

Material Safety Data Sheet

HAZARD WARNINGS	RISK PHRASES	PROTECTIVE CLOTHING
 	Corrosive to eyes and skin on contact. Harmful compound, minimize exposure.	

Section I. Chemical Product and Company Identification

Chemical Name	2-Ethylhexanoic Acid		
Catalog Number	E0120	Supplier	TCI America 9211 N. Harborside St. Portland OR 1-800-423-8616
Synonym	2-Butylbutanoic Acid	In case of Emergency Call Chemtrec® (800) 424-9300 (U.S.) (703) 527-3887 (International)	
Chemical Formula	CH ₃ (CH ₂) ₃ CH(C ₂ H ₅)COOH		
CAS Number	149-57-5		

Section II. Composition and Information on Ingredients

Chemical Name	CAS Number	Percent (%)	TLV/PEL	Toxicology Data
2-Ethylhexanoic Acid	149-57-5	Min. 99.0 (GC)	Not available.	Rat LD ₅₀ (oral) 3000mg/kg Rabbit LD ₅₀ (dermal) 1260µl/kg Guinea Pig LD ₅₀ (dermal) 6300µl/kg

Section III. Hazards Identification

Acute Health Effects	Corrosive to skin, eyes, and respiratory system. Liquid or spray mist may produce tissue damage, particularly in mucous membranes of the eyes, mouth and respiratory tract. Skin contact may produce burns. Eye contact can result in corneal damage or blindness. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Corrosive materials may cause serious injury if ingested. Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.
Chronic Health Effects	CARCINOGENIC EFFECTS : Not available. MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Not available. DEVELOPMENTAL TOXICITY Reproductive effects: Rat TDLo (oral) 5000 mg/kg. female 6-15 days of pregnancy. Effects on embryo or fetus - Fetotoxicity Rat TDLo (oral) 1803 mg/kg. female 12 days of pregnancy. Specific developmental Abnormalities - Musculoskeletal system Specific developmental Abnormalities - Cardiovascular (circulatory) system. Specific developmental Abnormalities - Urogenital system Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

Section IV. First Aid Measures

Eye Contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Skin Contact	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Inhalation	If the victim is not breathing, perform mouth-to-mouth resuscitation. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention if respiration problems do not improve.
Ingestion	DO NOT INDUCE VOMITING. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. SEEK IMMEDIATE MEDICAL ATTENTION in case of ingestion of a radioactive material.

Section V. Fire and Explosion Data

Flammability	May be combustible at high temperature.	Auto-Ignition	Not available.
Flash Points	114°C (237.2°F).	Flammable Limits	LOWER: 8.64%
Combustion Products	These products are toxic carbon oxides (CO, CO ₂).		
Fire Hazards	Not available.		
Explosion Hazards	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.		
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet. Consult with local fire authorities before attempting large scale fire-fighting operations.		

Section VI. Accidental Release Measures

Spill Cleanup Instructions	Corrosive liquid. Harmful liquid. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. DO NOT get water inside container. DO NOT touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all sources of ignition. Consult federal, state, and/or local authorities for assistance on disposal.
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Section VII. Handling and Storage

Handling and Storage Information	CORROSIVE. HARMFUL. Keep container dry. Keep away from heat. Mechanical exhaust required. When not in use, tightly seal the container and store in a dry, cool place. Avoid excessive heat and light. DO NOT ingest. Do not breathe gas/fumes/ vapor/spray. Never add water to this product. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Treat symptomatically and supportively. Always store away from incompatible compounds such as oxidizing agents, reducing agents, alkalis (bases).
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Section VIII. Exposure Controls/Personal Protection

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash station and safety shower is proximal to the work-station location.
Personal Protection	Face shield. Lab coat. Vapor respirator. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product. Be sure to use a MSHA/NIOSH approved respirator or equivalent. 
Exposure Limits	Not available.

Section IX. Physical and Chemical Properties

Physical state @ 20°C	Liquid.	Solubility	Soluble in ethyl ether, carbon tetrachloride. Slightly soluble in ethanol.
Specific Gravity	0.9031 (water=1)		
Molecular Weight	144.21	Partition Coefficient	Not available.
Boiling Point	113 to 118°C (235.4 to 244.4°F)	Vapor Pressure	1.3 kPa (@ 20°C)
Melting Point	Not available.	Vapor Density	4.98 (Air = 1)
Refractive Index	1.4241 @ 20°C	Volatility	Not available.
Critical Temperature	Not available.	Odor	Mild.
Viscosity	Not available.	Taste	Not available.

Section X. Stability and Reactivity Data

Stability	This material is stable if stored under proper conditions. (See Section VII for instructions)
Conditions of Instability	Avoid excessive heat and light.
Incompatibilities	Reactive with oxidizing agents, reducing agents, alkalis (bases).

Section XI. Toxicological Information	
RTECS Number	MO7700000
Routes of Exposure	Eye Contact. Ingestion. inhalation. Skin contact.
Toxicity Data	Rat LD ₅₀ (oral) 3000mg/kg Rabbit LD ₅₀ (dermal) 1260µl/kg Guinea Pig LD ₅₀ (dermal) 6300µl/kg
Chronic Toxic Effects	CARCINOGENIC EFFECTS : Not available. MUTAGENIC EFFECTS : Not available. TERATOGENIC EFFECTS : Not available. DEVELOPMENTAL TOXICITY Reproductive effects: Rat TDL ₀ (oral) 5000 mg/kg. female 6-15 days of pregnancy. Effects on embryo or fetus - Fetotoxicity Rat TDL ₀ (oral) 1803 mg/kg. female 12 days of pregnancy. Specific developmental Abnormalities - Musculoskeletal system Specific developmental Abnormalities - Cardiovascular (circulatory) system. Specific developmental Abnormalities - Urogenital system Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.
Acute Toxic Effects	Corrosive to skin, eyes, and respiratory system. Liquid or spray mist may produce tissue damage, particularly in mucous membranes of the eyes, mouth and respiratory tract. Skin contact may produce burns. Eye contact can result in corneal damage or blindness. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Corrosive materials may cause serious injury if ingested. Harmful if ingested or inhaled. Minimize exposure to this material. Severe overexposure can result in injury or death. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

Section XII. Ecological Information	
Ecotoxicity	Not available.
Environmental Fate	2-Ethylhexanoic acid may be released into the environment in various waste streams from its production and use in alkyd resins and as a chemical intermediate. If released to the atmosphere, 2-ethylhexanoic acid is expected to exist solely in the vapor phase in the ambient atmosphere based on a measured vapor pressure of 0.03 mm Hg at 20 deg C. Vapor-phase 2-ethylhexanoic acid will be degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals with an estimated half-life of 2.0 days. If released to soil, 2-ethylhexanoic acid is expected to have low mobility based on an estimated Koc of 650. 2-Ethylhexanoic acid has the potential to volatilize from moist soil surfaces based on an estimated Henry's Law constant of 2.9X10 ⁻⁶ atm-cu m/mole at 20 deg C. Volatilization of 2-ethylhexanoic acid from dry soil surfaces is not expected to occur based on this compound's vapor pressure. 2-Ethylhexanoic acid has the potential to biodegrade in water and soil. If released into water, 2-ethylhexanoic acid is expected to adsorb to suspended solids and sediment in the water column based on an estimated Koc of 650. The estimated Henry's Law constant for this compound indicates that 2-ethylhexanoic acid is expected to volatilize slowly from water surfaces. Estimated volatilization half-lives for a model river and model lake are 16 and 120 days, respectively. An estimated BCF of 60 indicates the potential for bioconcentration of 2-ethylhexanoic acid in aquatic organisms is moderate, not high. 2-Ethylhexanoic acid is not expected to undergo hydrolysis in the environment due to the lack of hydrolyzable functional groups. Occupational exposure to 2-ethylhexanoic acid may occur through dermal contact with this compound at workplaces where 2-ethylhexanoic acid is produced or used. The general population may be exposed to 2-ethylhexanoic acid via inhalation of ambient air, and ingestion of contaminated food and drinking water.

Section XIII. Disposal Considerations	
Waste Disposal	Recycle to process, if possible. Consult your local regional authorities. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. Observe all federal, state and local regulations when disposing of the substance.

Section XIV. Transport Information	
DOT Classification	Class 8: Corrosive material
PIN Number	UN3265
Proper Shipping Name	Corrosive liquid, acidic, organic, n.o.s.
Packing Group (PG)	III
DOT Pictograms	

Section XV. Other Regulatory Information and Pictograms

TSCA Chemical Inventory (EPA)	This compound is ON the EPA Toxic Substances Control Act (TSCA) inventory list.
WHMIS Classification (Canada)	CLASS E: Corrosive liquid.
EINECS Number (EEC)	205-743-6
EEC Risk Statements	R34- Causes burns. R20/21/22- Harmful by inhalation, in contact with skin and if swallowed.
Japanese Regulatory Data	ENCS No. 2-0608

Section XVI. Other Information**Version 1.0****Validated on 1/4/2001.****Printed 2/16/2005.****Notice to Reader**

TCI laboratory chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our MSDS sheets are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated MSDS sheets for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, facial mask, fume hood). For proper handling and disposal, always comply with federal, state, and local regulations.

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