNED):**

F Highly Flammable

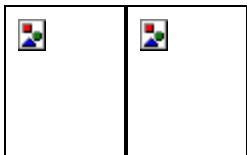
Xn Harmful



Xi Irritant  
Sensitizing

R 11-20/21/22-36/37/38-43

EC Classification may be inconsistent with independently-researched data.



#### EMERGENCY OVERVIEW:

**Color:** colorless

**Physical Form:** liquid

**Odor:** irritating odor

**Major Health Hazards:** harmful on contact with the skin, tears, respiratory irritation (possibly severe), skin irritation (possibly severe), eye irritation (possibly severe), allergic reactions, suspect cancer hazard (in animals)

**Physical Hazards:** Flammable liquid and vapor. Vapor may cause flash fire. May polymerize. Containers may rupture or explode.

#### POTENTIAL HEALTH EFFECTS:

##### INHALATION:

**Short Term Exposure:** irritation (possibly severe), lack of sense of smell, nausea, difficulty breathing, headache, drowsiness, lung congestion, convulsions

**Long Term Exposure:** same as effects reported in short term exposure

##### SKIN CONTACT:

**Short Term Exposure:** irritation (possibly severe), allergic reactions, absorption may occur

**Long Term Exposure:** same as effects reported in short term exposure

##### EYE CONTACT:

**Short Term Exposure:** irritation (possibly severe), tearing, blurred vision

**Long Term Exposure:** same as effects reported in short term exposure

##### INGESTION:

**Short Term Exposure:** burns, sore throat, vomiting, digestive disorders, difficulty breathing, bluish skin color, convulsions

**Long Term Exposure:** reproductive effects, cancer

#### CARCINOGEN STATUS:

OSHA: N

NTP: Y

IARC: Y

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## 4. FIRST AID MEASURES

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**INHALATION:**

Remove from exposure immediately. Use a bag valve mask or similar device to perform artificial respiration (rescue breathing) if needed. Get medical attention.

**SKIN CONTACT:**

Remove contaminated clothing, jewelry, and shoes immediately. Wash with soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15-20 minutes). Get medical attention, if needed.

**EYE CONTACT:**

Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains. Get medical attention immediately.

**INGESTION:**

If vomiting occurs, keep head lower than hips to help prevent aspiration. Get medical attention, if needed.

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**5. FIRE FIGHTING MEASURES**

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**FIRE AND EXPLOSION HAZARDS:**

Severe fire hazard. Vapor/air mixtures are explosive above flash point. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back. Containers may rupture or explode if exposed to heat.

**EXTINGUISHING MEDIA:**

regular dry chemical, carbon dioxide, water, regular foam, alcohol resistant foam

Large fires: Use regular foam or flood with fine water spray.

**FIRE FIGHTING:**

Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For tank, rail car or tank truck: Evacuation radius: 800 meters (1/2 mile). Do not attempt to extinguish fire unless flow of material can be stopped first. Flood with fine water spray. Do not scatter spilled material with high-pressure water streams. Cool containers with water spray until well after the fire is out. Apply water from a protected location or from a safe distance. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. Water may be ineffective.

**FLASH POINT:**

47 F (8.3 C) (CC)

**LOWER FLAMMABLE LIMIT:**

1.4%

**UPPER FLAMMABLE LIMIT:**

14%

**AUTOIGNITION:**

702 F (372 C)

**FLAMMABILITY CLASS (OSHA):**

IB

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**6. ACCIDENTAL RELEASE MEASURES**[Up to Table of Contents](#)**WATER RELEASE:**

Subject to California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Keep out of water supplies and sewers.

**OCCUPATIONAL RELEASE:**

Avoid heat, flames, sparks and other sources of ignition. Stop leak if possible without personal risk. Reduce vapors with water spray. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Large spills: Dike for later disposal. Remove sources of ignition. Keep unnecessary people away, isolate hazard area and deny entry. Reportable Quantity (RQ): Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

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**7. HANDLING AND STORAGE**[Up to Table of Contents](#)

Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.106. Grounding and bonding required. Protect from physical damage. Store outside or in a detached building. Store with flammable liquids. Store below 38 C. Keep separated from incompatible substances.

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**8. EXPOSURE CONTROLS, PERSONAL PROTECTION**[Up to Table of Contents](#)[Contents](#)**EXPOSURE LIMITS:****ETHYL ACRYLATE, INHIBITED:****ETHYL ACRYLATE:**25 ppm (100 mg/m<sup>3</sup>) OSHA TWA (skin)5 ppm (20 mg/m<sup>3</sup>) OSHA TWA (skin) (vacated by 58 FR 35338, June 30, 1993)25 ppm (100 mg/m<sup>3</sup>) OSHA STEL (vacated by 58 FR 35338, June 30, 1993)5 ppm (20 mg/m<sup>3</sup>) ACGIH TWA (skin)15 ppm (61 mg/m<sup>3</sup>) ACGIH STEL

2 ppm recommended TWA (DUPONT) (skin)

**VENTILATION:** Provide local exhaust ventilation system. Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Ensure compliance with applicable exposure limits.

**EYE PROTECTION:** Wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**CLOTHING:** Wear appropriate chemical resistant clothing.

**GLOVES:** Wear appropriate chemical resistant gloves.

**PROTECTIVE MATERIAL TYPES:** rubber

**RESPIRATOR:** The following respirators and maximum use concentrations are drawn from NIOSH and/or OSHA.

**At any detectable concentration -**

Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.

**Escape -**

Any air-purifying respirator with a full facepiece and an organic vapor canister.

Any appropriate escape-type, self-contained breathing apparatus.

**For Unknown Concentrations or Immediately Dangerous to Life or Health -**

Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.

Any self-contained breathing apparatus with a full facepiece.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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**PHYSICAL STATE:** liquid

**APPEARANCE:** clear

**COLOR:** colorless

**ODOR:** irritating odor

**MOLECULAR FORMULA:** C-H<sub>2</sub>-C-H-C-O-O-C-H<sub>2</sub>-C-H<sub>3</sub>

**BOILING POINT:** 210-212 F (99-100 C)

**FREEZING POINT:** -98 F (-72 C)

**VAPOR PRESSURE:** 29 mmHg @ 20 C

**VAPOR DENSITY (air=1):** 3.5

**SPECIFIC GRAVITY (water=1):** 0.9

**BULK DENSITY:** 7.6 lbs/gal

**WATER SOLUBILITY:** 1.5% @ 20 C

**PH:** Not available

**VOLATILITY:** Not available

**ODOR THRESHOLD:** 0.00024 ppm

**EVAPORATION RATE:** 3.3 (butyl acetate=1)

**COEFFICIENT OF WATER/OIL DISTRIBUTION:** Not available

**SOLVENT SOLUBILITY:**

**Soluble:** alcohol, ether, chloroform, organic solvents

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## 10. STABILITY AND REACTIVITY

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### REACTIVITY:

Polymerizes with evolution of heat. Avoid contact with light or storage and use above room temperature. Closed containers may rupture violently.

### CONDITIONS TO AVOID:

Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat. Keep out of water supplies and sewers.

### INCOMPATIBILITIES:

acids, bases, oxidizing materials, peroxides

### HAZARDOUS DECOMPOSITION:

Thermal decomposition products: oxides of carbon

### POLYMERIZATION:

Polymerizes with evolution of heat. Avoid contact with heat or light and monitor inhibitor content.

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## 11. TOXICOLOGICAL INFORMATION

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### ETHYL ACRYLATE, INHIBITED:

#### IRRITATION DATA:

1204 ppm/14 hour(s)-intermittent eyes-rat; 1204 ppm/15 hour(s)-intermittent eyes-monkey; 500 mg open skin-rabbit mild; 10 mg/24 hour(s) skin-rabbit mild; 45 mg eyes-rabbit mild; 1204 ppm/7 hour(s) eyes-rabbit; 1204 ppm/7 hour(s) eyes-guinea pig

#### TOXICITY DATA:

1414 ppm/4 hour(s) inhalation-rat LC50; 500 ul/kg skin-rabbit LD50; 800 mg/kg oral-rat LD50

#### CARCINOGEN STATUS:

NTP: Anticipated Human Carcinogen; IARC: Animal Sufficient Evidence, Group 2B; ACGIH: A2 - Suspected Human Carcinogen; EC: Category 2

#### LOCAL EFFECTS:

Irritant: inhalation, skin, eye

Lacrimator: eye

#### ACUTE TOXICITY LEVEL:

Toxic: dermal absorption

Moderately Toxic: inhalation, ingestion

#### TARGET ORGANS:

immune system (sensitizer)

#### MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

heart or cardiovascular disorders, respiratory disorders, skin disorders and allergies

#### TUMORIGENIC DATA:

Available.

#### MUTAGENIC DATA:

Available.

**ADDITIONAL DATA:**

May cross react with similar compounds.

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**12. ECOLOGICAL INFORMATION**

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**ECOTOXICITY DATA:**

**FISH TOXICITY:**

2500 ug/L 96 hour(s) LC50 (Mortality) Fathead minnow (*Pimephales promelas*)

**INVERTEBRATE TOXICITY:**

12000 ug/L 24 hour(s) LC50 (Mortality) Brine shrimp (*Artemia salina*)

**ENVIRONMENTAL SUMMARY:**

Toxic to aquatic life.

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**13. DISPOSAL CONSIDERATIONS**

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Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): U113.

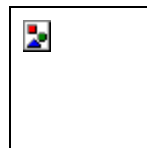
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**14. TRANSPORT INFORMATION**

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**U.S. DOT 49 CFR 172.101. SHIPPING NAME-UN NUMBER; HAZARD CLASS; PACKING GROUP; LABEL:**

Ethyl acrylate, inhibited-UN1917; 3; II; Flammable liquid



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**15. REGULATORY INFORMATION**

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**U.S. REGULATIONS:**

**TSCA INVENTORY STATUS:** Y

**TSCA 12(b) EXPORT NOTIFICATION:** Y

**Hydroquinone**

**CAS NUMBER:** 123-31-9

SECTION 4

**CERCLA SECTION 103 (40CFR302.4):** Y

**Ethyl acrylate:** 1000 LBS RQ

**Hydroquinone:** 100 LBS RQ

**SARA SECTION 302 (40CFR355.30):** Y

**Hydroquinone:** 500/10000 LBS TPQ

**SARA SECTION 304 (40CFR355.40):** Y

**Hydroquinone:** 100 LBS RQ

**SARA SECTION 313 (40CFR372.65):** Y

**Ethyl acrylate**

**SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):**

**ACUTE:** Y  
**CHRONIC:** Y  
**FIRE:** Y  
**REACTIVE:** Y  
**SUDDEN RELEASE:** N

**OSHA PROCESS SAFETY (29CFR1910.119):** N

**STATE REGULATIONS:**

**California Proposition 65:** Y

Known to the state of California to cause the following:

**Ethyl acrylate**

Cancer (Jul 01, 1989)

**EUROPEAN REGULATIONS:**

**EC NUMBER (EINECS):** 205-438-8

**EC RISK AND SAFETY PHRASES:**

R 11	Highly flammable.
R 20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R 36/37/38	Irritating to eyes, respiratory system and skin.
R 43	May cause sensitization by skin contact.
S 2	Keep out of reach of children.
S 9	Keep container in a well-ventilated place.
S 16	Keep away from sources of ignition - No smoking.
S 33	Take precautionary measures against static discharges.
S 36/37	Wear suitable protective clothing and gloves.

**CONCENTRATION LIMITS:**

C<sub>></sub>=25% X<sub>n</sub> R 20/21/22-36/37/38-43

5%<sub><</sub>=C<sub><</sub>25% Xi R 36/37/38-43

1%<sub><</sub>=C<sub><</sub>5% Xi R 43

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**16. OTHER INFORMATION**

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