Material Safety Data Sheet
Acrylic acid, stabilized with 200 ppm MEHQ

ACC# 91685

Section 1 - Chemical Product and Company Identification

MSDS Name: Acrylic acid, stabilized with 200 ppm MEHQ
Catalog Numbers: O6110-1, O6110-212
Synonyms: 2-Propenoic acid; Acroleic acid; Acrylic acid, inhibited; Ethylenecarboxylic acid; Glacial acrylic acid; Propene acid; Propenoic acid; Vinylformic acid
Company Identification:

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100
Emergency Number: 201-796-7100
For CHEMTREC assistance, call: 800-424-9300
For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
79-10-7	Acrylic acid	> 99	201-177-9
150-76-5	p-Hydroxyanisole	.02	205-769-8

Hazard Symbols: C N
Risk Phrases: 10 20/21/22 35 50

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: colorless liquid liquid. Flash Point: 48 deg C. **Flammable liquid and vapor.** **Danger!** May be fatal if swallowed. May polymerize explosively on loss of inhibitor. Causes digestive and respiratory tract burns. Causes eye and skin burns. Do not freeze. Stench. Corrosive to steel. Harmful if absorbed through skin or if inhaled. This substance has caused adverse reproductive and fetal effects in animals.
Target Organs: Eyes, reproductive system, skin, mucous membranes.

Potential Health Effects
Eye: May result in corneal injury. Causes severe eye irritation and burns. Direct contact with the liquid may cause blindness.
Skin: Harmful if absorbed through the skin. Causes severe skin irritation and burns. May cause sensitization by skin contact. Acrylic acid is a definite skin sensitizer by the guinea pig maximizat ion test, but it is not by the Draize test.
Ingestion: May be fatal if swallowed. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract.
Inhalation: May cause liver and kidney damage. Causes chemical burns to the respiratory tract. Vapors may cause dizziness or suffocation. Inhalation of vapors causes nasal irritation. Acrylic acid caused slight focal degeneration of the olfactory mucosa in mice exposed intermittently at 5 ppm. It caused changes in respiratory rate and volume in unanesthetized rats exposed at irritating concentrations.
Chronic: Acrylic acid caused teratogenic and embryotoxic effects in rats injected intraperitoneally at dose levels as low as 4.7 and 8 mg/kg of body weight.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.
Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.
Ingestion: If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.
Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Water runoff can cause environmental damage. Dike and collect water used to fight fire. Vapors may form an explosive mixture with air. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Flammable liquid and vapor. May polymerize explosively when involved in a fire. May accumulate static electrical charges, and may cause ignition of its own vapors. Closed containers may rupture violently when heated. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. Fight fire from protected location or maximum possible distance.
Extinguishing Media: Use water spray, dry chemical, "alcohol resistant" foam, or carbon dioxide.
Flash Point: 48 deg C (118.40 deg F)

Autoignition Temperature: 438 deg C (820.40 deg F)
Explosion Limits, Lower:2.0%
Upper: 8.0%
NFPA Rating: (estimated) Health: 3; Flammability: 2; Instability: 2

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. Use water spray to cool and disperse vapors, protect personnel, and dilute spills to form nonflammable mixtures.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Do not ingest or inhale. Discard contaminated shoes. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Do not use steam or electrical heating systems such as coils, jackets, tapes, mantles, lights, etc. to thaw any solidified monomer. The application of concentrated heat will cause polymerization and possibly rupture the container. Use only with adequate ventilation. Keep away from heat, sparks and flame. Pure vapor will be uninhibited and may polymerize in vents or other confined spaces.
Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Keep from freezing. Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Store only in glass, stainless steel, aluminum or polyethylene-lined equipment. Separate from oxidizing materials.

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.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Acrylic acid	2 ppm TWA; skin - potential for cutaneous absorption	2 ppm TWA; 6 mg/m3 TWA	none listed
p-Hydroxyanisole	5 mg/m3 TWA	5 mg/m3 TWA	none listed

OSHA Vacated PELs: Acrylic acid: 10 ppm TWA; 30 mg/m3 TWA p-Hydroxyanisole: 5 mg/m3 TWA
Personal Protective Equipment
Eyes: Wear chemical goggles.
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.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: colorless liquid
Odor: acrid odor - stench
pH: Not available.
Vapor Pressure: 4 mm Hg @ 25 deg C
Vapor Density: 2.48 (air=1)
Evaporation Rate: Not available.
Viscosity: 1.3 mPas 20 deg C
Boiling Point: 139 deg C @ 760 mm Hg
Freezing/Melting Point:13 deg C
Decomposition Temperature:200 deg C
Solubility: Soluble.
Specific Gravity/Density:1.05 g/cm3
Molecular Formula:C3H4O2
Molecular Weight:72.06

Section 10 - Stability and Reactivity

Chemical Stability: Stable only if stored and handled under recommended conditions. The stability of the product depends upon the availability of both dissolved oxygen and MEHQ inhibitor(CAS=150-76-5). The presence of oxygen is necessary for the MEHQ to function effectively. The product should never be stored under an inert gas atmosphere, but should always be stored under an atmosphere containing 5-21% oxygen by volume.
Conditions to Avoid: Light, ignition sources, excess heat, loss of inhibitor.
Incompatibilities with Other Materials: Metals, strong oxidizing agents, strong acids, amines, ammonia, peroxides, epichlorohydrin, alkalis, ethyleneimine, pyridine, polymerizing initiators, 2-aminoethanol, ethylene diamine, carbon steel.
Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: Will occur.

Section 11 - Toxicological Information

RTECS#:
CAS# 79-10-7: AS4375000
CAS# 150-76-5: SL7700000
LD50/LC50:
CAS# 79-10-7:
Draize test, rabbit, eye: 1 mg Severe;
Draize test, rabbit, eye: 250 ug/24H Severe;
Draize test, rabbit, skin: 5 mg/24H Severe;
Inhalation, mouse: LC50 = 5300 mg/m3/2H;
Oral, mouse: LD50 = 2400 mg/kg;
Oral, rat: LD50 = 33500 ug/kg;
Skin, rabbit: LD50 = 280 uL/kg;

CAS# 150-76-5:

Carcinogenicity:
CAS# 79-10-7:
ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: IARC Group 3 - not classifiable CAS# 150-76-5: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Epidemiology: No information available.
Teratogenicity: See actual entry in RTECS for complete information.
Reproductive Effects: See actual entry in RTECS for complete information.
Neurotoxicity: No information available.
Mutagenicity: See actual entry in RTECS for complete information.
Other Studies: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity: Water flea Daphnia: EC50 = 270 mg/L; 24 Hr; Static bioassay at 20-22°C, pH 7.6 Brown trout: LC50 = 130460 mg/L; 24-96 Hr; Unspecified No data available.
Environmental: Acrylic acid is expected to leach into the ground and possibly biodegrade when released on land. This product is not expected to adsorb significantly to soil or sediment. If release into the water is will biodegrade. Adsorption to sediment, volatilization and bioconcentration of acrylic acid in aquatic organisms should not be significant. In the atmosphere it will react with ozone and photochemically produced hydroxyl radicals with an overall half-life of 14.6 hours.
Physical: No information available.
Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: CAS# 79-10-7: waste number U008 (Ignitable waste).

Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
Shipping Name:	No information available.				No information available.
Hazard Class:					
UN Number:					
Packing Group:					

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 79-10-7 is listed on the TSCA inventory.
CAS# 150-76-5 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
SARA

CERCLA Hazardous Substances and corresponding RQs
CAS# 79-10-7: 5000 lb final RQ; 2270 kg final RQ
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 79-10-7: acute, chronic, flammable, reactive. CAS # 150-76-5: acute.
Section 313
This material contains Acrylic acid (CAS# 79-10-7, 99%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
Clean Air Act:
CAS# 79-10-7 is listed as a hazardous air pollutant (HAP). This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.
STATE
CAS# 79-10-7 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.
CAS# 150-76-5 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.
California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols:
C N
Risk Phrases:
R 10 Flammable.
R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R 35 Causes severe burns.
R 50 Very toxic to aquatic organisms.

Safety Phrases:
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

WGK (Water Danger/Protection)
CAS# 79-10-7: 1
CAS# 150-76-5: 1
Canada - DSL/NDSL
CAS# 79-10-7 is listed on Canada's DSL List.
CAS# 150-76-5 is listed on Canada's DSL List.
Canada - WHMIS
This product has a WHMIS classification of B3, E, F, D1A.
Canadian Ingredient Disclosure List
CAS# 79-10-7 is listed on the Canadian Ingredient Disclosure List.
CAS# 150-76-5 is listed on the Canadian Ingredient Disclosure List.
Exposure Limits
CAS# 79-10-7: OEL-AUSTRALIA:TWA 10 ppm (30 mg/m3) OEL-BELGIUM:TWA 10 ppm (29 mg/m3) OEL-DENMARK:TWA 10 ppm (30 mg/m3) OEL-FRANCE:TWA 10 ppm (30 mg/m3) OEL-THE NETHERLANDS:TWA 10 ppm (30 mg/m3) OEL-RUSSIA :STEL 5 mg/m3 OEL-SWEDEN:TWA 10 ppm (30 mg/m3);STEL 15 ppm (45 mg/m3) OEL-SWITZERLAND:TWA 10 ppm (30 mg/m3) OEL-UNITED KINGDOM:TWA 10 ppm (30 mg/m3);STEL 20 ppm (60 mg/m3) OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV
CAS# 150-76-5: OEL-AUSTRALIA:TWA 5 mg/m3 OEL-BELGIUM:TWA 5 mg/m3 OEL-DENMARK:TWA 5 mg/m3 OEL-FRANCE:TWA 5 mg/m3 OEL-THE NETHERLANDS:TWA 5 mg/m3 OEL-UNITED KINGDOM:TWA 5 mg/m3 OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

Section 16 - Additional Information

MSDS Creation Date: 11/02/2000
Revision #6 Date: 7/08/2002