



\*\*\*\* MATERIAL SAFETY DATA SHEET \*\*\*\*

\*\*\*\* SECTION 1 - CHEMICAL PRODUCT \*\*\*\*

MSDS Name: Propionic anhydride

Catalog Numbers:

13152-0000, 13152-0010, 13152-5000, 22010-0000, 22010-0500, 22010-5000

Synonyms:

\*\*\*\* SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS \*\*\*\*

CAS#	Chemical Name	%	EINECS#	Haz Symbols
79-09-4	Propionic acid	<2%	201-176-3	C   34
123-62-6	Propionic anhydride	97%	204-638-2	C   34

Text for R-phrases: see Section 16

Hazard Symbols: C

Risk Phrases: 34

\*\*\*\* SECTION 3 - HAZARDS IDENTIFICATION \*\*\*\*

EMERGENCY OVERVIEW

Causes burns.

Potential Health Effects

Eye:

Causes eye burns. Causes redness and pain. Lachrymator (substance which increases the flow of tears).

Skin:

Causes skin burns. Causes redness and pain.

Ingestion:

Causes gastrointestinal tract burns. May cause burning sensations, coughing, wheezing, laryngitis, shortness of breath and headache.

Inhalation:

Causes chemical burns to the respiratory tract. Inhalation may be fatal as a result of spasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Inhalation may produce burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

Chronic:

Not available.

**\*\*\*\* SECTION 4 - FIRST AID MEASURES \*\*\*\***

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin:

Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion:

Do NOT induce vomiting and seek IMMEDIATE MEDICAL ADVICE.

Inhalation:

Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician:

Treat symptomatically and supportively.

**\*\*\*\* SECTION 5 - FIRE FIGHTING MEASURES \*\*\*\***

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Will burn if involved in a fire. Combustible liquid.

Extinguishing Media:

Use water spray, dry chemical, carbon dioxide, or chemical foam.

**\*\*\*\* SECTION 6 - ACCIDENTAL RELEASE MEASURES \*\*\*\***

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container.

**\*\*\*\* SECTION 7 - HANDLING and STORAGE \*\*\*\***

Handling:

Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Take precautionary measures against static discharges. Use only in a chemical fume hood.

Storage:

Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Corrosives area.

**\*\*\*\* SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION \*\*\*\***

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Personal Protective Equipment

Eyes:

Wear chemical goggles.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

**\*\*\*\* SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES \*\*\*\***

Physical State:	Clear liquid
Color:	APHA: 20 max
Odor:	pungent odor
pH:	3 (100 g/l aq.sol.)

Vapor Pressure: 1.3mbar @20 deg C  
Viscosity: 1.144 cP @20 deg C  
Boiling Point: 167 - 170 deg C @760mmHg  
Freezing/Melting Point: -42 deg C  
Autoignition Temperature: 315 deg C ( 599.00 deg F)  
Flash Point: 63 deg C ( 145.40 deg F)  
Explosion Limits, lower: 1.3 Vol %  
Explosion Limits, upper: 9.5 Vol %  
Decomposition Temperature:  
Solubility in water: Hydrolysis.  
Specific Gravity/Density: 1.015  
Molecular Formula: C6H10O3  
Molecular Weight: 130.14

**\*\*\*\* SECTION 10 - STABILITY AND REACTIVITY \*\*\*\***

Chemical Stability:

Stable under normal temperatures and pressures. Moisture sensitive.

Conditions to Avoid:

Incompatible materials, exposure to moist air or water.

Incompatibilities with Other Materials:

Strong oxidizing agents, reducing agents, acids, bases, alcohols, amines.

Hazardous Decomposition Products:

Carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported.

**\*\*\*\* SECTION 11 - TOXICOLOGICAL INFORMATION \*\*\*\***

RTECS#:

CAS# 79-09-4: UE5950000

CAS# 123-62-6: UF9100000

LD50/LC50:

CAS# 79-09-4: Draize test, rabbit, eye: 990 ug Severe; Oral, rat:

LD50 = 2600 mg/kg; Skin, rabbit: LD50 = 500 uL/kg.

CAS# 123-62-6: Dermal, guinea pig: LD50 = 1 mL/kg; Oral, rat: LD50 = 2360 mg/kg; Skin, rabbit: LD50 = 10 mL/kg.

Not available.

Carcinogenicity:

Propionic acid -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Propionic anhydride -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

See actual entry in RTECS for complete information.

**\*\*\*\* SECTION 12 - ECOLOGICAL INFORMATION \*\*\*\***

Ecotoxicity:

Fish: Goldfish: LC50 = 3 mg/l; .; .Fish: Leuciscus idus: LC0 > 1000 mg/l; 48H; .Daphnia: Daphnia: LC50 = 50 mg/l; 48H; .Fish: Leuciscus idus: LC0 = ca. 200 mg/l; 72H; .BOD(5) : 0.36 - 1.30 g/g CSB : 1.40 g/gThOD : 1.513 g/g

Other

Avoid entering into waters or underground water. Do not empty into drains. Readily biodegradable.

**\*\*\*\* SECTION 13 - DISPOSAL CONSIDERATIONS \*\*\*\***

Dispose of in a manner consistent with federal, state, and local regulations.

**\*\*\*\* SECTION 14 - TRANSPORT INFORMATION \*\*\*\***

IATA

Shipping Name: PROPIONIC ANHYDRIDE

Hazard Class: 8

UN Number: 2496

Packing Group: III

IMO

Shipping Name: PROPIONIC ANHYDRIDE

Hazard Class: 8

UN Number: 2496

Packing Group: III

RID/ADR

Shipping Name: PROPIONIC ANHYDRIDE

Hazard Class: 8

UN Number: 2496

Packing group: III

USA RQ:CAS# 79-09-4: 5000 lb final RQ; 2270 kg final RQ

USA RQ:CAS# 123-62-6: 5000 lb final RQ; 2270 kg final RQ

**\*\*\*\* SECTION 15 - REGULATORY INFORMATION \*\*\*\***

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: C

Risk Phrases:

R 34 Causes burns.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 79-09-4: 1

CAS# 123-62-6: 1

United Kingdom Occupational Exposure Limits

CAS# 79-09-4: OES-United Kingdom, TWA 10 ppm TWA; 31 mg/m<sup>3</sup> TWA

CAS# 79-09-4: OES-United Kingdom, STEL 15 ppm STEL; 46 mg/m<sup>3</sup> STEL

CAS# 79-09-4: OES-United Kingdom, STEL 15 ppm STEL; 46 mg/m<sup>3</sup> STEL

United Kingdom Maximum Exposure Limits

Canada

CAS# 79-09-4 is listed on Canada's DSL List.

CAS# 123-62-6 is listed on Canada's DSL List.

CAS# 79-09-4 is listed on Canada's Ingredient Disclosure List.

CAS# 123-62-6 is listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 79-09-4: OEL-AUSTRALIA:TWA 10 ppm (30 mg/m<sup>3</sup>);STEL 15 ppm (45 mg/m<sup>3</sup>)

OEL-BELGIUM:TWA 10 ppm (30 mg/m<sup>3</sup>);STEL 15 ppm (45 mg/m<sup>3</sup>)

OEL-DENMARK:TWA 10 ppm (30 mg/m<sup>3</sup>)

OEL-FRANCE:TWA 10 ppm (30 mg/m<sup>3</sup>)

OEL-GERMANY:TWA 10 ppm (30 mg/m<sup>3</sup>)

OEL-THE NETHERLANDS:TWA 10 ppm (30 mg/m<sup>3</sup>)

OEL-RUSSIA:STEL 20 mg/m<sup>3</sup>

OEL-SWITZERLAND:TWA 10 ppm (30 mg/m<sup>3</sup>);STEL 20 ppm (60 mg/m<sup>3</sup>)

OEL-UNITED KINGDOM:TWA 10 ppm (30 mg/m<sup>3</sup>);STEL 15 ppm (45 mg/m<sup>3</sup>)

OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV

OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

US FEDERAL

TSCA

CAS# 79-09-4 is listed on the TSCA inventory.

CAS# 123-62-6 is listed on the TSCA inventory.

\*\*\*\* SECTION 16 - ADDITIONAL INFORMATION \*\*\*\*

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users

should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.

[www.sparchem.com](http://www.sparchem.com)