

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/24/2015

Reviewed on 10/03/2014

1 Identification

- **Product identifier**
- **Trade name:** Propionic Acid, Reagent Grade
- **Article number:** P8499
- **CAS Number:**
79-09-4
- **EC number:**
201-176-3
- **Index number:**
607-089-00-0
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Thermal Scientific Co.
4405 Westpark Road
Beaumont, TX 77627
(409) 724-2428
- **Information department:**
Technical Coordinator
Sherman Nelson sherman@aquasolutions.org
Product safety department
- **Emergency telephone number:**
Chemtrec: 800-424-9300
Canutec: 613-996-6666

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.



GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

- **Label elements**
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02



GHS05

- **Signal word** Danger
- **Hazard statements**
Flammable liquid and vapor.
Causes severe skin burns and eye damage.
- **Precautionary statements**
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Use explosion-proof electrical/ventilating/lighting/equipment.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/24/2015

Reviewed on 10/03/2014

Trade name: Propionic Acid, Reagent Grade

(Contd. of page 1)

Wear protective gloves/protective clothing/eye protection/face protection.
 Ground/bond container and receiving equipment.
 Keep container tightly closed.
 Use only non-sparking tools.
 Avoid release to the environment.
 Take precautionary measures against static discharge.
 Wash thoroughly after handling.
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Immediately call a POISON CENTER/doctor.
 Specific treatment (see on this label).
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 Wash contaminated clothing before reuse.
 If swallowed: Rinse mouth. Do NOT induce vomiting.
 In case of fire: Use for extinction: CO₂, powder or water spray.
 Store locked up.
 Store in a well-ventilated place. Keep cool.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
79-09-4 Propionic Acid, Reagent Grade
- **Identification number(s)**
- **EC number:** 201-176-3
- **Index number:** 607-089-00-0

4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/24/2015

Reviewed on 10/03/2014

Trade name: Propionic Acid, Reagent Grade

(Contd. of page 2)

- **After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/24/2015

Reviewed on 10/03/2014

Trade name: Propionic Acid, Reagent Grade

(Contd. of page 3)

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

CAS: 79-09-4 Propionic Acid, Reagent Grade

REL Short-term value: 45 mg/m³, 15 ppm

Long-term value: 30 mg/m³, 10 ppm

TLV Long-term value: 30 mg/m³, 10 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

- **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **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.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Liquid

Color: Clear

- **Odor:** Characteristic

- **Odour threshold:** Not determined.

- **pH-value (2.5 g/l) at 100 °C (212 °F):** 20

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/24/2015

Reviewed on 10/03/2014

Trade name: Propionic Acid, Reagent Grade

(Contd. of page 4)

· Change in condition	
Melting point/Melting range:	-24 °C (-11 °F)
Boiling point/Boiling range:	141 °C (286 °F)
· Flash point:	54 °C (129 °F)
· Flammability (solid, gaseous):	Not applicable.
· Ignition temperature:	485 °C (905 °F)
· Decomposition temperature:	Not determined.
· Auto igniting:	Not determined.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	2.1 Vol %
Upper:	12 Vol %
· Vapor pressure at 20 °C (68 °F):	3.2 hPa (2 mm Hg)
· Density at 20 °C (68 °F):	0.993 g/cm ³ (8.287 lbs/gal)
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	
	Fully miscible.
· Partition coefficient (n-octanol/water): Not determined.	
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	3500-4200 mg/kg (rat)
	Intraperitoneal	3500 mg/kg (rat)

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/24/2015

Reviewed on 10/03/2014

Trade name: Propionic Acid, Reagent Grade

(Contd. of page 5)

- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** Substance is not listed.
- **NTP (National Toxicology Program)** Substance is not listed.
- **OSHA-Ca (Occupational Safety & Health Administration)** Substance is not listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (Assessment by list): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|----------------------------------|----------------|
| · UN-Number | |
| · DOT, IMDG, IATA | UN1848 |
| · UN proper shipping name | |
| · DOT | Propionic acid |

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/24/2015

Reviewed on 10/03/2014

Trade name: Propionic Acid, Reagent Grade

(Contd. of page 6)

· IMDG, IATA	PROPIONIC ACID
· Transport hazard class(es)	
· DOT, IMDG, IATA	
· Class	8 Corrosive substances
· Packing group	
· DOT, IMDG, IATA	III
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Corrosive substances
· Danger code (Kemler):	8
· EMS Number:	F-A,S-B
· Segregation groups	Acids
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Hazardous substance:	5000 lbs, 2270 kg
· UN "Model Regulation":	UN 1848 PROPIONIC ACID, 8, III

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is not listed.
- **TSCA (Toxic Substances Control Act):** Substance is listed.
- **Proposition 65**
- **Chemicals known to cause cancer:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
- **Chemicals known to cause developmental toxicity:** Substance is not listed.
- **Carcinogenic categories**
- **EPA (Environmental Protection Agency)** Substance is not listed.
- **TLV (Threshold Limit Value established by ACGIH)** Substance is not listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02 GHS05

- **Signal word** *Danger*
- **Hazard statements**
Flammable liquid and vapor.
Causes severe skin burns and eye damage.

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/24/2015

Reviewed on 10/03/2014

Trade name: Propionic Acid, Reagent Grade

(Contd. of page 7)

· **Precautionary statements**

- Keep away from heat/sparks/open flames/hot surfaces. No smoking.*
- Use explosion-proof electrical/ventilating/lighting/equipment.*
- Wear protective gloves/protective clothing/eye protection/face protection.*
- Ground/bond container and receiving equipment.*
- Keep container tightly closed.*
- Use only non-sparking tools.*
- Avoid release to the environment.*
- Take precautionary measures against static discharge.*
- Wash thoroughly after handling.*
- If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
- Immediately call a POISON CENTER/doctor.*
- Specific treatment (see on this label).*
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.*
- Wash contaminated clothing before reuse.*
- If swallowed: Rinse mouth. Do NOT induce vomiting.*
- In case of fire: Use for extinction: CO2, powder or water spray.*
- Store locked up.*
- Store in a well-ventilated place. Keep cool.*
- Dispose of contents/container in accordance with local/regional/national/international regulations.*
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Environment protection department.
- **Contact:** Revision 0.0, 06-30-2015: Creation date for SDS. STN
- **Date of preparation / last revision** 09/24/2015 / -
- **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)*
 - IMDG: International Maritime Code for Dangerous Goods*
 - DOT: US Department of Transportation*
 - IATA: International Air Transport Association*
 - ACGIH: American Conference of Governmental Industrial Hygienists*
 - EINECS: European Inventory of Existing Commercial Chemical Substances*
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)*
 - NFPA: National Fire Protection Association (USA)*
 - HMIS: Hazardous Materials Identification System (USA)*
 - LC50: Lethal concentration, 50 percent*
 - LD50: Lethal dose, 50 percent*
 - PBT: Persistent, Bioaccumulative and Toxic*
 - vPvB: very Persistent and very Bioaccumulative*
 - Flam. Liq. 3: Flammable liquids, Hazard Category 3*
 - Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B*

US