

Product Name: PROPIO NITRILE
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Document Type: Material Safety Data Sheet (MSDS)

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name	PROPIO NITRILE
Part Number	RXSOL-19-1431-210

Company Details:

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2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS	EC number	Weight	Formula
Propionitrile	107-12-0	203-464-4	= 100 %	C ₃ H ₅ N

3. HAZARDS IDENTIFICATION

Signal Word	Danger
Hazard Statements	H225 Highly flammable liquid and vapor. H300 + H310 Fatal if swallowed or in contact with skin. H319 Causes serious eye irritation. H332 Harmful if inhaled.
Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P262 Do not get in eyes, on skin, or on clothing. P280 Wear protective gloves/ protective clothing. P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth. P302 + P352 + P310 IF ON SKIN: Wash with plenty of water. Immediately call a POISON CENTER/ doctor. P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
Classification of the substance or mixture	Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.
Supplemental Hazard Statements	None.
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.

4. FIRST AID MEASURES

General advice	Consult a physician. Show this material 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.
Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Swallowed	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Skin Contact	Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
Inhalation	Remove patient to fresh air, keep warm and at rest and get medical assistance in necessary.
Ingestion	Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.
Most important symptoms and effects, both acute and delaye	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
Indication of any immediate medical attention and special treatment needed	No data available

5. FIRE FIGHTING MEASURES

Flammability	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Suitable extinguishing media	Dry powder Dry sand
Unsuitable extinguishing media	Do NOT use water jet.
Special hazards arising from the substance or mixture	Carbon oxides Nitrogen oxides (NOx) Combustible.
Further information	Use water spray to cool unopened containers.
Hazardous combustion products	Fire may cause the evolution of Sulphur oxides, nitrogen oxides.
Advice for firefighters	Wear self-contained breathing apparatus for firefighting if necessary.
Protective Equipment	Use personal protective equipment.
Specific Hazards Arising from the Chemical	Oxides of phosphorus Sodium oxides Not combustible. Fire may cause evolution of: Oxides of phosphorus Ambient fire may liberate hazardous vapours.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. For personal protection see section 8.
Spillage	Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas dike if needed. Eliminate all ignition sources. Call for assistance on disposal.
Enviromental Precaution	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Methods and materials for containment and cleaning	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Advice on protection against fire and explosion	Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
Incompatible materials	Keep away from alkalis, strong oxidizing agents and metals. Provide containment walls of adequate capacity to hold any accidental spills.
Hygiene measures	Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. For precautions see section 2.2.
Precautions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.
Storage conditions	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. Store in cool place.
Storage class	Storage class (TRGS 510): 3: Flammable liquids
Specific end use(s)	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
Advice on general occupational hygiene	Advice on safe handling Observe label precautions. Change contaminated clothing. Wash hands after working with substance.
Requirements for storage	Keep in cool and store under shade.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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.
Control parameters	Ingredients with workplace control parameters Contains no substances with occupational exposure limit values.
Engineering Control	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Eye/face protection	Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
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.
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 Regulation (EU) 2016/425 and the standard EN 374 derived from it. Full contact Material: butyl-rubber Minimum layer thickness: 0,3 mm Break through time: 480 min Material tested: Butoject® (KCL 897 / Aldrich Z677647, Size M) Splash contact Material: Chloroprene Minimum layer thickness: 0,6 mm Break through time: 30 min Material tested: Camapren® (KCL 722 / Aldrich Z677493, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, 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 EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer 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.
Respiratory protection	Where risk assessment shows air-purifying respirators are appropriate use a fullface 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).
Control of environmental exposure	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.



9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Clear, liquid
Colour	Colorless
Odour	No data available
Odor Threshold	No data available
pH	No data available
Melting Point	93 °C - lit.
Boiling Point	97 °C - lit.
Flash Point	6 °C
Evaporation Rate	Not Applicable
Flammability (solid, gas)	No data available
Explosive limits	No Data Available
Upper/lower flammability or explosive limits	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Vapour pressure	No data available
Density	0,772 g/mL at 25 °C - lit.
Relative Density	No data available
Relative vapor density	No data available
Freezing point	No data available
Viscosity kinematic	No data available
Partition coefficient	No data available
Explosive properties	No data available
Solubility	No data available
Ignition temperature	No information available.
Particle characteristics	No data available

10. STABILITY AND REACTIVITY

Reactivity	No data available
Stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No data available
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Strong acids, Strong bases, Strong oxidizing agents, Strong reducing agents
Hazardous decomposition products	In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

Acute toxicity	LD50 Oral - Rat - 39 mg/kg LC50 Inhalation - 4 h - 11 mg/l LD50 Dermal - 51 mg/kg
Skin corrosion/irritation	Skin - Rabbit Result: Mild skin irritation - 24 h
Serious eye damage/eye irritation	Eyes - Rabbit Result: Moderate eye irritation - 24 h
Respiratory or skin sensitization	No data available
Toxic Effects on Human	May cause damage to the following organs: upper respiratory tract. Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant, sensitizer), of ingestion, of inhalation (lung irritant, lung sensitizer).
Carcinogenicity	No data available
Germ cell mutagenicity	No data available
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	Mixture may cause respiratory irritation.
Special Remarks on other Toxi Effects on Humans	Acute Potential Health Effects: Skin: Causes skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Eyes: Causes eye irritation. Ingestion: Causes gastrointestinal (digestive) tract irritation with nausea, vomiting, and diarrhea. May be harmful if swallowed. Inhalation: Causes respiratory tract irritation. May cause chemical pneumonitis and pulmonary edema, inflammation, edema of bronchi and larynx. Chronic Potential Health Effects: Repeated or prolonged skin exposure may cause allergic reactions in sensitive individuals. Repeated or prolonged exposure by inhalation may affect respiration and metabolism.
Additional Information	RTECS: UF9625000 Lung irritation, Cyanosis, Central nervous system depression To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

Bioaccumulative potential	Bioaccumulation <i>Lepomis macrochirus</i> - 7,5 d - 7,93 µg/l(pentachloroethane) Bioconcentration factor (BCF): 67
Persistence and degradability	Biodegradability Result: - Readily biodegradable.
Toxicity to fish	LC50 - <i>Pimephales promelas</i> (fathead minnow) - 1.520 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - <i>Daphnia magna</i> (Water flea) - 4,7 mg/l - 48 h
Toxicity to algae	Static test ErC50 - <i>Pseudokirchneriella subcapitata</i> (green algae) - 123 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	Static test IC50 - activated sludge - > 1.000 mg/l - 3 h (OECD Test Guideline 209)
Mobility in soil	No Information available
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.
Endocrine disrupting properties	No data available
Other adverse effects	No data available

13. DISPOSAL CONSIDERATIONS

Disposal methods	The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.
Contaminated packaging	Dispose of as unused product.
Waste treatment Method	Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

14. TRANSPORT INFORMATION

UN number	ADR/RID: 2404	IMDG:2404	IATA:2404
UN proper shipping name	ADR/RID:Propionitrile	IMDG: Propionitrile	IATA:Propionitrile
Transport hazard class(es)	ADR/RID: 3 (6.1)	IMDG: 3 (6.1)	IATA: 3 (6.1)
Packaging group	ADR/RID: II	IMDG: II	IATA: II
Environmental hazards	ADR/RID: NO	IMDG: NO	IATA: NO
Further information	No data available		

15. REGULATORY INFORMATION

Inventory status	Components are on the following inventories: Polymaleic acid: - US TSCA, Canadian DSL, EU EINECS, Australian AICS, Korean, Philippine PICCS and Chinese Xi irritant R 36/38 Irritant to eyes & skin R 41 Risk of serious damage to eyes S24/25 Avoid contact with skin and eyes S26/28 In case of contact eyes & skin, rinse with plenty water and seek medical advice Section 312/313: Not listed. Not listed under California proposition 65.
Safety, health and environmental regulations/legislation specific for the substance or mixture	This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.
Authorisations and/or restrictions on use	REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : pentachloroethane
National legislation	Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : ACUTE TOXIC : FLAMMABLE LIQUIDS
Other regulations	Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable. Take note of Dir 94/33/EC on the protection of young people at work.
Chemical Safety Assessment	For this product a chemical safety assessment was not carried out

16. OTHER INFORMATION AND DISCLAIMER

Other Information

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