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Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
Printdate 09 Sep 2024

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product name:

Propionaldehyde

1.1. Catalog No.:

685698

1.2. Relevant identified uses of the substance or mixture

Identified uses: Laboratory chemical
R&D

1.3. Uses advised against:

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1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36
This number is only available during office hours.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Flammable liquids (Category 2), H225
Acute toxicity, Oral (Category 4), H302
Acute toxicity, Inhalation (Category 4), H332
Skin irritation (Category 2), H315
Serious eye damage (Category 1), H318
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

2.2. Label elements

2.2.1. Pictogram

2.2.2.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008
Pictogram Signal word Danger
Hazard statement(s)
H225 Highly flammable liquid and vapour.
H302 + H332 Harmful if swallowed or if inhaled.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
Precautionary statement(s)
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P261 Avoid breathing vapours.
P280 Wear protective gloves/ 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.
Supplemental Hazard Statements
none
2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
Formula : C3H6O
Molecular weight : 58,08 g/mol
CAS-No. : 123-38-6
EC-No. : 204-623-0
Index-No. : 605-018-00-8

Component	Classification	Concentration
Propanal	Flam. Liq. 2; Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 1; STOT SE 3; H225, H302, H332, H315, H318, H335	<= 100 %

3.1.1. Formula

C3H6O

3.1.2. Molecular Weight (g/mol)

58.08

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3.1.3. CAS-No.

123-38-6

4. FIRST AID MEASURES

4.1 Description of first aid measures
General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration.
Consult a physician. In case of skin contact
Wash off with soap and plenty of water. Consult a physician.
In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
5.2 Special hazards arising from the substance or mixture
Carbon oxides
5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.
5.4 Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
For personal protection see section 8.
6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wetbrushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections
For disposal see section 13

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist Keep away from sources of ignition - No smoking.Take measures to prevent the build up of
electrostatic charge.
For precautions see section 2.2.
7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent
leakage.
Over time, pressure may increase causing containers to burst Handle and open container
with care.
7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
a) Appearance Form: clear, liquid
Colour: colourless
b) Odour Stench.
c) Odour Threshold No data available
d) pH No data available
e) Melting
point/freezing point
Melting point/range: -81 °C
f) Initial boiling point
and boiling range
47 - 49 °C at 1013 hPa
g) Flash point -40 °C - closed cup
h) Evaporation rate No data available
i) Flammability (solid,
gas)
No data available
j) Upper/lower
flammability or
explosive limits
Upper explosion limit: 16,1 %(V)
Lower explosion limit: 2,6 %(V)
k) Vapour pressure 343 hPa at 20 °C
l) Vapour density 2,01 - (Air = 1.0)
m) Relative density 0,81 g/cm3

n) Water solubility completely soluble
o) Partition coefficient:
n-octanol/water
log Pow: 0,83
p) Auto-ignition
temperature
No data available
q) Decomposition
temperature
No data available
r) Viscosity No data available
s) Explosive properties No data available
t) Oxidizing properties No data available 9.2 Other safety information
Surface tension 23,4 mN/m at 20 °C
Relative vapour
density
2,01 - (Air = 1.0)

10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available 10.2 Chemical stability
Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions
No data available
10.4 Conditions to avoid
Heat, flames and sparks. Extremes of temperature and direct sunlight.
10.5 Incompatible materials
Oxidizing agents, Strong bases, Strong reducing agents
10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute toxicity
LD50 Oral - Rat - female - 1.690 mg/kg
(OECD Test Guideline 401)
LC50 Inhalation - Mouse - 4 h - 10,9 mg/l
Remarks: Lungs, Thorax, or Respiration:Acute pulmonary edema. Liver:Other changes.
Kidney, Ureter, Bladder:Other changes. (RTECS)
LD50 Dermal - Rabbit - female - 2.460 mg/kg
(OECD Test Guideline 402)
Remarks: Behavioral:Somnolence (general depressed activity). Behavioral:Convulsions or
effect on seizure threshold. Lungs, Thorax, or Respiration:Dyspnea.
Skin corrosion/irritation
Skin - Rabbit
Result: Skin irritation - 4 h
(OECD Test Guideline 404)
(Regulation (EC) No 1272/2008, Annex VI)
Serious eye damage/eye irritation
Eyes - Rabbit
Result: Causes serious eye irritation.
Remarks: (RTECS)
(Regulation (EC) No 1272/2008, Annex VI)
Respiratory or skin sensitisation
Local lymph node assay (LLNA) - Mouse
Result: negative
(OECD Test Guideline 429)

Germ cell mutagenicity
Ames test
S. typhimurium
Result: negative
OECD Test Guideline 474
Mouse - male and female Result: negative
Carcinogenicity
Reproductive toxicity
No data available
Specific target organ toxicity - single exposure
May cause respiratory irritation.
Specific target organ toxicity - repeated exposure
No data available
Aspiration hazard
No data available
Additional Information
RTECS: UE0350000
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
After absorption:
Tiredness, narcosis
Other dangerous properties can not be excluded.
Handle in accordance with good industrial hygiene and safety practice

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Toxicity to fish static test LC50 - Pimephales promelas (fathead minnow) - 14 mg/l - 96 h
Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates
static test EC50 - Daphnia magna (Water flea) - 88,7 mg/l - 48 h
(Regulation (EC) No. 440/2008, Annex, C.2)
Toxicity to algae static test ErC50 - Desmodesmus subspicatus (green algae) - 260 mg/l - 72 h
(DIN 38412)
12.2 Persistence and degradability
Biodegradability aerobic - Exposure time 28 d
Result: ca.91 - 97 % - Readily biodegradable.
(OECD Test Guideline 301C)
Ratio BOD/ThBOD 95 %
Ratio BOD/ThBOD 38 %
12.3 Bioaccumulative potential
No data available
12.4 Mobility in soil
No data available
12.5 Results of PBT and vPvB assessment This substance/mixture contains no components considered to be either persistent,
bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
12.6 Other adverse effects
Harmful to aquatic life.
Discharge into the environment must be avoided.

13. DISPOSAL CONSIDERATIONS

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13.1 Waste treatment methods
Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number
ADR/RID: 1275 IMDG: 1275 IATA: 1275
14.2 UN proper shipping name
ADR/RID: PROPIONALDEHYDE
IMDG: PROPIONALDEHYDE
IATA: Propionaldehyde
14.3 Transport hazard class(es)
ADR/RID: 3 IMDG: 3 IATA: 3
14.4 Packaging group
ADR/RID: II IMDG: II IATA: II
14.5 Environmental hazards
ADR/RID: no IMDG Marine pollutant: no IATA: no
14.6 Special precautions for user
No data available

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
15.2 Chemical safety assessment
For this product a chemical safety assessment was not carried out

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!