

1 Identification of substance**Product details**

Trade name

2-Ethylhexanal

Stock number:

B23471, L13414

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG
Benzstrasse 3
D-76185 Karlsruhe / GermanyE-mail: gcat@matthey.com
www.alfa-chemcat.com

Informing department:

Product safety department.

Emergency information:

Giftnotruf Universität Mainz / Poison Information Center Mainz
www.giftinfo.uni-mainz.de Telefon:+49(0)6131/19240**2 Hazards identification**

Hazard designation:

Xi Irritant
N Dangerous for the environment

Information pertaining to particular dangers for man and environment

R 10 Flammable.
R 36/37/38 Irritating to eyes, respiratory system and skin.
R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

GHS label elements

**Warning**

H226 - Flammable liquid and vapour.

**Warning**H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.

H411 - Toxic to aquatic life with long lasting effects.

Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.

Response:

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition/information on ingredients

Chemical characterization:

Designation: (CAS#)

2-Ethylhexanal (CAS# 123-05-7): 100%

Identification number(s):

EINECS Number:

204-596-5

4 First aid measures

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact

Seek immediate medical advice.
Instantly wash with water and soap and rinse thoroughly.

After eye contact

Seek immediate medical advice.

After swallowing

Rinse opened eye for several minutes under running water. Then consult doctor.
Seek immediate medical advice.**5 Fire fighting measures**

Suitable extinguishing agents

CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

Special hazards caused by the material, its products of combustion or flue gases:

Can be released in case of fire:
Carbon monoxide and carbon dioxide
Wear self-contained breathing apparatus.
Wear full protective suit.

Protective equipment:

6 Accidental release measures

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.

Measures for environmental protection:

Ensure adequate ventilation

Keep away from ignition sources

Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

Keep away from ignition sources.

Additional information:

See Section 7 for information on safe handling

See section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

7 Handling and storage

Handling

Information for safe handling:

Keep containers tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Fumes can combine with air to form an explosive mixture.

Storage

Requirements to be met by storerooms and containers:

No special requirements.

Information about storage in one common storage facility:

Store away from oxidizing agents.

Further information about storage conditions:

Keep container tightly sealed.

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Store in cool, dry conditions in well sealed containers.

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8 Exposure controls and personal protection

Additional information about design of technical systems:	Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
Components with critical values that require monitoring at the workplace:	Not required.
Additional information:	No data
Personal protective equipment	The usual precautionary measures should be adhered to in handling the chemicals.
General protective and hygienic measures	Keep away from foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work. Avoid contact with the eyes and skin.
Breathing equipment:	Use breathing protection with high concentrations.
Protection of hands:	Check protective gloves prior to each use for their proper condition.
Material of gloves	The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
Eye protection:	Safety glasses
Body protection:	Face protection Protective work clothing.

9 Physical and chemical properties:**General Information**

Form:	Liquid
Colour:	Colourless
Smell:	Not determined

Change in condition	
Melting point/Melting range:	Not determined
Boiling point/Boiling range:	161-163°C
Sublimation temperature / start:	Not determined

Flash point:	50°C
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Ignition temperature:	Not determined
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Decomposition temperature:	Not determined
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Critical values for explosion:	
Lower:	Not determined
Upper:	Not determined

Steam pressure:	Not determined
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Density at 20°C	0.819 g/cm ³
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Solubility in / Miscibility with Water:	Not miscible or difficult to mix
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10 Stability and reactivity

Thermal decomposition / conditions to be avoided:	No decomposition if used and stored according to specifications.
Materials to be avoided:	Oxidizing agents
Dangerous reactions:	No dangerous reactions known
Dangerous products of decomposition:	Carbon monoxide and carbon dioxide

11 Toxicological information**Acute toxicity:****LD/LC50 values that are relevant for classification:**

Oral	LD50	3550 mg/kg (mouse) 2600 mg/kg (rat)
Dermal	LD50	>20 mL/kg (rat) 4135 mg/kg (rabbit)
Inhalative	LCLo/4H	4000 ppm/4H (rat)
Irritation of skin	mild	425 mg (rabbit)

Primary irritant effect:	Irritant for skin and mucous membranes.
on the skin:	Irritant effect.
on the eye:	No sensitizing effect known.
Sensitization:	To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
Additional toxicological information:	No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information:

Ecotoxicological effects:	
Remark:	Toxic for fish
Additional ecological information:	
General notes:	Generally not hazardous for water. Also poisonous for fish and plankton in water bodies. Do not allow material to be released to the environment without proper governmental permits. Toxic for aquatic organisms

13 Disposal considerations

Product:	
Recommendation	Consult state, local or national regulations for proper disposal. Hand over to disposers of hazardous waste. Must be specially treated under adherence to official regulations.

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Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

14 Transport information**Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)**

ADR/RID-GGVS/E Class: 3 (F1) Flammable liquids.
Kemler Number: 30
UN-Number: 1989
Packaging group: III
Label: 3
Special marking: Symbol (fish and tree)
Designation of goods: 1989 ALDEHYDES, N.O.S. (2-Ethylhexanal)
Limited quantities (LQ): LQ7
Transport category: 3
Tunnel restriction code: D/E

Maritime transport IMDG/GGVSea:

IMDG/GGVSea Class: 3
UN Number: 1989
Label: 3
Packaging group: III
Marine pollutant: No
Correct technical name: ALDEHYDES, N.O.S. (2-Ethylhexanal)

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: 3
UN/ID Number: 1989
Label: 3
Packaging group: III
Correct technical name: ALDEHYDES, N.O.S. (2-Ethylhexanal)

UN "Model Regulation":

UN1989, ALDEHYDES, N.O.S., 3, III

Environmental hazards:

Environmentally hazardous substance, liquid; Marine Pollutant

15 Regulatory information**Designation according to EC guidelines:**

Code letter and hazard designation of product:



Xi Irritant
N Dangerous for the environment

Risk phrases:

10 Flammable.
36/37/38 Irritating to eyes, respiratory system and skin.
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases:

23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
37 Wear suitable gloves.
57 Use appropriate container to avoid environmental contamination.

National regulations**Information about limitation of use:**

Employment restrictions concerning young persons must be observed.
For use only by technically qualified individuals.

Water hazard class:

Generally not hazardous for water.

16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing data specification sheet: Health, Safety and Environmental Department.

Contact: Zachariah Holt

Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent