

SAFETY DATA SHEET PROPAN-2-OL TECH

According to Regulation (EU) No 453/2010

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name	PROPAN-2-OL TECH
Product No.	2601
REACH Registration number	Not supplied
REACH Registration notes	Not provided by supplier.
CAS-No.	67-63-0
EU Index No.	603-117-00-0
EC No.	200-661-7

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

Identified uses	General chemical reagent Used for household, industrial and cosmetic purposes. Organic solvent Used in organic synthesis
Uses advised against	Formation of explosive mixtures including vapour/air mixtures and using where sources of ignition occur. Processes involving incompatible materials. Processes that would lead to over-exposure of the operators.

1.3. Details of the supplier of the safety data sheet

Supplier	Reagent Chemical Services 18 Aston Fields Road Whitehouse Industrial Estate Runcorn Cheshire WA7 3DL T: 01928 716903 (08.30 - 17.00) F: 01928 716425 E: info@reagent.co.uk
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1.4. Emergency telephone number

NHS Direct. Tel. 0845 4647 (24 Hours)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical Hazards	Flam. Liq. 2 - H225
Human health	Eye Irrit. 2 - H319; STOT SE 3 - H336
Environment	Not classified.

Classification (67/548/EEC)

F; R11 Xi; R36 R67

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Human health

Irritating to eyes. Vapours or mists in high concentration may irritate the respiratory system. Inhalation may cause drowsiness and dizziness. Severe exposure may cause unconsciousness. Ingestion of the product may cause a feeling of nausea, larger amounts may produce vomiting. Doses in excess of 100ml may be fatal in humans.

Environment

The substance is miscible with water and will spread in water systems. Due to the flammability of the product there is a high potential to cause fire especially if discharged near to ignition sources. This can lead to widespread fire and environmental damage.

Physical and Chemical Hazards

The product is highly flammable, and explosive vapours/air mixtures may be formed even at normal room temperatures. The flow or agitation of the substance can generate electrostatic charges, which can produce an explosion. Ensure sufficient earthing systems are in place to eliminate electrostatic build up.

2.2. Label elements

PROPAN-2-OL TECH

EC No. 200-661-7
Label In Accordance With (EC) No. 1272/2008



Signal Word Danger

Hazard Statements

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary Statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P313 Get medical advice/attention.

Supplementary Precautionary Statements

P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash ... thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+361+353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P337 If eye irritation persists:
P370+378 In case of fire: Use ... for extinction.
P403+233 Store in a well-ventilated place. Keep container tightly closed.
P403+235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container to ...

2.3. Other hazards

Not Classified as PBT/vPvB by current EU criteria.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Product name PROPAN-2-OL TECH
REACH Registration number Not supplied
REACH Registration notes Not provided by supplier.
CAS-No. 67-63-0
EU Index No. 603-117-00-0
EC No. 200-661-7

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

PROPAN-2-OL TECH

General information

CAUTION! First aid personnel must be aware of own risk during rescue! Always consider any dangers in the vicinity before approaching to treat the casualty. First aid personnel must protect themselves with all necessary personal protective equipment during the assistance of casualties. Isolate all sources of ignition when treating casualties - DO NOT SMOKE. When breathing is difficult, properly trained personnel may assist the casualty by administering oxygen. Check airway for any blockages. Place unconscious person on the side in the recovery position and ensure breathing can take place. Never give anything by mouth to an unconscious person. If breathing has stopped perform CPR. If medical assistance is needed take as much detail as possible about the incident and hazardous materials involved with the casualty.

Inhalation

Remove victim immediately from source of exposure. Provide rest, warmth and fresh air. Get medical attention if any discomfort continues.

Ingestion

Do not induce vomiting. Rinse mouth thoroughly with water Get medical attention.

Skin contact

Remove contaminated clothing and wash before re - use. Flush skin thoroughly with water. If irritation or discomfort occurs obtain medical attention

Eye contact

Promptly wash eyes with plenty of water or eye wash solution while lifting the eyelids. If possible remove any contact lenses and continue to wash. Get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

General information

The severity of the symptoms described will vary dependant of the concentration and the length of exposure.

Inhalation.

Acute: Irritation of nose, throat and airway. Delayed: Vapours may cause drowsiness and dizziness.

Ingestion

Acute: Nausea, vomiting. Delayed: Dizziness. Headache. Drowsiness Narcosis Coma and death can occur following severe exposure.

Skin contact

Acute: May produce irritation in people with sensitive skin. Delayed: Prolonged contact may cause redness, irritation and dry skin. May be absorbed through the skin.

Eye contact

Acute: Irritating to eyes. Delayed: May cause damage to the eyes.

4.3. Indication of any immediate medical attention and special treatment needed

Have eye wash facilities in place close to the operators' work area to provide immediate first aid prior to medical attention. Cases of eye contact and ingestion should be treated immediately.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Small fires: Extinguish with alcohol-resistant foam, carbon dioxide or dry powder. Large fires: Dry powder, foam or water spray/mist.

Unsuitable extinguishing media

Do not use water jet as this can spread the fire. Do not use carbon dioxide in enclosed spaces with insufficient ventilation.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

Carbon monoxide (CO). Carbon dioxide (CO₂).

Unusual Fire & Explosion Hazards

Vapours are heavier than air and may spread near ground to sources of ignition. Vapours may form explosive mixture with air at room temperature. Sealed containers of the product or other flammable liquids in the near vicinity of the fire can explode due to pressure build up.

Specific hazards

In case of fire, toxic gases or vapours may be formed.

5.3. Advice for firefighters

Special Fire Fighting Procedures

Containers close to the fire area should be cooled with water if safe to do so. Be aware that any flammable substance containers are liable to explode when heated. Prevent run-off from entering drains and watercourses. Be aware of dangers from other hazardous substances in the immediate area.

Protective equipment for fire-fighters

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

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6.1. Personal precautions, protective equipment and emergency procedures

Isolate all sources of ignition. Use protective clothing and equipment as described in section 8 of this datasheet. Provide adequate ventilation. Avoid ingestion, inhalation of vapours and contact with skin and eyes. Restrict access to the area until the spillage is treated, if large amounts of vapours are produced that will be hazardous to others, evacuate the area. Use suitable respiratory equipment if spillages occur in enclosed spaces and vapours are produced. Have emergency procedures in place for treating spillages, evacuating the area and informing the emergency services if necessary. When any other effects of spillages will affect the safety of others the area should be evacuated. Restrict access to the area until the spillage is treated and it is safe to return.

6.2. Environmental precautions

Avoid unauthorised discharge to the environment. Do not discharge into drains, water courses or onto the ground. Clean up any spillages immediately, prevent material from spreading and entering drains or sewage systems. If spillages to land cannot be treated safely or if contamination will occur the Environment Agency must be alerted immediately. Large spillages or uncontrolled discharge to water systems must be alerted to the Environmental Agency or other regulatory body. If the substance has entered a foul drain or sewage system in significant quantity to cause a hazard the local Water Treatment Company must be informed.

6.3. Methods and material for containment and cleaning up

Isolate all ignition sources. Avoid heat, flames, sparks and static discharge. NO SMOKING. Small Spillages: Absorb with inert, non-combustible material. Large Spillages: Dam and absorb spillages with sand, earth or other inert, non-combustible material. Fit drain covers where they are available if the spillage is likely to enter the drainage system. Ventilate well. Any extraction systems used to ventilate the area must be flameproof. Collect spillage in containers, seal securely and deliver for disposal according to local regulations. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Ensure there are no ignition or heat sources in the waste storage area. Wash spillage site well with water and detergent, be aware of the potential for surfaces to become slippery. Wash thoroughly after dealing with a spillage. After spillages in enclosed areas test atmosphere before using any potential ignition sources. Ventilate area and allow to dry before allowing access.

6.4. Reference to other sections

Refer to sections 8 and 13 for additional information.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Static electricity and formation of sparks must be prevented. Ensure sufficient earthing is in place during use. Eliminate all sources of ignition. Avoid spilling, skin and eye contact. Avoid inhalation of vapours and spray mists. Do not mix with incompatible substances or mixtures. Do not eat, drink or smoke when handling. Do not dispose of the substance to the environment through unauthorised means. Do not discharge to land or water including the drainage system. Do not use in areas close to drainage systems unless measures are in place to prevent access of product. Do not use in confined spaces without adequate ventilation and/or respirator. Use flame proof fume extraction systems to remove vapours away from the work area. Wash at the end of each work shift and before using the toilet. Remove contaminated clothing/footwear/equipment before entering eating areas or other places that would expose others to the substance. Ensure emergency procedures are in place to treat spillages and cope with other situations such as evacuation.

7.2. Conditions for safe storage, including any incompatibilities

Avoid all ignition sources. Ensure sufficient earthing is in place to eliminate static charge accumulation. Store in area with adequate ventilation and sufficient air movement to prevent any build up of vapours. Store in closed original container at temperatures between 15°C and 25°C. Store away from heat, direct sunlight and moisture. Store away from oxidising agents. Store away from incompatible materials. Keep above the chemical's freezing point. Store in a stable situation to avoid spillages. It is advisable to store in a bunded area or use other protective measures such as a sump pallet or storage tray. If the substance is transferred to other containers ensure the packaging material is compatible. Consult with the packaging manufacturer or supplier. Do not leave storage containers exposed to the atmosphere as this will result in evaporation of contents.

Storage Class

Flammable liquid storage.

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
PROPAN-2-OL TECH	WEL	400 ppm	999 mg/m3	500 ppm	1250 mg/m3	

WEL = Workplace Exposure Limit.

Biological Limit Values

No information available

DNEL

Industry	Dermal	Long Term	888 (Systemic)	mg/kg/day
Industry	Inhalation.	Long Term	500 (Systemic)	mg/m3

PROPAN-2-OL TECH

Consumer	Dermal	Long Term	319	mg/kg/day
Consumer	Inhalation.	Long Term	89	mg/m3
Consumer	Oral	Long Term	26	mg/kg/day

PNEC

Freshwater	140.9	mg/l
Marinewater	140.9	mg/l
STP	2251	mg/l
Sediment	552 (freshwater)	mg/kg
Sediment	552 (marine water)	mg/kg
Soil	28	mg/kg
160 (oral - food).	mg/kg	

No information received from the manufacturer concerning PNEC.

8.2. Exposure controls

Engineering measures

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined workplace exposure limit (WEL) is not exceeded. Explosion-proof general and local exhaust ventilation. If vapours or mists are generated, work in a fume cupboard.

Respiratory equipment

Wear suitable respiratory protection when vapours or mists are produced if the Workplace Exposure Limit is exceeded and there is insufficient ventilation or extraction. Chemical respirator with organic vapour cartridge. Type A. Consult with the supplier as to the compatibility of the equipment with the chemical of concern. Respiratory protection should conform to the following standards. BS EN 136: Full face masks. BS EN 140: Half-face masks. BS EN 143: Particulates. CAUTION: Air purifying respirators do not protect the user in oxygen deficient atmospheres, use air supplied system. Powered air respirators should meet requirements of EN146 and EN12941. Airline fed respirators should meet the requirements of EN 270 and EN1835. Respiratory protection should be maintained in a proper condition and inspected at the frequency specified by current legislation.

Hand protection

Wear protective gloves. Nitrile. Viton rubber (fluor rubber). Butyl rubber. For gloves involving total immersion 1.0mm thickness (if available) are recommended, at least 0.5mm and breakthrough time of >480 minutes. For splash resistance use minimum 0.5mm thickness and breakthrough time > 240 minutes. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Gloves showing signs of degradation should be changed to avoid skin contamination. Gloves should conform to EN 374 (Chemical and Micro-organisms hazards). When packages of the product are being handled during storage or transport it is advisable to wear protective gloves to prevent damage to the skin. When removing used gloves apply proper technique by avoiding skin contact with the outer surface.

Eye protection

Wear approved chemical safety goggles conforming to EN 166.

Other Protection

Wear suitable protective clothing during transport, handling and storage operations connected with the product. Protective clothing should conform to the general requirements of EN 340:2003. Also consider EN 13034:2005; EN 14605:2005; EN 943:2002 dependent upon the situation resulting in exposure. Wear suitable protective footwear during handling of the product. When treating spillages it is recommended to wear protective boots, consult with the supplier as to the compatibility. Safety footwear should conform to standards EN 344 - 347. Wear plastic apron and full length gloves if handling large amounts. If there is a risk of splashing then wear a face shield. Have facilities in place to wash eyes in case of contact. If handling large amounts it is recommended to have a safety shower. Wear anti-static footwear.

Hygiene measures

Remove clothing when contamination will result in exposure to the substance, segregate and wash before re-use. Do not eat, drink or smoke in the work area. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Remove contaminated clothing when entering eating areas or other places that could lead to contamination of others with the product.

Environmental Exposure Controls

See section 6 for details.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Colourless.
Odour	Characteristic. Alcoholic
Solubility	Miscible with water
Initial boiling point and boiling range	82
Melting point (°C)	- 89
Relative density	0.786 20
Vapour density (air=1)	2.07
Vapour pressure	33 mm Hg 20
Evaporation rate	1.2
pH-Value, Conc. Solution	Neutral (approx. 7)
Viscosity	2.65 cSt 20c

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Decomposition temperature (°C)

Not available.

Flash point 12

Auto Ignition Temperature (°C) 425

Flammability Limit - Lower(%) 2.0

Flammability Limit - Upper(%) 12.7

Partition Coefficient log Pow: 0.05

(N-Octanol/Water)

OECD Test Guideline 107; Literature value.

Explosive properties

Formation of explosive vapour / air mixtures.

More sensitive to shock than m-dinitrobenzene.

No.

More sensitive to friction than m-dinitrobenzene.

No.

Solid/Liquid Ignition On Contact With Air.

No.

Solid: Burning time. Not applicable

Aerosol ignition distance Not applicable

Aerosol flame height Not applicable

Oxidising properties

Not applicable.

9.2. Other information

All available information about the substance has been included in section 9.1. If more becomes available from the manufacturer then this datasheet will be updated.

Mol. Weight 60.1

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Reaction with acid chlorides, chlorine and phosphorus chlorides forms toxic chloroacetones. Water loss occurs over alumina or sulphuric acid to form diisopropyl ether and propylene which are both flammable.

10.2. Chemical stability

Stable when stored in sealed container at normal temperatures and in a suitable location. Evaporation will occur if the containers are not sealed correctly. Agitation of the substance in storage containers may produce a build up of electrostatic charge. Forms explosive mixtures with air.

10.3. Possibility of hazardous reactions

Hazardous reactions as specified in section 10.1. Heat and gaseous products may be formed that would build up pressure in a sealed container, do not mix with incompatible materials. Oxidation which is highly exothermic occurs above 300C.

Hazardous Polymerisation

Will not polymerise.

10.4. Conditions to avoid

Avoid sources of heat and ignition. Avoid direct sunlight and moisture. Avoid storage with incompatible materials. Avoid storage in freezing conditions. Avoid storage near to unprotected drainage systems. It is advisable to store the product within some form of containment to prevent spillages reaching drainage systems. Situations that would produce vibration or agitation of the substance in storage containers as there is the potential to build up static charge, particularly in metal or compatible plastic containers. Do not allow the storage container to be left exposed to the atmosphere. Avoid storage in an unstable manner or in a situation that would result in exposure to the product.

10.5. Incompatible materials

Materials To Avoid

Acids. Halogenated compounds Oxidising agents. Acid anhydrides. Aluminium. Some plastics and rubber.

10.6. Hazardous decomposition products

None under normal conditions. See section 5 for hazardous combustion products.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

PROPAN-2-OL TECH

Acute toxicity:

Acute Toxicity (Oral LD50)

5840 mg/kg Rat

OECD Guideline 401, Acute Oral Toxicity.

Acute Toxicity (Dermal LD50)

16.4 Rabbit

OECD Guideline 402, Acute Dermal Toxicity. 24 hour exposure, units quoted are ml/kg bw.

Acute Toxicity (Inhalation LC50)

> 10000 ppmV (gas) Rat

OECD Guideline 403 (Acute inhalation toxicity). 6 hour duration instead of 4 hour.

Skin Corrosion/Irritation:

Dose

4 hr Rabbit

Erythema/eschar score

No erythema (0).

Oedema score

No oedema (0).

Not irritating. 4 hour exposure, observations at 4, 24 and 48 hours on intact and abraded skin.

Following a 4 hour exposure period on both intact and abraded skin, only slight irritation was noted on abraded skin.

Slightly irritating.

Serious eye damage/irritation:

Irritating 14 day observation period. Tests on rabbits, OECD Guideline 405, Acute eye Irritation / Corrosion.

Respiratory or skin sensitisation:

Skin sensitisation

Buehler test: Guinea Pig

OECD Guideline 406 (Skin sensitisation).

Not Sensitising.

Germ cell mutagenicity:

Genotoxicity - In Vitro

Gene Mutation:

All in-vitro tests gave negative results. OECD Guidelines 471 and 476.

Negative.

Micronucleus assay on mice gave negative results. OECD Guideline 474.

Negative.

Carcinogenicity:

Carcinogenicity

NOEL = 5000 ppm Inhalation. Rat

Tests on mice and rats through inhalation and injection gave negative results for carcinogenicity.

Not a carcinogen.

Reproductive Toxicity:

Reproductive Toxicity - Fertility

Two-generation study: NOEL 500 mg/kg Rat F1

Test results on animals have shown propan-2-ol not to be toxic for reproduction.

Not toxic for reproduction.

Reproductive Toxicity - Development

NOEL 400 (maternal toxicity); 400 (developmental toxicity). mg/kg Oral Rat

OECD Guideline 414.

Maternal and developmental toxicity was noted at levels of 800 and 1200 mg/kg bw/day. There were no incidences of teratogenicity at any doses tested.

Specific target organ toxicity - single exposure:

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Target Organs

Eyes Skin Respiratory system, lungs Central nervous system

In high concentrations irritation of the respiratory system and eyes. Drowsiness and dizziness. Ingestion can produce nausea and vomiting in higher doses.

Specific target organ toxicity - repeated exposure:

STOT - Repeated exposure

NOAEL 5000 (5 day/week; 104 weeks) ppmV/6hr/day Inhalation. Rat

Target Organs

Liver Kidneys

Tests on rats over prolonged periods have showed both weight gains and losses, increased weight of the liver and some liver damage.

Aspiration hazard:

Viscosity

No information available.

Inhalation

Immediate: Vapours may cause drowsiness and dizziness. High concentrations of vapours may irritate the respiratory system, cause headache and vomiting. Delayed: High concentrations of vapours may lead to unconsciousness.

Ingestion

Immediate: Nausea, vomiting, headache, dizziness and intoxication. Delayed: Ingestion of large amounts may cause coma and death.

Skin contact

Immediate: May cause irritation on prolonged or repeated contact. Delayed: May have degreasing effect on the skin.

Eye contact

Immediate: Irritating to eyes. Delayed: Prolonged or repeated contact may cause damage to the eye.

Target Organs

Liver

Specific effects

Reversible effects on the liver have been observed.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Although not classified as environmentally hazardous, harmful effects cannot be excluded in the event of improper handling or disposal. Do not allow to enter drinking water, waste water or soil.

12.1. Toxicity

Acute Toxicity - Fish

LC50 96 hours 9640 mg/l Pimephales promelas (Fat-head Minnow)

Flow through method. OECD Guideline 203 (Fish, Acute Toxicity Test)

LC50 48 hours 8970 mg/l Leuciscus idus (Golden orfe)

Freshwater, static.

Acute Toxicity - Aquatic Invertebrates

EC50 9714 mg/l Daphnia magna

24 hour study Immobilisation test. OECD Guideline 202.

1800 mg/l

Scenedesmus quadricauda, 7 day, static, freshwater, toxicity threshold.

Acute Toxicity - Microorganisms

1050 mg/l

Cell Multiplication Inhibition Test, 16 hour, Toxicity threshold, static, freshwater, Pseudomonas putida.

Chronic Toxicity - Fish Early life Stage

Not available.

Short Term Toxicity - Embryo and Sac Fry Stages

Not available.

Chronic Toxicity - Aquatic Invertebrates

Not available.

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Acute Toxicity - Terrestrial

LC50 48 hours 10200 mg/l

Insects (*Drosophila simulans*) were exposed to propan-2-ol in nutrients.

12.2. Persistence and degradability

Degradability

Good biodegradability

Phototransformation

Air. Half-life:

Indirect photolysis by hydroxyl (OH) radicals.

Degradation (50%) 1.3 days

Air, sunlight, OECD draft: Photochemical Oxidative Degradation in the Atmosphere.

Stability (Hydrolysis)

pH7 Half-life: 5 days 20°C

Abiotic: Propan-2-ol is not susceptible to hydrolysis. Biotic: 50% degradation in 5 days.

Biodegradation

Degradation (95%) 21 days

Test carried out on domestic sewage. Concentration 10mg/l. Aerobic test. OECD 301 E.

Degradation (99.9%) days

Aerobic, activated sludge, 10mg/l, OECD 303 A. No time period quoted.

Degradation (100%) 4 days

Anaerobic, domestic sludge, 200mg/l.

The substance is readily biodegradable.

Biological Oxygen Demand

1.19 g O₂/g substance

1.19 g O₂/g (non-adapted) and 1.72 g O₂/g (adapted).

Chemical Oxygen Demand

2.23 g O₂/g substance

Ratio BOD₅/COD = 0.53(non-adapted) and 0.77(adapted).

12.3. Bioaccumulative potential

Bioaccumulative potential

Will not bio-accumulate.

Bioaccumulation factor

Not applicable.

Partition coefficient log Pow: 0.05

OECD Test Guideline 107; Literature value.

12.4. Mobility in soil

Mobility:

The product will evaporate readily from soil and water surfaces. It will undergo biodegradation in both soil and water. It is not expected to travel into groundwater.

Adsorption/Desorption Coefficient

Not available.

Henry's Law Constant

Not available.

Surface tension

Not available.

12.5. Results of PBT and vPvB assessment

Not Classified as PBT/vPvB by current EU criteria.

12.6. Other adverse effects

May inhibit germination of seeds and grains if soil contamination occurs.

SECTION 13: DISPOSAL CONSIDERATIONS

PROPAN-2-OL TECH

General information

Any waste material is classed as hazardous waste, it should only be disposed of through licenced waste handlers and treatment sites. Do not allow unauthorised disposal to the environment. Avoid sources of ignition when handling waste. If operators are exposed to vapours during the disposal process then suitable respiratory protection should be worn. All other personal protective equipment as described in section 8 should be worn. When handling waste, consideration should be made to the safety precautions applying to handling of the product.

13.1. Waste treatment methods

Waste material should not be disposed of directly to drain. Uncleaned empty containers should be treated as hazardous waste. Avoid unauthorised disposal. Do not dump illegally onto land or into water. Dispose of waste and residues in accordance with local authority requirements. The recommended method for treatment of waste residues is either reclamation or incineration by specialist disposal company. Recover and reclaim or recycle, if practical. When dealing with waste always consider the waste management hierarchy of Prevention, Preparation for re-use, Recycling, Recovery and Disposal. It is advisable to minimise waste at source if possible, then re-use, recover or recycle wherever possible before considering waste disposal options.

SECTION 14: TRANSPORT INFORMATION

14.1. UN number

UN No. (ADR/RID/ADN)	1219
UN No. (IMDG)	1219
UN No. (ICAO)	1219

14.2. UN proper shipping name

Proper Shipping Name	ISOPROPANOL (ISOPROPYL ALCOHOL)
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14.3. Transport hazard class(es)

ADR/RID/ADN Class	3
ADR/RID/ADN Class	Class 3: Flammable liquids.
ADR Label No.	3
IMDG Class	3
ICAO Class/Division	3
Transport Labels	



14.4. Packing group

ADR/RID/ADN Packing group	II
IMDG Packing group	II
ICAO Packing group	II

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant
No.

14.6. Special precautions for user

EMS	F-E, S-D
Emergency Action Code	2YE

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

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SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Statutory Instruments

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I. 2009 No. 716). Control of Substances Hazardous to Health.

Guidance Notes

Workplace Exposure Limits EH40. Approved Classification and Labelling Guide (CHIP 4) ECHA Guidance on the Compilation of Safety Data Sheets, September 2011.
EU Legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments. Regulation (EU) 453/2010.

15.2. Chemical Safety Assessment

Information from the manufacturer of the raw material has not been received regarding Chemical Safety Assessments, Exposure Scenarios or a Chemical Safety Report.

SECTION 16: OTHER INFORMATION

General information

Toxicological and ecotoxicological information has been taken from the ECHA List of Registered Substances and the ESIS database. It is taken as being correct at the date of compilation of this Safety Datasheet.

Information Sources

Raw material safety data sheets. ESIS Database IUCLID Datasheet Web-based literature. Wiley Guide to Chemical Incompatibilities. ECHA website.

Revision Comments

Changes to sections 1, 2, 4, 5, 6, 8, 11, 12, 13, 14 and 15.

Revision Date 25/04/2012

Revision 8

Supersedes date 03/11/2011

SDS No. 21053

Safety Data Sheet Status Approved.

Risk Phrases In Full

R11 Highly flammable

R36 Irritating to eyes.

R67 Vapours may cause drowsiness and dizziness.

Hazard Statements In Full

H319 Causes serious eye irritation.

H225 Highly flammable liquid and vapour.

H336 May cause drowsiness or dizziness.