ionz

SAFETY DATA SHEET

Updated on 26/09/2024

1. Material Identification

Product Name : Ethyl acrylate
Catalog Number : io-2352
CAS Number : 140-88-5
Identified uses : Laboratory chemicals, manufacture of chemical compounds
Company : Ionz

>> R&D Use only

2. Hazards Identification

GHS Classification:

Flammable liquid (category 2)
Acute toxicity, oral (Category 3)
Acute toxicity, dermal (Category 3)
Acute toxicity, inhalation (Category 3)
Specific target organ toxicity, single exposure (Category 1)

Note

>> Pictograms displayed are for > 99.9% (4875 of 4877) of reports that indicate hazard statements. This chemical does not meet GHS hazard criteria for < 0.1% (2 of 4877) of reports.

Pictogram(s)

GHS Hazard Statements

>> H225 (> 99.9%): Highly Flammable liquid and vapor [Danger Flammable liquids]

>> H302 (99.4%): Harmful if swallowed [Warning Acute toxicity, oral]

>> H312 (> 99.9%): Harmful in contact with skin [Warning Acute toxicity, dermal]

>> H315 (> 99.9%): Causes skin irritation [Warning Skin corrosion/irritation]

>> H317 (> 99.9%): May cause an allergic skin reaction [Warning Sensitization, Skin]

>> H319 (> 99.9%): Causes serious eye irritation [Warning Serious eye damage/eye irritation]

>> H331 (54.5%): Toxic if inhaled [Danger Acute toxicity, inhalation]

>> H332 (46%): Harmful if inhaled [Warning Acute toxicity, inhalation]

>> H335 (99.7%): May cause respiratory irritation [Warning Specific target organ toxicity, single exposure; Respiratory tract irritation]

>> H412 (52.9%): Harmful to aquatic life with long lasting effects [Hazardous to the aquatic environment, long-term hazard]

Precautionary Statement Codes

>> P210, P233, P240, P241, P242, P243, P261, P264, P264+P265, P270, P271, P272, P273, P280, P301+P317, P302+P352, P303+P361+P353, P304+P340, P305+P351+P338, P316, P317, P319, P321, P330, P332+P317, P333+P317, P337+P317, P362+P364, P370+P378, P403+P233, P403+P235, P405, and P501

NFPA 704 Diamond

NFPA Health Rating

>> 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA Fire Rating

>> 3 - Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials produce hazardous atmospheres with air under almost all ambient temperatures or, though unaffected by ambient temperatures, are readily ignited under almost all conditions.

NFPA Instability Rating

>> 2 - Materials that readily undergo violent chemical changes at elevated temperatures and pressures.

Health Hazards:

>> May cause irritation and burns of eyes and skin. Exposure to excessive vapor concentrations can also cause drowsiness accompanied by nausea, headache, or extreme irritation of the respiratory tract. (USCG, 1999)

>> Special Hazards of Combustion Products: Toxic and irritating vapors generated when heated.

>> Behavior in Fire: Vapor is heavier than air and may travel considerable distance to a source of ignition and flash back. May polymerize and cause container to explode. (USCG, 1999)

>> Highly flammable. Vapour/air mixtures are explosive.

3. Composition/Information On Ingredients

Chemical name : Ethyl acrylate
CAS Number : 140-88-5
Molecular Formula : C5H8O2
Molecular Weight : 100.1200 g/mol

4. First Aid Measures

First Aid:

>> EYES: First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or poison control center. Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician. IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.

>> SKIN: IMMEDIATELY flood affected skin with water while removing and isolating all contaminated clothing. Gently wash all affected skin areas thoroughly with soap and water. IMMEDIATELY call a hospital or poison control center even if no symptoms (such as redness or irritation) develop. IMMEDIATELY transport the victim to a hospital for treatment after washing the affected areas.

>> INHALATION: IMMEDIATELY leave the contaminated area; take deep breaths of fresh air. IMMEDIATELY call a physician and be prepared to transport the victim to a hospital even if no symptoms (such as wheezing, coughing, shortness of breath, or burning in the mouth, throat, or chest) develop. Provide proper respiratory protection to rescuers entering an unknown atmosphere. Whenever possible, Self-Contained Breathing Apparatus (SCBA) should be used; if not available, use a level of protection greater than or equal to that advised under Protective Clothing.

>> INGESTION: DO NOT INDUCE VOMITING. Volatile chemicals have a high risk of being aspirated into the victim's lungs during vomiting which increases the medical problems. If the victim is conscious and not convulsing, give 1 or 2 glasses of water to dilute the chemical and IMMEDIATELY call a hospital or poison control center. IMMEDIATELY transport the victim to a hospital. If the victim is convulsing or unconscious, do not give anything by mouth, ensure that the victim's airway is open and lay the victim on his/her side with the head lower than the body. DO NOT INDUCE VOMITING. IMMEDIATELY transport the victim to a hospital.

>> OTHER: Since this chemical is a known or suspected carcinogen you should contact a physician for advice regarding the possible long term health effects and potential recommendation for medical monitoring. Recommendations from the

physician will depend upon the specific compound, its chemical, physical and toxicity properties, the exposure level, length of exposure, and the route of exposure. (NTP, 1992)

First Aid Measures

Inhalation First Aid

>> Fresh air, rest. Refer for medical attention.

Skin First Aid

>> Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention .

Eye First Aid

>> First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

Ingestion First Aid

>> Rinse mouth. Give one or two glasses of water to drink. Do NOT induce vomiting. Refer for medical attention .

5. Fire Fighting Measures

>> Vapor is heavier than air and may travel a considerable distance to a source of ignition and flash back. Liquid floats on water and may travel to a source of ignition and spread fire. /Ethyl acrylate, inhibited/

>> Excerpt from ERG Guide 129 [Flammable Liquids (Water-Miscible / Noxious); polymerization hazard]:

>> CAUTION: The majority of these products have a very low flash point. Use of water spray when fighting fire may be inefficient.

>> SMALL FIRE: Dry chemical, CO2, water spray or alcohol-resistant foam. Do not use dry chemical extinguishers to control fires involving nitromethane (UN1261) or nitroethane (UN2842).

>> LARGE FIRE: Water spray, fog or alcohol-resistant foam. Avoid aiming straight or solid streams directly onto the product. If it can be done safely, move undamaged containers away from the area around the fire.

>> FIRE INVOLVING TANKS, RAIL TANK CARS OR HIGHWAY TANKS: Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks in direct contact with flames. For massive fire, use unmanned master stream devices or monitor nozzles; if this is impossible, withdraw from area and let fire burn. (ERG, 2024)

>> Use water spray, powder, alcohol-resistant foam, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

6. Accidental Release Measures

Isolation and Evacuation:

Isolation and evacuation measures to take when a large amount of this chemical is accidentally released in an emergency.

>> Excerpt from ERG Guide 129 [Flammable Liquids (Water-Miscible / Noxious); polymerization hazard]:

>> IMMEDIATE PRECAUTIONARY MEASURE: Isolate spill or leak area for at least 50 meters (150 feet) in all directions.

>> LARGE SPILL: Consider initial downwind evacuation for at least 300 meters (1000 feet).

>> FIRE: If tank, rail tank car or highway tank is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions. (ERG, 2024)

Spillage Disposal:

Methods for containment and safety measures to protect workers dealing with a spillage of this chemical.

>> Evacuate danger area! Consult an expert! Personal protection: self-contained breathing apparatus. Remove all ignition sources. Do NOT let this chemical enter the environment. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

7. Handling And Storage

Safe Storage:

>> Fireproof. Cool. Keep in the dark. Store only if stabilized.

Storage Conditions:

>> Store in away from heat, oxidizers, and sunlight. Outside or detached storage is preferred. Separate from any oxidizers, peroxides, or other initiators. /Ethyl acrylate, inhibited/

8. Exposure Control/ Personal Protection

>> Ca See Appendix A

>> 25.0 [ppm]

PEL-TWA (8-Hour Time Weighted Average)

>> 25 ppm (100 mg/m³)

>> 5.0 [ppm]

TLV-STEL

>> 15.0 [ppm]

>> 5 ppm as TWA; 15 ppm as STEL; A4 (not classifiable as a human carcinogen).

TLV-TWA (Time Weighted Average)

>> 5 ppm [1986]

TLV-STEL (Short Term Exposure Limit)

>> 15 ppm [1986]

EU-OEL

>> 21 mg/m

MAK (Maximale Arbeitsplatz Konzentration)

>> 8.3 mg/m

>> ERPG-1: 0.01 ppm - one hour exposure limit: 1 = mild transient health effects or objectionable odor [AIHA]

>> ERPG-2: 30 ppm - one hour exposure limit: 2 = impaired ability to take protective action [AIHA]

>> ERPG-3: 300 ppm - one hour exposure limit: 3 = life threatening health effects [AIHA]

Inhalation Risk:

>> A harmful contamination of the air can be reached rather quickly on evaporation of this substance at 20 °C.

Effects of Short Term Exposure:

>> The substance is irritating to the eyes, skin and respiratory tract.

Effects of Long Term Exposure:

>> Repeated or prolonged contact may cause skin sensitization. Tumours have been detected in experimental animals but may not be relevant to humans.

Fire Prevention

>> NO open flames, NO sparks and NO smoking. Closed system, ventilation, explosion-proof electrical equipment and lighting. Do NOT use compressed air for filling, discharging, or handling. Use non-sparking handtools.

Exposure Prevention

>> AVOID ALL CONTACT!

Inhalation Prevention

>> Use ventilation, local exhaust or breathing protection.

Skin Prevention

>> Protective clothing. Protective gloves.

Eye Prevention

>> Wear safety spectacles or eye protection in combination with breathing protection.

Ingestion Prevention

>> Do not eat, drink, or smoke during work.

Exposure Control and Personal Protection

RD50 (Exposure concentration producing a 50% respiratory rate decrease)

>> 315.0 [mmHg]

Maximum Allowable Concentration (MAK)

>> 2.0 [ppm]

9. Physical And Chemical Properties

Molecular Weight:

>> 100.12

Exact Mass:

>> 100.052429494

Physical Description:

>> Ethyl acrylate, stabilized appears as a clear colorless liquid with an acrid odor. Flash point 60 °F. May polymerize exothermically if heated or contaminated. If the polymerization takes place inside a container, the container may rupture violently. Auto ignition temperature 721 °F (383 °C) (NTP). Less dense than water. Vapors heavier than air. Used to make paints and plastics.

>> COLOURLESS LIQUID WITH PUNGENT ODOUR.

Color/Form:

>> Colorless liquid

Odor:

>> Acrid penetrating odor

Boiling Point:

>> 211.6 °F at 760 mmHg (NTP, 1992)

>> 99 °C

Melting Point:

>> -96.2 °F (NTP, 1992)

>> -71 °C

Flash Point:

>> 48 °F (NTP, 1992)

>> 9 °C c.c.

Solubility:

>> 10 to 50 mg/mL at 70 °F (NTP, 1992)

>> Solubility in water, g/100ml at 20 °C: 1.5

Density:

>> 0.923 at 68 °F (USCG, 1999) - Less dense than water; will float

>> Relative density (water = 1): 0.92

Vapor Density:

>> 3.45 (NTP, 1992) - Heavier than air; will sink (Relative to Air)

>> Relative vapor density (air = 1): 3.45

Vapor Pressure:

>> 29.3 mmHg at 68 °F ; 40 mmHg at 79 °F (NTP, 1992)

>> Vapor pressure, kPa at 20 °C: 3.9

LogP:

>> log Kow = 1.32

>> 1.32

Stability/Shelf Life:

>> Easily polymerizes on standing; polymerization process speeded up by heat, light, and peroxides. If pure, the monomer can be stored below +10 °C without incurring polymerization.

Autoignition Temperature:

>> 721 °F (USCG, 1999)

>> 345 °C

Decomposition:

>> When heated to decomp it emits acrid smoke and irritating fumes.

Heat of Combustion:

>> 655.49 kcal/mol

Heat of Vaporization:

>> 8.27 kcal/mol

Surface Tension:

>> 0.025 DYNES/CM= 0.025 N/M @ 20 °C

Ionization Potential:

>> 10.30 eV

Polymerization:

Polymerization is a process of reacting monomer molecules together in a chemical reaction to form polymer chains or three-dimensional networks.

>> Hazardous polymerization may occur. Polymerization may be caused by elevated temperature, oxidizers, peroxides ... Uninhibited monomer vapor may form polymer in vents and other confined spaces. /Ethyl acrylate, inhibited/

Odor Threshold:

>> Odor Threshold Low: 0.0002 [mmHg]

>> Odor Threshold High: 0.0013 [mmHg]

>> Detection odor threshold from AIHA (mean = 0.00024 ppm)

Refractive Index:

>> Index of refraction: 1.4068 at 20 °C/D

Relative Evaporation Rate:

The rate at which a material will vaporize (evaporate, change from liquid to vapor), compared to the rate of vaporization of a specific known material.

>> 3.3 (butyl acetate= 1)

10. Stability And Reactivity

>> Highly flammable. Insoluble in water.

>> Highly Flammable

>> Polymerizable

11. Toxicological Information

Toxicity Summary:

>> Ethyl acrylate causes gastric lesions depending upon upon the rate of chemical delivery to stomach tissue as a result of interaction of the parent molecule or metabolites (other than hydrolysis products), with subcellular sites in stomach tissue (A2451).

EPA Provisional Peer-Reviewed Toxicity Values:

This section provides the EPA Provisional Peer-Reviewed Toxicity Values (PPRTVs) and links of related assessment documents.

Chemical Substance

>> Ethyl Acrylate

Reference Dose (RfD), Chronic

>> 5 x 10^-3 mg/kg-day

Reference Concentration (RfC), Chronic

>> 8 x 10^-3 mg/m^3

Reference Concentration (RfC), Subchronic

>> 8 x 10^-3 mg/m^3

PPRTV Assessment

>> PDF Document

Weight-Of-Evidence (WOE)

>> Suggestive evidence of carcinogenic potential

Last Revision

>> 2014

Evidence for Carcinogenicity:

Evidence that this chemical does or may cause cancer. The information here is collected from various sources by the Hazardous Substances Data Bank (HSDB).

>> NTP delisted ethyl acrylate as a suspected human carcinogen because the forestomach tumors in rats and mice appeared to arise from local tissue irritation and ulceration, rather than from a systemic toxicity, and occurred only at oral doses unlikely to be achieved by chronic human exposure. Ethyl acrylate remains an OSHA Select Carcinogen, due to its evaluation (Group 2B) by the IARC.

Carcinogen Classification:

This section provides the International Agency for Research on Cancer (IARC) Carcinogenic Classification and related monograph links. In the IARC Carcinogenic classification, chemicals are categorized into four groups: Group 1 (carcinogenic to humans), Group 2A (probably carcinogenic to humans), Group 2B (possibly carcinogenic to humans), and Group 3 (not classifiable as to its carcinogenicity to humans).

IARC Carcinogenic Agent

>> Ethyl acrylate

IARC Carcinogenic Classes

>> Group 2B: Possibly carcinogenic to humans

IARC Monographs

>> Volume 39: (1986) Some Chemicals Used in Plastics and Elastomers

>> Volume Sup 7: Overall Evaluations of Carcinogenicity: An Updating of IARC Monographs Volumes 1 to 42, 1987; 440 pages; ISBN 92-832-1411-0 (out of print)

>> Volume 71: (1999) Re-evaluation of Some Organic Chemicals, Hydrazine and Hydrogen Peroxide (Part 1, Part 2, Part 3)

>> Volume 122: (2019) Isobutyl Nitrite, β-Picoline, and Some Acrylates

>> 2B, possibly carcinogenic to humans. (L135)

Health Effects:

>> Thickened forestomach mucosa, forestomach inflammation and lesions, and abdominal adhesions; swelling of renal tubules and the liver, minor lesions on the liver and lung, and increased kidney weight may result from poisoning (L1242).

Exposure Routes:

>> The substance can be absorbed into the body by inhalation, through the skin and by ingestion.

>> inhalation, skin absorption, ingestion, skin and/or eye contact

Inhalation Exposure

>> Burning sensation. Cough. Shortness of breath. Sore throat.

Skin Exposure

>> Redness. Pain.

Eye Exposure

>> Redness. Pain. Blurred vision.

Ingestion Exposure

>> Abdominal pain. Diarrhoea. Nausea. Vomiting.

>> irritation eyes, skin, respiratory system; [potential occupational carcinogen]

Target Organs:

Organs that are affected by exposure to this chemical. Information in this section reflects human data unless otherwise noted.

>> Eyes, skin, respiratory system

Cancer Sites:

The site in which cancer develops due to exposure to this compound. Cancers are casually referred to based on their primary sites (e.g., skin, lung, breasts, prostate, colon and rectum).

>> [in animals: tumors of the forestomach]

Adverse Effects:

An adverse effect is an undesired harmful effect resulting from a medical treatment or other intervention.

>> Occupational hepatotoxin - Secondary hepatotoxins: the potential for toxic effect in the occupational setting is based on cases of poisoning by human ingestion or animal experimentation.

>> Dermatotoxin - Skin burns.

>> Lacrimator (Lachrymator) - A substance that irritates the eyes and induces the flow of tears.

>> Skin Sensitizer - An agent that can induce an allergic reaction in the skin.

>> Toxic Pneumonitis - Inflammation of the lungs induced by inhalation of metal fumes or toxic gases and vapors.

>> IARC Carcinogen - Class 3: Chemicals are not classifiable by the International Agency for Research on Cancer.

>> ACGIH Carcinogen - Not Classifiable.

Toxicity Data:

>> LC50 (rat) = 1,414 ppm/4H

Treatment:

Treatment when exposed to toxin

>> For eye contamination, flush eyes immediately with water. Irrigate each eye continuously with normal saline during transport. Do not use emetics. For ingestion, rinse mouth and administer 5 ml/kg up to 200 ml of water for dilution if the patient can swallow, has a strong gag reflex, and does not drool. Administer activated charcoal. (A569)

Interactions:

>> Pretreatment of rats with triorthotolyl phosphate potentiated the lethal action of inhaled methyl and ethyl acrylate. Carboxylesterases are important in detoxification of methyl and ethyl acrylate and the exposure to inhibitors of carboxylesterase may potentiate adverse effects of acrylate esters.

Antidote and Emergency Treatment:

>> Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand-valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR as necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. /Esters and related compounds/

Human Toxicity Excerpts:

>> /HUMAN EXPOSURE STUDIES/ Ethyl acrylate tested at 4% in petroleum produced no irritation after 48-hr closed patch test on human subjects. A maximization test was carried out on 24 volunteers. Material was tested at concentrations of 4% in petroleum and produced sensitization reactions in 10 of the 24.

Non-Human Toxicity Excerpts:

>> /LABORATORY ANIMALS: Acute Exposure/ The liquid monomer applied in quantity of 0.1 to 0.5 mL to rabbit (strain and sex unknown) corneas causes injury ... Limited to damage of the corneal epithelium.

Non-Human Toxicity Values:

>> LD50 Rat oral 760-1020 mg/kg

National Toxicology Program Studies:

Reports from the National Toxicology Program, an interagency program supported by three government agencies (NIH, FDA, and CDC) within the Department of Health and Human Services. This program plays a critical role in generating, interpreting, and sharing toxicological information about chemicals of public health concerns.

>> Carcinogenesis studies of ethyl acrylate were conducted by administering this test chemical in corn oil by gavage to groups of 50 male and 50 female F344/N rats and B6C3F1 mice at doses of 100 or 200 mg/kg. Ethyl acrylate was administered five times per week for 103 weeks. Groups of 50 rats and 50 mice of each sex received corn oil by gavage on the same schedule and served as vehicle controls. Survival of dosed male and female rats and mice was comparable with that of the corresponding vehicle controls. There was no evidence of systemic toxicity in the prechronic or in the 2-year studies. Compound-related increased incidences of hyperkeratosis, inflammation, and hyperplasia of the forestomach were observed in rats and mice in the prechronic as well as 2-year studies. In the 2-year studies, squamous cell papillomas and squamous cell carcinomas of the forestomach occurred at the site of chemical deposition with significant positive trends and increased incidences in dosed groups versus vehicle controls for both sexes of rats and mice. Nonneoplastic and neoplastic forestomach lesion frequencies were related to the concentration of ethyl acrylate in dosing solutions used. Significant negative trends for several common rodent tumors were found in treated animals in the 2-year studies. Under the conditions of these studies, ethyl acrylate was carcinogenic for the forestomach of F344/N rats and B6C3F1 mice, causing squamous cell carcinomas in male rats and male mice, squamous cell papillomas in male and female rats and male mice, and squamous cell papillomas or carcinomas (combined) in male and female rats and mice. Evidence for carcinogenicity was greater in males than in females. Ethyl acrylate also caused irritation of the forestomach mucosa in male and female rats and mice.

TSCA Test Submissions:

Under the Toxic Substances Control Act (TSCA), EPA has broad authority to issue regulations designed to require manufacturers (including importers) or processors to test chemical substances and mixtures for health and environmental effects. This section provides information on test reports submitted for this chemical under TSCA.

>> Chronic toxicity was evaluated in male and female Fischer 344 rats (115/sex/group) receiving whole body exposures to ethyl acrylate at nominal concentrations of 0, 25 or 75ppm in a dynamic air flow chamber. Animals were exposed 6 hours per day, 5 days per week, for 12 months beginning at age 7 to 9 weeks. Two male animals died spontaneously, one in the control group and one in the low dose group. Palpable masses were identified in one control group male and in two high dose females. Mean body weight gains of high dose groups were significantly lower than controls. There was no effect of treatment for all dosed rats as indicated by: absolute or relative organ weights, hematologic values, clinical chemistry values, urinalysis values or gross necropsy observations. Nasal lesions were observed in both exposure groups and exhibited a dose-response relationship.

Populations at Special Risk:

>> ... Certain medical conditions /chronic respiratory disease, skin disease, liver disease, kidney disease/ ... might place the employee at increased risk from ethyl acrylate exposure.

12. Ecological Information

Resident Soil (mg/kg)

>> 4.70e+01

Industrial Soil (mg/kg)

>> 2.10e+02

Resident Air (ug/m3)

>> 8.30e+00

Industrial Air (ug/m3)

>> 3.50e+01

Tapwater (ug/L)

>> 1.40e+01

MCL (ug/L)

>> 2.00e+00

Risk-based SSL (mg/kg)

>> 3.20e-03

Chronic Oral Reference Dose (mg/kg-day)

>> 5.00e-03

Chronic Inhalation Reference Concentration (mg/m3)

>> 8.00e-03

Volatile

>> Volatile

Mutagen

>> Mutagen

Fraction of Contaminant Absorbed in Gastrointestinal Tract

>> 1

Soil Saturation Concentration (mg/kg)

>> 2.50e+03

ICSC Environmental Data:

>> The substance is toxic to aquatic organisms.

Fish/Seafood Concentrations:

Concentrations of this compound in fish or seafood.

>> Ethyl acrylate was not detected in fresh mussels taken from Oarai coast, Ibaraki, Japan, July 31, 1985, but was detected at 0.07 ug/g wet weight after mussels were allowed to rot(1).

13. Disposal Considerations

Spillage Disposal

>> Evacuate danger area! Consult an expert! Personal protection: self-contained breathing apparatus. Remove all ignition sources. Do NOT let this chemical enter the environment. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

Disposal Methods

>> Generators of waste (equal to or greater than 100 kg/mo) containing this contaminant, EPA hazardous waste number U113, must conform with USEPA regulations in storage, transportation, treatment and disposal of waste.

>> A good candidate for liquid injection incineration at a temperature range of 650 to 1,600 °C and a residence time of 0.1 to 2 seconds. Also, a good candidate for rotary kiln incineration at a temperature range of 820 to 1,600 °C and residence times of seconds for liquids and gases, and hours for solids. Also, a good candidate for fluidized bed incineration at a temperature range of 450 to 980 °C and residence times of seconds for liquids and gases, and longer for solids.

>> Ethyl Acrylate is a waste chemical stream constituent which may be subjected to ultimate disposal by controlled incineration. /From table/

>> PRECAUTIONS FOR "CARCINOGENS": There is no universal method of disposal that has been proved satisfactory for all carcinogenic compounds & specific methods of chem destruction ... published have not been tested on all kinds of carcinogen-containing waste. ... summary of avail methods & recommendations ... /given/ must be treated as guide only. /Chemical Carcinogens/

>> For more Disposal Methods (Complete) data for Ethyl acrylate (10 total), please visit the HSDB record page.

14. Transport Information

DOT

Ethyl acrylate
3
UN Pack Group: II
Reportable Quantity of 1000 lb or 454 kg

IATA

Ethyl acrylate
3,
UN Pack Group: II

15. Regulatory Information

TSCA Requirements:

This section provides information on requirements concerning this chemical under the Toxic Substances Control Act (TSCA) of 1976. TSCA provides EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics and pesticides.

>> Pursuant to section 8(d) of TSCA, EPA promulgated a model Health and Safety Data Reporting Rule. The section 8(d) model rule requires manufacturers, importers, and processors of listed chemical substances and mixtures to submit to EPA copies and lists of unpublished health and safety studies. Ethyl acrylate is included on this list. Effective date 4/13/89; Sunset date: 6/30/98.

Regulatory Information

The Australian Inventory of Industrial Chemicals

>> Chemical: 2-Propenoic acid, ethyl ester, homopolymer

The Australian Inventory of Industrial Chemicals

>> Chemical: 2-Propenoic acid, ethyl ester

REACH Registered Substance

>> Status: Active Update: 11-05-2023 https://echa.europa.eu/registration-dossier/-/registered-dossier/15431

>> Status: Active Update: 01-03-2017 https://echa.europa.eu/registration-dossier/-/registered-dossier/5359

New Zealand EPA Inventory of Chemical Status

>> 2-Propenoic acid, ethyl ester: HSNO Approval: HSR001042 Approved with controls

New Zealand EPA Inventory of Chemical Status

>> 2-Propenoic acid, ethyl ester, homopolymer: Does not have an individual approval but may be used as a component in a product covered by a group standard. It is not approved for use as a chemical in its own right.

16. Other Information

Toxic Combustion Products:

Toxic products (e.g., gases and vapors) produced from the combustion of this chemical.

>> Toxic and irritating vapors generated when heated.

Other Safety Information

Chemical Assessment

>> IMAP assessments - 2-Propenoic acid, ethyl ester, homopolymer: Environment tier I assessment

>> IMAP assessments - 2-Propenoic acid, ethyl ester, homopolymer: Human health tier I assessment

Chemical Assessment

>> IMAP assessments - 2-Propenoic acid, ethyl ester: Human health tier II assessment

"The information provided is believed to be accurate but is not comprehensive and should be used as a reference. It reflects our current knowledge and is intended for safety guidance related to the product. This document does not constitute a warranty of the product's properties. Ionz is not responsible for any damages resulting from handling or contact with the product incorrectly."