Material Safety Data Sheet

Version 4.1
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Ethyl acrylate
Product Number	:	E9706
Brand	:	Aldrich
Company	:	Sigma-Aldrich 3050 Spruce Street SAINT LOUIS MO 63103 USA
Telephone	:	+18003255832
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Emergency Phone #	:	(314) 776-6555

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Flammable liquid, Target Organ Effect, Harmful by ingestion., Skin sensitiser, Irritant

Target Organs

Liver, Kidney

Other hazards which do not result in classification
Lachrymator.

GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H313	May be harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H401	Toxic to aquatic life.

Precautionary statement(s)

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P311	Call a POISON CENTER or doctor/physician.

HMIS Classification

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	3

Physical hazards: 0

NFPA Rating

Health hazard: 3
Fire: 3
Reactivity Hazard: 0

Potential Health Effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.
Skin May be harmful if absorbed through skin. Causes skin irritation.
Eyes Causes eye irritation.
Ingestion Harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Acrylic acid ethyl ester

Formula : $C_5H_8O_2$

CAS-No.	EC-No.	Index-No.	Concentration
Ethyl acrylate			
140-88-5	205-438-8	607-032-00-X	<= 100 %
Mequinol			
150-76-5	205-769-8	604-044-00-7	>= 0.001 - <= 0.002 %

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage
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. Store in cool place.

Recommended storage temperature: 2 - 8 °C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Update	Basis
Ethyl acrylate	140-88-5	TWA	5 ppm	2007-01-01	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Central Nervous System impairment Eye irritation Skin sensitization Upper Respiratory Tract & Gastrointestinal irritation Not classifiable as a human carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories.				
		STEL	15 ppm	2007-01-01	USA. ACGIH Threshold Limit Values (TLV)
	Central Nervous System impairment Eye irritation Skin sensitization Upper Respiratory Tract & Gastrointestinal irritation Not classifiable as a human carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories.				
		TWA	5 ppm 20 mg/m3	1989-01-19	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
	Skin notation				
		STEL	25 ppm 100 mg/m3	1989-01-19	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
	Skin notation				
		TWA	25 ppm 100 mg/m3	1997-08-04	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	Skin designation The value in mg/m3 is approximate.				

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves.

Eye protection
Face shield and safety glasses

Skin and body protection
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	liquid
Colour	colourless

Safety data

pH	no data available
Melting point	-71 °C (-96 °F) - lit.
Boiling point	99 °C (210 °F) - lit.
Flash point	8 °C (46 °F) - closed cup
Ignition temperature	383 °C (721 °F)
Lower explosion limit	1.8 %(V)
Upper explosion limit	12.1 %(V)
Vapour pressure	41 hPa (31 mmHg) at 20 °C (68 °F)
Density	0.918 g/cm3 at 25 °C (77 °F)
Water solubility	no data available
Relative vapour density	3.46 - (Air = 1.0)

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
Vapours may form explosive mixture with air.

Conditions to avoid
Heat, flames and sparks.

Materials to avoid
Oxidizing agents, Peroxides

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides

Contains the following stabiliser(s):
Mequinol (>=0.001 - <=0.002 %)

11. TOXICOLOGICAL INFORMATION

Acute toxicity
LD50 Oral - rat - 800 mg/kg

LC50 Inhalation - rat - 4 h - 1414 ppm
Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Olfaction:Other changes. Lungs, Thorax, or Respiration:Dyspnea. Gastrointestinal:Changes in structure or function of salivary glands.

LD50 Dermal - mouse - 2,997 mg/kg

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
no data available

Respiratory or skin sensitization
May cause allergic skin reaction.

Germ cell mutagenicity
Laboratory experiments have shown mutagenic effects.

Genotoxicity in vitro - mouse - lymphocyte
Mutation in mammalian somatic cells.

Genotoxicity in vitro - Hamster - ovary
Sister chromatid exchange

Genotoxicity in vivo - mouse - Intraperitoneal
Micronucleus test

Carcinogenicity

Carcinogenicity - rat - Oral
Tumorigenic:Carcinogenic by RTECS criteria. Gastrointestinal:Tumors.

This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

IARC:	2B - Group 2B: Possibly carcinogenic to humans (Ethyl acrylate)
ACGIH:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP:	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

Reproductive toxicity - rat - Oral
Maternal Effects: Other effects.

Specific target organ toxicity - single exposure (GHS)
May cause respiratory irritation.

Specific target organ toxicity - repeated exposure (GHS)
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion	Harmful if swallowed.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.

Signs and Symptoms of Exposure
Nausea, Headache, Drowsiness, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Additional Information
RTECS: AT0700000

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - 2.5 mg/l - 96 h

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN-Number: 1917 Class: 3 Packing group: II
Proper shipping name: Ethyl acrylate, stabilized
Reportable Quantity (RQ): 1000 lbs
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN-Number: 1917 Class: 3 Packing group: II EMS-No: F-E, S-D
Proper shipping name: ETHYL ACRYLATE, STABILIZED
Marine pollutant: No

IATA
UN-Number: 1917 Class: 3 Packing group: II
Proper shipping name: Ethyl acrylate, stabilized

15. REGULATORY INFORMATION

OSHA Hazards
Flammable liquid, Target Organ Effect, Harmful by ingestion., Skin sensitiser, Irritant

DSL Status
All components of this product are on the Canadian DSL list.

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

	CAS-No.	Revision Date
Ethyl acrylate	140-88-5	1993-04-24

SARA 311/312 Hazards
Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date

Ethyl acrylate	140-88-5	1993-04-24

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Ethyl acrylate	140-88-5	1993-04-24

New Jersey Right To Know Components

	CAS-No.	Revision Date
Ethyl acrylate	140-88-5	1993-04-24

California Prop. 65 Components

	CAS-No.	Revision Date
WARNING! This product contains a chemical known to the State of California to cause cancer. Ethyl acrylate	140-88-5	2007-09-28

16. OTHER INFORMATION

Further information

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