SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product name: Eastman(TM) 2-Ethylhexanoic Acid

Product No.: EAN 904442. P0099605

Synonyms, Trade Names: 00996-00

Additional identification

Chemical name: 2-ethylhexanoic acid
CAS-No.: 149-57-5

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Chemical Intermediate, Additive
Uses advised against: None known.

Details of the supplier of the safety data sheet

Manufacturer / Supplier
Eastman Chemical Company
200 South Wilcox Drive
Kingsport, TN 37660-5280 US
+14232292000

Visit our website at www.EASTMAN.com or email emnmsds@eastman.com

Emergency telephone number:
For emergency health, safety, and environmental information, call 1-423-229-4511 or 1-423-229-2000.

For emergency transportation information, in the United States: call CHEMTREC at 800-424-9300 or call 423-229-2000.

SECTION 2: Hazards identification

Hazard classification:

Health hazards
Toxic to reproduction Category 2

OSHA Specified Hazards: not applicable

Warning label items including precautionary statement:

Pictogram:

Signal words: WARNING!
Hazard Statement(s):  H361d: Suspected of damaging the unborn child.

Precautionary statement:

Prevention:  
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.

Response:  
P308+P313: IF exposed or concerned: Get medical advice/attention.

Storage:  
P405: Store locked up.

Disposal:  
P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC):  None known.

SECTION 3: Composition/information on ingredients

Substances / Mixtures

General information:

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Concentration</th>
<th>Additional identification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-ethylhexanoic acid</td>
<td>100%</td>
<td>CAS-No.: 149-57-5</td>
<td>#</td>
</tr>
</tbody>
</table>

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

This substance has workplace exposure limit(s).

SECTION 4: First aid measures

Description of first aid measures

Inhalation:  Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

Eye contact:  Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Get medical attention if symptoms persist.

Skin contact:  Wash with soap and water. Get medical attention if symptoms occur.

Ingestion:  Seek medical advice.

Most important symptoms and effects, both acute and delayed:  Symptoms may be delayed.

Indication of any immediate medical attention and special treatment needed

Hazards:  None known.

Treatment:  Treat symptomatically.
SECTION 5: Firefighting measures

General fire hazards: None known.

Extinguishing media


Unsuitable extinguishing media: None known.

Special hazards arising from the substance or mixture: None known.

Advice for firefighters

Special fire fighting procedures: None known.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures: Wear appropriate personal protective equipment.

Environmental precautions: Avoid release to the environment.

Methods and material for containment and cleaning up: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Large Spillages: Flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.

Notification Procedures: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

SECTION 7: Handling and storage:

Precautions for safe handling: Do not taste or swallow. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities: Keep container closed. Keep away from food, drink and animal feeding stuffs.

Specific end use(s): Chemical Intermediate Additive
SECTION 8: Exposure controls/personal protection

Control parameters

Occupational exposure limits

Country specific exposure limits have not been established or are not applicable unless listed below.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Type</th>
<th>Exposure Limit values</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-ethylhexanoic acid -</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>US. ACGIH Threshold Limit Values (01 2010)</td>
</tr>
<tr>
<td>Inhalable fraction and vapor.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Exposure controls

Appropriate engineering controls:

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

General information: Eye bath. Washing facilities.

Eye/face protection: It is a good industrial hygiene practice to minimize eye contact.

Skin protection

Hand protection: It is a good industrial hygiene practice to minimize skin contact.

Other: No data available.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

Hygiene measures: Observe good industrial hygiene practices.

Environmental Controls: No data available.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical State: Liquid

Form: Liquid

Color: Colorless

Odor: Mild
Odor Threshold: No data available.

pH: strongly acidic

Freezing Point: -118 °C

Boiling Point: 223 °C

Flash Point: 118.3 °C (Pensky-Martens Closed Cup)

Evaporation Rate: Not determined.

Flammability (solid, gas): No data available.

Flammability Limit - Upper (%)(V): 8.64 %

Flammability Limit - Lower (%)(V): 1.04 %

Vapor pressure: 0.011 mbar (20 °C)

Vapor density (air=1): 5.0

Specific Gravity: 0.908 (20 °C)

Solubility (ies)
- Solubility in Water: 0.025 g/l (25 °C)
- Solubility (other): No data available.

Partition coefficient (n-octanol/water): Pow: 436.5  log Pow: 2.64

Autoignition Temperature: 371 °C (ASTM D2155)

Decomposition Temperature: (HPDTA) No exotherm to boiling

Dynamic Viscosity: No data available.

Kinematic viscosity: Not determined.

Explosive properties: No data available.

Oxidizing properties: No data available.

### SECTION 10: Stability and reactivity

**Reactivity:** None known.

**Chemical stability:** Stable

**Possibility of hazardous reactions:** None known.

**Conditions to avoid:** None at ambient temperatures.

**Incompatible materials:** Strong oxidizing agents.

**Hazardous decomposition products:** Carbon Dioxide. Carbon Monoxide.

### SECTION 11: Toxicological information

**Information on likely routes of exposure**

**Inhalation:** None known.

**Ingestion:** None known.

**Skin contact:** None known.

**Eye contact:** None known.
Information on toxicological effects

Acute Toxicity

Oral
Product: Oral LD-50: (Rat, Female): 2,043 mg/kg

Dermal
Product: Dermal LD-50: (Rat): > 2,000 mg/kg

Inhalation
Product: LC50 (Rat, 8 h): > 0.11 mg/l

Repeated dose toxicity
Product: No data available.
  Specified substance(s)
  2-ethylhexanoic acid: No data available.

Skin corrosion/irritation:
Product: (Rabbit, 24 h): Slight

Serious eye damage/eye
irritation:
Product: (Rabbit, 24 h): none

Respiratory or skin
sensitization:
Product: Skin Sensitization; (Guinea Pig) - non-sensitizing

Mutagenicity

In vitro
Product: No data available.
  Specified substance(s)
  2-ethylhexanoic acid: No data available.

In vivo
Product: No data available.
  Specified substance(s)
  2-ethylhexanoic acid: No data available.

Carcinogenicity
Product: No data available.
  Specified substance(s)
  2-ethylhexanoic acid: No data available.

Reproductive toxicity
Product: Suspected of damaging the unborn child.

Specific target organ toxicity - single exposure
Product: No data available.
  Specified substance(s)
  2-ethylhexanoic acid: No data available.
Specific target organ toxicity - repeated exposure
Product: No data available.
Specified substance(s)
2-ethylhexanoic acid No data available.

Aspiration hazard
Product: No data available.
Specified substance(s)
2-ethylhexanoic acid No data available.

Other adverse effects: No data available.

SECTION 12: Ecological information

Toxicity

Acute toxicity

Fish
Product: LC-50 (Oryzias latipes, 96 h): > 100 mg/l

Aquatic invertebrates
Product: EC-50 (Water Flea, 48 h): 85.4 mg/l
          EC-50 (Water Flea, 48 h): 106 mg/l

Chronic Toxicity

Fish
Product: No data available.
Specified substance(s)
2-ethylhexanoic acid No data available.

Aquatic invertebrates
Product: EC-50 (Water Flea, 21 d): 75 mg/l
          NOEC (Water Flea, 21 d): 25 mg/l
          LOEC (Water Flea, 21 d): 63 mg/l

Toxicity to Aquatic Plants
Product: ErC50 (Scenedesmus subspicatus, 72 h): 49.3 mg/l

Persistence and degradability

Biodegradation
Product: 99 % (28 d)

Biological Oxygen Demand
Product: No data available.
Specified substance(s)
2-ethylhexanoic acid No data available.

Chemical Oxygen Demand
Product: No data available.
Specified substance(s)
2-ethylhexanoic acid No data available.
BOD/COD ratio
Product
Specified substance(s)
2-ethylhexanoic acid
No data available.

Bioaccumulative potential
Product:
Specified substance(s)
2-ethylhexanoic acid
No data available.

Mobility in soil:
No data available.

Known or predicted distribution to environmental compartments
2-ethylhexanoic acid
No data available.

Results of PBT and vPvB assessment:
2-ethylhexanoic acid
No data available.

Other adverse effects:
No data available.

SECTION 13: Disposal considerations
Waste treatment methods
General information: No data available.
Disposal methods: Dispose of waste and residues in accordance with local authority requirements. Incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied.

SECTION 14: Transport information

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

DOT
Class not regulated

IMDG - International Maritime Dangerous Goods Code
Class not regulated

IATA
Class not regulated
SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture:

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.
WHMIS (Canada) Status: controlled
WHMIS (Canada) Hazard Classification: D/2/A

SARA 311-312 Hazard Classification(s):
delayed (chronic) health hazard

US EPCRA (SARA Title III) Section 313 - Toxic Chemical List: NONE

OSHA: hazardous

TSCA (US Toxic Substances Control Act): This product is listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act): This product is listed on the DSL. Any impurities present in this product are exempt from listing.

AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme): This product is listed on AICS or otherwise complies with NICNAS.

MITI (Japanese Handbook of Existing and New Chemical Substances): This product is listed in the Handbook or has been approved in Japan by new substance notification.

ECL (Korean Toxic Substances Control Act): This product is listed on the Korean inventory or otherwise complies with the Korean Toxic Substances Control Act.KE-13740

Philippines Inventory (PICCS): This product is listed on the Philippine Inventory or otherwise complies with PICCS.

Inventory of Existing Chemical Substances in China: All components of this product are listed on the Inventory of Existing Chemical Substances in China (IECSC).

SECTION 16: Other information

HMIS® Hazard Ratings: Health - 1*, Flammability - 1, Chemical Reactivity - 0

HMIS® rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

Revision Information: Not relevant.

Key literature references and sources for data: No data available.

Training information: No data available.
Issue date: 10/20/2014
SDS No.: 
Disclaimer: This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.