

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 Version 5.2 Revision Date 31.07.2012

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

1.1 Product identifiers

Product name : Propionic acid

Product Number : 52-7533
Brand : Rapid
Index-No. : 607-089-00-0
CAS-No. : 79-09-4

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

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : Rapid Electronics,
Severalls Lane,
Colchester,
Essex,
CO4 5JS, United Kingdom

Telephone : +44 (0) 1206 751166
Fax : +44 (0) 1206 751188
E-mail address : sales@rapidelec.co.uk

1.4 Emergency telephone number

Emergency Phone # : +44 (0) 1206 751166

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Flammable liquids (Category 3)
Skin corrosion (Category 1B)

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

Causes burns. Flammable.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]



Pictogram

Signal word

Danger

Hazard statement(s)

H226

Flammable liquid and vapour.

H314

Causes severe skin burns and eye damage.

Precautionary statement(s)

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.

P310

Immediately call a POISON CENTER or doctor/ physician.

Supplemental Hazard Statements none

According to European Directive 67/548/EEC as amended.

Hazard symbol(s)



R-phrases(s)

R10 Flammable.
R34 Causes burns.

S-phrases(s)

S23 Do not breathe gas/fumes/vapour/spray.
S36 Wear suitable protective clothing.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3 Other hazards

Rapidly absorbed through skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms : Propanoic acid
Propanyl acid

Formula : C₃H₆O₂

Molecular Weight : 74.08 g/mol

| Component | Concentration |
|------------------------|---------------|
| Propionic acid | |
| CAS-No. 79-09-4 | - |
| EC-No. 201-176-3 | |
| Index-No. 607-089-00-0 | |

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

Take off contaminated clothing and shoes immediately. 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

May cause an asthmatic-like bronchitis., Nausea, Dizziness, Headache, Blood disorders

4.3 Indication of any immediate medical attention and special treatment needed

no data available

5. FIREFIGHTING 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 fire fighting 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 vapors, 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.

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 wet-brushing 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 inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

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.

7.3 Specific end uses

no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

| Component | CAS-No. | Value | Control parameters | Basis |
|----------------|---------|------------|--------------------------------|--|
| Propionic acid | 79-09-4 | STEL | 15 ppm 46 mg/m ³ | UK. EH40 WEL - Workplace Exposure Limits |
| | | TWA | 10 ppm 31 mg/m ³ | UK. EH40 WEL - Workplace Exposure Limits |
| | | TWA | 10 ppm 31 mg/m ³ | Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values |
| | Remarks | Indicative | | |

| | | | | |
|--|--|------------|--------------------------------|--|
| | | STEL | 20 ppm 62 mg/m ³ | Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values |
| | | Indicative | | |

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Immersion protection

Material: butyl-rubber

Minimum layer thickness: 0.3 mm

Break through time: > 480 min

Material tested: Butoject® (Aldrich Z677647, Size M)

Splash protection

Material: Nature latex/chloroprene

Minimum layer thickness: 0.6 mm

Break through time: 41 min

Material tested: Lapren® (Aldrich Z677558, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 873000, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- | | |
|---------------|---|
| a) Appearance | Form: liquid, clear Colour: colourless |
| b) Odour | no data available |

| | |
|---|---|
| c) Odour Threshold | no data available |
| d) pH | 2.5 at 100 g/l at 20 °C |
| e) Melting point/freezing point | Melting point/range: -24 - -23 °C |
| f) Initial boiling point and boiling range | 141 °C |
| g) Flash point | 54 °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: 12.1 %(V) Lower explosion limit: 2.9 %(V) |
| k) Vapour pressure | 3.2 hPa at 20 °C 13 hPa at 39.70 °C |
| l) Vapour density | 2.56 - (Air = 1.0) |
| m) Relative density | 0.993 g/mL at 25 °C |
| n) Water solubility | soluble |
| o) Partition coefficient: n-octanol/water | log Pow: 0.25 |
| p) Autoignition 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 | 27.21 mN/m at 15 °C |
|-----------------|---------------------|

10. STABILITY AND REACTIVITY

10.1 Reactivity

no data available

10.2 Chemical stability

no data available

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - rat - 3,500 - 4,200 mg/kg

LD50 Intravenous - mouse - 625 mg/kg

Remarks: Behavioral:Convulsions or effect on seizure threshold.

LD50 Parenteral - rat - 3,500 mg/kg

Skin corrosion/irritation

Skin - rabbit - Severe skin irritation

Serious eye damage/eye irritation

Eyes - rabbit - Severe eye irritation

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation

Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion

May be harmful if swallowed. Causes burns. May be harmful if swallowed. Causes burns.

Skin

Toxic if absorbed through skin. Causes skin burns. May be harmful if absorbed through skin. Causes skin burns.

Eyes

Causes eye burns. Causes eye burns.

Signs and Symptoms of Exposure

May cause an asthmatic-like bronchitis., Nausea, Dizziness, Headache, Blood disorders

Additional Information

RTECS: UE595000

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 51.0 - 73.2 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 21.0 - 24.6 mg/l - 48 h

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 10 d
Result: 95 % - Readily biodegradable.

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil
no data available

12.5 Results of PBT and vPvB assessment
no data available

12.6 Other adverse effects
Harmful to aquatic life.
no data available

13. DISPOSAL CONSIDERATIONS

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: 3463

IMDG: 3463

IATA: 3463

14.2 UN proper shipping name

ADR/RID: PROPIONIC ACID

IMDG: PROPIONIC ACID

IATA: Propionic acid

14.3 Transport hazard class(es)

ADR/RID: 8 (3)

IMDG: 8 (3)

IATA: 8 (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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
no data available

15.2 Chemical Safety Assessment
no data available

16. OTHER INFORMATION

Further 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.