

SAFETY DATA SHEET**Product: 2-ETHYLHEXANOIC ACID**

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Revision 1, itens 2 and 15, statement H361d to H361.**1- IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

Identification of the substance:

Product name: **2-ETHYLHEXANOIC ACID**

Use of the substance: Applications with some heavy metals, which determine respective end uses, include paint driers and pvc stabilizers. 2-Ethylhexanoic acid esters, especially those obtained from di-Glycols, tri-Glycols and polyethelene glycol, besides its lubricant properties, are also excellent plasticizers to PVC, nitrocellulose, chlorinated rubber and propylene.

Supplier identification

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2- HAZARDS IDENTIFICATION

Most important hazards: Suspected of damaging the unborn child.

Product effects

Adverse human health effects: Harmful if ingested and absorbed through the skin; inflammation/edema/spasms of larynx and bronchi; pulmonar edema, sensation of burning, coughing, difficult breath, asthma, headache, nausea and vomits. Irritating and may cause burns in contact to skin, digestive tract and eyes. Toxic to reproduction.

Environmental effects: Harmful to aquatic life.

Physical and chemical hazards: May produce acrid and toxic smoke and fumes if burning.

Specific hazards: Not applicable.

Main symptoms: Following ingestion it may cause abdominal pain; burning sensation and diarrhea. Redness, itching and may cause destruction of mucous membranes, eyes and skin. Mild exposure may cause dyspnea, pleuritic chest pain, cough and bronchospasm. Severe inhalation may cause upper airway edema and burns, hypoxia, stridor, pneumonitis, tracheobronchitis, and rarely acute lung injury or persistent pulmonary function abnormalities. Pulmonary dysfunction similar to asthma has been reported.

Classification of the chemical product:

Classification system adopted: European Chemical Bureau – European Community: Directive 67/548/EEC (substances).

Hazard Class and Category: Reproductive toxicity - Category 3

Risk Phrases: R63: Possible risk of harm to the unborn child.

Classification system adopted: REGULATION (EC) No 1272/2008 of the European Parliament and of the Council, of 16 December 2008.

Hazard Class and Category: Reproductive toxicity – Category 2

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Hazard statements: H361: Suspected of damaging fertility or the unborn child.

3- COMPOSITION/INFORMATION ON INGREDIENTS

Substance name:	2-Ethylhexanoic Acid
Chemical formula:	C ₈ H ₁₆ O ₂
Synonym:	2-Ethylhexoic acid; 2-Ethylcaproic acid; 2-Buthylbutanoic acid; Buthyl-ethyl-acetic acid; Alpha-ethylcaproic acid; Alphaethylhexanoic acid; Ethylhexanoic acid; Ethylhexoic acid; 3-heptanecarboxilic acid.
Concentration:	99,5%
CAS Number:	149-57-5
EINECS number:	205-743-6
Classification:	Directive 67/548/EEC Repr. Cat. 3; R63. REGULATION (EC) No 1272/2008 Repr. 2; H361.

4- FIRST-AID MEASURES

Exposure routes	
Inhalation:	Remove to fresh air and keep at rest. Monitor respiratory function. If breathing is difficult, give oxygen. If necessary, give artificial respiration. Seek medical attention. Take this SDS.
Skin contact:	Remove contaminated clothing and shoes. Wash with plenty of soap and water. Seek medical attention. Take this SDS.
Eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention. Take this SDS.
Ingestion:	Rinse mouth of victim with plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Seek medical attention. Take this SDS.

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Protection of first-aiders
and/or special notes to a
physician:

Avoid contact with this product while helping the victim; keep the victim warmed. Symptomatic treatment should include, above all, measured of support as correction of hydro electrolytic and metabolic disturbances.

5- FIRE-FIGHTING MEASURES

Suitable extinguishing media: Combustible if heated. Compatible with dry chemical, water spray, carbon dioxide and polyvalent foam.

Special hazard arising from
the chemical: May produce acrid and toxic smoke and fumes if burning.

Special protective equipment
for fire-fighters: Use self-contained breathing apparatus (SCBA) operated in positive pressure mode and complete protective clothing.

6- ACCIDENTAL RELEASE MEASURES

Personal precautions: Remove ignition sources. Do not touch damage containers or spilled material unless wearing appropriate protective clothing. Avoid contact with skin and eyes.
Use protective gloves, safety goggles and protective clothing.

Environmental precautions Prevent from entering into watercourses, sewerage and confined areas.

Cleaning up methods:

Appropriate containment
techniques: Collect product and place in appropriate seal containers. In case of significant spill contain it with earth dikes, sand, vermiculite or other inert material.

Appropriate clean up
procedures: Discard any product, waste, container or wrapper available in an appropriate manner as not to harm the environment, according to federal regulations, state and local.

Inappropriate containment or
clean up techniques: Do not discard directly in the environment or the sewage network.

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7- HANDLING AND STORAGE

Appropriate technical measures for handling

Precautions for safe handling:

Avoid inhalation, contact with skin and eyes. Not handle near incompatible materials. Use proper personal protective equipment as indicated in Section 8.

Hygiene measures:

Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wash hands before eating, drinking, smoking or going to the toilet. Take off all contaminated clothing and wash before reuse.

Appropriate technical measures for storage

Conditions for safe storage:

Keep only in original container, in a cool, dry, well ventilated place. Keep away from food. Store locked up. Keep out of reach of children. Avoid static electricity by grounding. Damaged or perforated packages should be emptied.

Incompatible products:

Alkaline substances, oxidizers (like nitric acid, peroxides, sulfuric acid, perchloric acid etc.) and reducing agents, cyanides, sulfides, ammonia and amines.

Packaging compatibilities

Recommended use:

Metal drum; glass vessel. Other packages, consult the supplier.

8- EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values:

Substance	ACGIH TLV-TWA (mg/m ³)
2-ethylhexanoic	5

Exposure controls:

Engineering controls

The best protection is to enclose operations and/or provide local exhaust

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measures: ventilation at the site of chemical release. It is recommended safety shower and eye bath available near work side. Engineering controls are the most effective way of reducing product exposure.

Personal protective equipment:

Eye/face protection: Protective safety goggles.

Skin/body protection: Protective gloves of PVC, nitrilic rubber or neoprene and protective clothing. PVC or trevira apron. In case of intense handling, wear PVC or Tyvek clothes (according to the recommended specification) and PVC boots.

Respiratory protection: Half face respirator for organic vapors. In cases of high potential of exposure use a supplied-air respirator, full facepiece, operated in positive-pressure mode.

Special precautions: Avoid wear contact lenses while using this product.

Hygiene measures: Do not eat, drink or smoke while using this product. Wash hands before eating, drinking, smoking or going to the toilet. Take off all contaminated clothing and wash before reuse.

9- PHYSICAL AND CHEMICAL PROPERTIES

General information:

Physical state: Liquid

Colour: Colorless

Odour: Moderately irritant

Important health, safety and environmental information

pH: 3 (20°C; 1.4 g/l)

Boiling point: 228°C (760 mm Hg)

Flash point: 118°C (open cup)

Ignition point: 371°C

Explosive properties (limits): Lower = 0,8% v/v
Upper = 6.0% v/v

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Vapor pressure (kPa):	0.004 at 20°C
Specific gravity:	0.9071 at 20 °C
Solubility (ies):	Soluble in the majority of organic solvents
Solubility in water:	1.4g/l
Viscosity (cP):	9.5 at 20 °C
Vapor density (water=1):	4.98 (Air = 1)
Melting point:	- 59°C
Refraction index:	1.425 at 20 °C

10- STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and handling. Polymerization will not occur.
Materials to avoid:	Alkaline substances, oxidizers (like nitric acid, peroxides, sulfuric acid, perchloric acid etc.) and reducing agents, cyanides, sulfides, ammonia and amines.
Hazardous decomposition products:	When heated produces acrid and toxic smoke and fumes

11- TOXICOLOGICAL INFORMATION

Acute toxicity:	LD ₅₀ (oral, rats): 1600 to 3000mg/Kg LD ₅₀ (oral, rabbits): 1300mg/Kg LD ₅₀ (dermal, rabbit): 1260mg/Kg Harmful if ingested and absorbed through the skin; inflammation/edema/spasms of larynx and bronchi; pulmonar edema, sensation of burning, coughing, difficult breath, asthma, headache, nausea and vomits. Inhalation of the vapour can cause nausea and headache and can aggravate a pre-existing respiratory condition.
Skin corrosion/irritation:	Irritating and may cause burns in contact to skin. Contact with the product can aggravate a pre-existing condition.

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Respiratory or skin sensitization:	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Serious eye damage/irritation:	Irritating and may cause damage to eyes.
Carcinogenicity:	Not listed as carcinogenic (IARC)
Reproductive toxicity:	May damage the unborn child.

12- ECOLOGICAL INFORMATION

Ecotoxicity:	Harmful to aquatic life. LC ₅₀ (<i>Pimephales promelas</i> , 96h) = 70mg/L
Mobility:	Low mobility in soil.
Persistence/degradability:	It is expected that this product present rapid degradability. Low potential of bioconcentration.
Bioaccumulative potential:	BCF: 3 Log Kow of 2.64

13- DISPOSAL CONSIDERATIONS

Recommended methods for safe and environmentally preferred disposal	
Disposal methods:	Prior to implementing land disposal of waste residue (including waste sludge), consult local legislation for adequate disposal methods. Empty containers can retain product residues and shall be disposed in accordance with the provisions proposed for the product.

14- TRANSPORT INFORMATION

International regulations	
Land:	UN - "United Nations" Recommendations on the TRANSPORT OF DANGEROUS GOODS. Model Regulations, 15th Edition, 2007. European Agreement Concerning the International Carriage of

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Dangerous Goods by Road (ADR), 2009.

Sea: **IMO - "International Maritime Organization"
International Maritime Dangerous Goods Code (IMDG Code) -
Incorporating Amendment 34-08; 2008 Edition.**

Air: **IATA - "International Air Transport Association"
Dangerous Goods Regulation (DGR) - 51th Edition, 2010.**

UN classification number: Not regulated

15- REGULATORY INFORMATION

Regulatory: REGULATION (EC) No 1907/2006 of the European Parliament and of the Council, of 18 December 2006.

Labeling: health, safety and environmental information

Hazard Classes: Reproductive toxicity, hazard category 2.

Hazard Pictograms:



GHS08

Signal word: Warning.

Hazard statements: H361: Suspected of damaging fertility or the unborn child.

Precautionary statements: P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P281: Use personal protective equipment as required.
P308+P313: IF exposed or concerned: Get medical advice/attention.
P405: Store locked up.
P501: Dispose of contents/container in accordance to local legislation.

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16- OTHER INFORMATION

This information had been based on the current knowledge of the product and intended to describe safety, health and environmental hazards.

Warns that the manuscript of any chemical substance requires the previous knowledge of its hazards for the user. It is contained in the using company of the product promotes training of its employees about possible risks come upon of the product.

SDS elaborated by InterTox: October, 2009 – <http://www.intertox.com.br>

Abbreviations:

ACGIH – American Conference of Governmental Industrial Hygienists;

BCF – Bioconcentration Factor

CAS – Chemical Abstracts Service

EINECS – European INventory of Existing Commercial chemical Substances

IARC – International Agency for Research on Cancer

LC₅₀ – Lethal Concentration 50

LD₅₀ – Lethal Dose 50

STOT – Specific Target Organ Toxicity

TLV – Threshold Limit Value

TWA – Time Weighted Average

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