

This Safety Data Sheet has been prepared in accordance with the requirements of EC Directive 1999/45/EC and provides information relating to the safe handling and use of the product.

## QTEK ISOPROPYL ALCOHOL

### SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Isopropyl alcohol

Manufacturer: QTEK Manufacturing Ltd.,  
IDA Business Park,  
Athenry,  
Galway,  
Ireland.

Telephone Number: (353) 91 850222  
Fax Number: (353) 91 850233

### SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

Substance formal name: Propan-2-ol  
Substance chemical family: Alcohol  
Common name: IPA  
Synonyms: Isopropanol, IPS, Dimethyl carbinol, Propanol, sec-  
CAS Number: 67-63-0  
INDEX Number: 603-117-00-0  
EG-Nr: 200-661-7  
Symbol(s): F, Xi  
R-phrases(s): R11, R36, R67

### SECTION 3: HAZARDS IDENTIFICATION

Human health hazards: Narcotic at high vapour concentrations.  
Safety hazards: Highly flammable. In use, may form flammable/explosive vapour/air mixture.  
Environmental hazards: Not classified as dangerous under EU criteria.

### SECTION 4: FIRST AID MEASURES

Symptoms and effects: Headache. Dizziness. Nausea. Narcosis. Dryness of the skin. Ingestion may cause inebriation and coma. Irritation of the skin, eyes and respiratory tract.

Eye Contact Flush eye with water. If persistent irritation occurs, obtain medical attention.

Skin Contact Wash promptly with soap and water if available. If persistent irritation occurs, obtain medical attention.

Inhalation Remove person to fresh air. If rapid recovery does not occur, obtain medical attention.

Ingestion DO NOT induce vomiting. If rapid recovery does not occur, obtain medical attention. Give water to drink, providing patient is conscious.

Advice to physicians: Dermatitis may result from prolonged or repeated exposure. May cause central nervous system depression.

### SECTION 5: FIRE FIGHTING MEASURES

This Safety Data Sheet has been prepared in accordance with the requirements of EC Directive 1999/45/EC and provides information relating to the safe handling and use of the product.

<u>Specific hazards:</u>	Hazardous combustion products may include carbon monoxide. The vapour is heavier than air, spreads along the ground and distant ignition is possible.
<u>Extinguishing Media:</u>	Alcohol resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
<u>Unsuitable extinguishing media:</u>	Water in a jet.
<u>Protective equipment:</u>	Full protective clothing and self contained breathing apparatus.
<u>Other information:</u>	Keep adjacent containers cool by spraying with water.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

<u>Personal precautions:</u>	Avoid contact with skin and eyes. Ventilate contaminated area thoroughly. Do not breathe vapour. Extinguish naked flames. Remove ignition sources. No smoking. Avoid sparks. Evacuate the area of all non-essential personnel. Shut off leaks, if possible without personal risk.
<u>Personal protection:</u>	Wear PVC, neoprene, or nitrile rubber gloves, PVC one-piece suit with integral hood, safety boots, rubber, knee length. Wear full face-piece respirator with organic vapour canister NPF 400. In a confined space, wear self-contained breathing apparatus open circuit type NPF 2000.
<u>Environmental precautions:</u>	Prevent contamination of soil and water. Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers.
<u>Clean-up methods - small spillage:</u>	Absorb or contain liquid with sand, earth or spill control material. Shovel up and place in a labelled, sealable container for subsequent safe disposal. Put leaking containers in a labelled drum or overdrum. Flush contaminated area with plenty of water. Retain washings as contaminated waste.
<u>Clean-up methods - large spillage:</u>	Transfer to a labelled, sealable container for product recovery or safe disposal. Treat residues as for small spillage.
<u>Other information:</u>	Risk of explosion. Inform the emergency services if liquid enters surface water drains. Vapour may form an explosive mixture with air. See section 13 for information on disposal.

## SECTION 7: HANDLING AND STORAGE

<u>Handling:</u>	Avoid prolonged or repeated contact with skin. Extinguish any naked flames. Remove ignition sources. Avoid sparks. Do not smoke. Take precautionary measures against static discharges. Earth all equipment. Do not empty into drains.
<u>Handling temperatures:</u>	Ambient.
<u>Storage:</u>	Tanks should be fitted with a vapour recovery system. Keep away from direct sunlight and other sources of heat or ignition. Do not smoke in storage areas. Keep container tightly closed and in a well-ventilated place.
<u>Storage temperatures:</u>	Ambient.
<u>Product transfer:</u>	Take precautionary measures against static discharges. Earth all equipment. Avoid splash filling.
<u>Recommended materials:</u>	For containers or container linings, use mild steel or stainless steel. For container paints, use zinc silicate. If diluted with de-ionised water, steel containers may be unsuitable.
<u>Unsuitable materials:</u>	Most plastics, aluminium if > 50C, neoprene rubber.

## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering control measures:

This Safety Data Sheet has been prepared in accordance with the requirements of EC Directive 1999/45/EC and provides information relating to the safe handling and use of the product.

Use only in well-ventilated areas.

Occupational exposure standards:

Component name	Limit type	Value	Unit	Other information
Isopropyl alcohol	TLV/TWA	999	mg/m <sup>3</sup>	(400ppm for 8 hours)
	STEL	1250	mg/m <sup>3</sup>	(500ppm for 15 mins)

Respiratory protection: No specific measures.

Eye protection: Monogoggles.

Body protection: Standard issue work clothes. Safety shoes or boots - chemical resistant.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<u>Physical state:</u>	Liquid at ambient temperature.
<u>Colour:</u>	Clear.
<u>Odour:</u>	Characteristic.
<u>Initial boiling point:</u>	82°C
<u>Final boiling point:</u>	83°C
<u>Melting point:</u>	-90°C
<u>Vapour pressure:</u>	4.3kPa @ 20°C
<u>Density:</u>	785 kg/m <sup>3</sup> @ 20°C
<u>Dynamic viscosity:</u>	2.43 mPa.s @ 20°C
<u>Vapour density (air = 1):</u>	2.0 @ 20°C
<u>Conductivity:</u>	6 pS/m x 10 <sup>6</sup> @ 20°C
<u>Flash point:</u>	12°C (Abel)
<u>Explosion limit - upper:</u>	12% (v/v)
<u>Explosion limit - lower:</u>	2% (v/v)
<u>Auto-ignition temperature:</u>	425°C
<u>Solubility in water:</u>	Complete.
<u>n-octanol/water partition coefficient:</u>	< 3 log P <sub>OW</sub>
<u>Evaporation rate: (relative)</u>	1.5 (n-Bu.Ac=1).
<u>Other properties:</u>	Molecular Weight 60.10

## SECTION 10: STABILITY AND REACTIVITY

<u>Stability:</u>	Stable under normal conditions. Reacts with strong oxidising agents. Reacts with strong acids.
<u>Conditions to avoid:</u>	Heat, flames and sparks.
<u>Materials to avoid:</u>	Strong oxidising agents. Strong acids.
<u>Hazardous Decomposition Products:</u>	None Known.

## SECTION 11: TOXICOLOGICAL INFORMATION

<u>Basis for assessment:</u>	Information given is based on product data.
<u>Acute toxicity - oral:</u>	LD50 > 2000 mg/kg

This Safety Data Sheet has been prepared in accordance with the requirements of EC Directive 1999/45/EC and provides information relating to the safe handling and use of the product.

<u>Acute toxicity - dermal:</u>	LD50 > 2000 mg/kg
<u>Acute toxicity - inhalation:</u>	LC50 > 5 mg/l
<u>Eye irritation:</u>	Slight irritant.
<u>Skin irritation:</u>	Slight irritant.
<u>Respiratory irritation:</u>	Irritant in animal studies.
<u>Skin sensitisation:</u>	May cause skin sensitisation.
<u>(Sub) chronic toxicity:</u>	Repeated exposure causes liver damage.
<u>Human effects:</u>	Repeated exposure can lead to allergic contact dermatitis. High exposures can cause drowsiness and dizziness. Can cause liver damage.

## SECTION 12: ECOLOGICAL INFORMATION

<u>Basis for assessment:</u>	Information is given on product data.
<u>Mobility:</u>	Dissolves in water. Lost within a day by evaporation and dissolution. Large volumes may penetrate soil and could contaminate groundwater.
<u>Persistence/Degradability:</u>	Readily biodegradable. Oxidises rapidly by photochemicals in air.
<u>Bio-accumulation:</u>	Does not bio-accumulate.
<u>Acute toxicity - fish:</u>	LC50 > 100 mg/l
<u>Acute toxicity - daphnia:</u>	EC50 > 100 mg/l
<u>Acute toxicity - algae:</u>	IC50 > 100 mg/l
<u>Acute toxicity - bacteria:</u>	IC50 > 100 mg/l
<u>Sewage treatment:</u>	Practically non-toxic, EC50 > 100 mg/l, to organisms in sewage treatment plants.
<u>Other information:</u>	Poses a significant risk of oxygen depletion in aquatic systems.

## SECTION 13: DISPOSAL CONSIDERATIONS

<u>Precautions:</u>	Refer to Section 7 before handling the products or containers.
<u>Waste disposal:</u>	Recover or recycle if possible. Otherwise incineration.
<u>Product disposal:</u>	Recover or recycle if possible. Otherwise incineration.
<u>Container disposal:</u>	Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Send to drum recoverer or metal reclaimer. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums.

Local legislation:

## SECTION 14: TRANSPORT INFORMATION

<u>US Number:</u>	1219
<u>UN Class/Packing Group:</u>	3/II
<u>U.N. Proper shipping name:</u>	ISOPROPANOL (Isopropyl alcohol)
<u>UN Number (sea transport, IMO):</u>	1219
<u>IMO Class/Packing Group:</u>	3.2/II



This Safety Data Sheet has been prepared in accordance with the requirements of EC Directive 1999/45/EC and provides information relating to the safe handling and use of the product.

IMO Symbol: Flammable liquid  
IMO Marine pollutant: No  
IMO Proper shipping name: ISOPROPANOL (Isopropyl alcohol)  
ADR/RID Class/Item: 3/3b  
ADR/RID Symbol: Flammable liquid  
ADR/RID Kemler number: 33/1219  
ADR/RID Proper shipping name: ISOPROPYL ALCOHOL  
UN Number (air transport, ICAO): 1219  
IATA/ICAO Class/Packing Group: 3/II  
IATA/ICAO Symbol: Flammable liquid  
IATA/ICAO Proper shipping name: ISOPROPANOL (Isopropyl alcohol)  
Local regulations:

## SECTION 15: REGULATORY INFORMATION

EC Label name: Isopropanol  
EC Classification: Highly flammable  
EC Symbols: F, Xi  
EC Safety phrases: S7 Keep container tightly closed  
S16 Keep away from sources of ignition - no smoking.  
R-phrases(s): R11: Highly Flammable  
R36: Irritating to eyes  
R67: Vapours may cause drowsiness or dizziness  
EINECS (EC): 200-661-7  
EC Annex I Number: 603-003-00-0  
MITI (Japan): 2-207  
TSCA (USA): Listed  
AICS (Australia): Listed  
DSL (Canada): Listed  
National legislation:

## SECTION 16: OTHER INFORMATION

Uses and restrictions: Used in the manufacture of paints, household products and pharmaceuticals. Raw material for acetone and MIBK.  
Core SDS history: Edition No: 03  
First issue: 3 November 1997  
Revised: 25 February 2003  
Revisions highlighted: Section 4 Advice to Physicians



This Safety Data Sheet has been prepared in accordance with the requirements of EC Directive 1999/45/EC and provides information relating to the safe handling and use of the product.

SDS Distribution: The information in this document should be made available to all who may handle the product.

Other information:

References:

The data contained herein is based on information currently available to Q-TEK Manufacturing Ltd. and is believed to be factual. As a blender, and compounder, Q-TEK does not manufacture the raw materials used in this product and correspondingly relies on information provided to Q-TEK Manufacturing Ltd. from material safety data sheets on the specific raw materials in the construction of this material safety data sheet. Such information is, to the best of Q-TEK Manufacturing Ltd.'s knowledge and belief, accurate and reliable as of the date of this MSDS. HOWEVER, NO REPRESENTATION, WARRANTY OR GUARANTEE IS MADE AS TO THE ACCURACY, RELIABILITY, OR COMPLETENESS. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular application. This information is not intended to be all-inclusive as of the manner and conditions of use, handling and storage. Other factors may involve other or additional safety or performance considerations. This data is not to be taken as a warranty or representation of which Q-TEK Manufacturing Ltd. assumes legal responsibility.