

Revision Date 09-Nov-2010

Revision Number 1

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identifier**

**Product Description:** 2-Ethylhexanal  
**Cat No.** 410090000; 410090010; 410090050; 410092500  
**Synonyms** 2-Ethylcapronaldehyde; 2-Ethylhexylaldehyde; Hexanal, 2-ethyl-

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

**Recommended Use** Laboratory chemicals  
**Uses advised against** No Information available

**Details of the supplier of the safety data sheet**

**Company**

Acros Organics BVBA  
 Janssen Pharmaceuticaaan 3a  
 2440 Geel, Belgium

**E-mail address** begel.sdsdesk@thermofisher.com

**Emergency Telephone Number**

For information in the US, call: 800-ACROS-01  
 For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99  
 Emergency Number, US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300  
 CHEMTREC Phone Number, Europe: 703-527-3887

## 2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture**

**REGULATION (EC) No 1272/2008**

Skin Corrosion / irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2A
Specific target organ systemic toxicity (single exposure)	Category 3
Flammable liquids.	Category 3

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

*For the full text of the R phrases mentioned in this Section, see Section 16*

**Symbol(s)** Xi - Irritant  
**R -phrase(s)** R10 - Flammable  
**Risk Combination Phrases** R36/37/38 - Irritating to eyes, respiratory system and skin

## 2. HAZARDS IDENTIFICATION

### Label Elements



### Signal Word

**Warning**

### Hazard Statements

H335 - May cause respiratory irritation  
 H319 - Causes serious eye irritation  
 H315 - Causes skin irritation  
 H226 - Flammable liquid and vapor

### Precautionary Statements - EU (§28, 1272/2008)

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
 P302+ P352 - IF ON SKIN: Wash with plenty of soap and water  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

### Other Hazards

No information available.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC No.	Weight %	CAS-No	Classification	GHSCLAS	REACH Reg. No.
2-Ethylhexaldehyde	EEC No. 204-596-5	99	123-05-7	R10 Xi; R36/37/38;	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	

**For the full text of the R phrases mentioned in this Section, see Section 16**

## 4. FIRST AID MEASURES

#### 4. FIRST AID MEASURES

##### Description of first aid measures

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes Obtain medical attention
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes Obtain medical attention
<b>Ingestion</b>	Clean mouth with water Get medical attention
<b>Inhalation</b>	Remove from exposure, lie down Move to fresh air If breathing is difficult, give oxygen If not breathing, give artificial respiration Obtain medical attention
<b>Notes to Physician</b>	Treat symptomatically

#### 5. FIRE-FIGHTING MEASURES

##### Extinguishing media

##### **Suitable Extinguishing Media**

Water spray Carbon dioxide (CO<sub>2</sub>) Dry chemical Use water spray to cool unopened containers chemical foam

##### **Extinguishing media which must not be used for safety reasons**

No information available.

##### Special hazards arising from the substance or mixture

Flammable Vapors may travel to source of ignition and flash back

##### Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

#### 6. ACCIDENTAL RELEASE MEASURES

##### Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation

##### Environmental precautions

Prevent further leakage or spillage if safe to do so

##### Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust) Keep in suitable and closed containers for disposal Remove all sources of ignition Use spark-proof tools and explosion-proof equipment Provide adequate ventilation

#### 7. HANDLING AND STORAGE

##### Precautions for Safe Handling

Avoid contact with skin and eyes Do not breathe dust Do not breathe vapors or spray mist Use explosion-proof equipment Use only non-sparking tools

##### Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place Keep container tightly closed Keep away from heat and sources of ignition Flammables area

##### Specific End Uses

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### **Exposure limits**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

#### **Derived No Effect Level (DNEL)**

No information available.

#### **Predicted No Effect Concentration (PNEC)**

No information available.

### Exposure controls

#### **Engineering Measures**

Ensure adequate ventilation, especially in confined areas

#### **Personal protective equipment**

##### **Eye Protection**

Goggles

##### **Hand Protection**

Protective gloves

##### **Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure

##### **Respiratory Protection**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

#### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice

#### **Environmental exposure controls**

No information available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

#### **Physical State**

Liquid

#### **Appearance**

Colorless

#### **odor**

slight

#### **pH**

No information available.

#### **Vapor Pressure**

1.8 mmHg @ 20 °C

#### **Vapor Density**

4.42

#### **Boiling Point/Range**

162 - 165°C / 323.6 - 329°F @ 760 mmHg

#### **Melting Point/Range**

<-76°C / -104.8°F

#### **Flash Point**

50°C / 122°F

#### **Explosion Limits**

##### **Lower**

1.4

#### **Water Solubility**

< 0.2 G/L WATER (20°C)

#### **Specific Gravity**

0.820

#### **Molecular Formula**

C8 H16 O

#### **Molecular Weight**

128.21

## 10. STABILITY AND REACTIVITY

### Reactivity

#### **Chemical Stability**

Stable under normal conditions.

#### **Possibility of Hazardous Reactions**

##### **Hazardous Polymerization**

Polymerization can occur.

##### **Hazardous Reactions .**

No information available.

#### **Conditions to Avoid**

Temperatures above 71°C, Excess heat, Exposure to light, Incompatible products.

#### **Incompatible Materials**

Strong oxidizing agents, Strong acids, Strong bases.

**Hazardous Decomposition Products**

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

## 11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects**Acute Toxicity****Product Information**

No acute toxicity information is available for this product

**Component Information****Component**

2-Ethylhexaldehyde

LD50 Oral	LD50 Dermal	LC50 Inhalation
	5040 mg/kg ( Rabbit ) 20 mL/kg ( Rat )	

**Chronic Toxicity****Carcinogenicity**

There are no known carcinogenic chemicals in this product

**Sensitization**

No information available.

**Mutagenic Effects**

No information available

**Reproductive Effects**

No information available.

**Developmental Effects**

No information available.

**Target Organs**

No information available.

**Other Adverse Effects**

The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information

**Endocrine Disruptor Information**

None known

## 12. ECOLOGICAL INFORMATION

**Toxicity****Ecotoxicity effects**

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
2-Ethylhexaldehyde	52 mg/L EC50 = 96 h 38 mg/L EC50 = 72 h	10.0-32.0 mg/L LC50 96 h	EC50 = 206 mg/L 30 min EC50 > 200 mg/L 17 h	11.5 mg/L EC50 = 48 h

**Persistence and degradability**

No information available

**Bioaccumulative potential**

No information available.

**Component**

2-Ethylhexaldehyde

**log Pow**

3.07

**Mobility in soil**

Results of PBT and vPvB assessmentOther adverse effects

No information available

**13. DISPOSAL CONSIDERATIONS**Waste treatment methods**Waste from Residues / Unused Products**

Dispose of in accordance with local regulations

**Contaminated Packaging**

Empty containers should be taken for local recycling, recovery or waste disposal

**14. TRANSPORT INFORMATION**IMDG/IMO

UN-No 1191  
 Hazard Class 3  
 Packing Group III  
 Proper Shipping Name OCTYL ALDEHYDES

ADR

UN-No 1191  
 Hazard Class 3  
 Packing Group III  
 Proper Shipping Name OCTYL ALDEHYDES

IATA

UN-No 1191  
 Hazard Class 3  
 Packing Group III  
 Proper Shipping Name OCTYL ALDEHYDES

**15. REGULATORY INFORMATION**Safety, health and environmental regulations/legislation specific for the substance or mixtureInternational Inventories

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
2-Ethylhexaldehyde	204-596-5	-		X	X	-	X	X	X	X	-

Legend**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**EINECS/ELINCS** - European Inventory Lists**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**CHINA** - China Inventory of Existing Chemical Substances**AICS** - Inventory of Chemical Substances**KECL** - Existing and Evaluated Chemical Substances

**Chemical Safety Assessment****16. OTHER INFORMATION****Text of R phrases mentioned in Section 2-3**

R10 - Flammable

R36/37/38 - Irritating to eyes, respiratory system and skin

**Revision Date** 09-Nov-2010**Revision Summary** Not applicable**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006****Disclaimer**

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

**End of Safety Data Sheet**