SAFETY DATA SHEET

1. Identification

Product identifier **Contec Gallon Bottles containing 100% Isopropyl alcohol (1000FLIQ)**

Other means of identification

SDS number 1000FLIQ

Product code SBI28100, SBI28100IR

Recommended use Bottled IPA for critical cleaning.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company name Contec, Inc.

Address 525 Locust Grove
Spartanburg, SC 29303
USA

Telephone 1-864-503-8333

Email SDS@contecinc.com

Emergency phone number Call CHEMTREC Day or Night
USA/Canada: 1.800.424.9300
Mexico: 1.800.681.9531
Outside USA/Canada: +1.703.527.3887

2. Hazard identification

Physical hazards	Flammable liquids	Category 2
Health hazards	Serious eye damage/eye irritation	Category 2
	Specific target organ toxicity following single exposure	Category 3 narcotic effects

Label elements

Signal word Danger

Hazard statement Highly flammable liquid and vapour. Causes serious eye irritation. May cause drowsiness or dizziness.

Precautionary statement

Prevention Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use non-sparking tools. Take action to prevent static discharges. Avoid breathing mist/vapours. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Response IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTRE/doctor if you feel unwell. In case of fire: Use appropriate media to extinguish.

Storage Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental information None.

Other hazards None known.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
Isopropyl alcohol		67-63-0	100

Composition comments All concentrations are in percent by volume.

4. First-aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison centre or doctor/physician if you feel unwell.

Skin contact Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if irritation develops and persists.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause drowsiness or dizziness. Headache. Nausea, vomiting.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

General information Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical May burn with invisible flame. Vapours may form explosive mixtures with air. Vapours are heavier than air and may spread near ground to sources of ignition. Vapours may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed. Carbon oxides. Organic compounds.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Cool containers exposed to flames with water. Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards Highly flammable liquid and vapour.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapours. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. Avoid release to the environment. This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

WARNING! Used bottles may catch fire if improperly discarded or stored near ignition sources. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Take precautionary measures against static discharges. Use only in accordance with directions. Avoid breathing mist/vapours. Avoid contact with skin, eyes and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Keep containers closed when not in use. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see section 10 of the SDS). Keep away from combustible material.

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values (TLV)

Material	Type	Value
Isopropyl alcohol	STEL	400 ppm
	TWA	200 ppm

Components	Type	Value
Isopropyl alcohol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended

Material	Type	Value
Isopropyl alcohol	STEL	984 mg/m3
		400 ppm
	TWA	492 mg/m3
		200 ppm

Components	Type	Value
Isopropyl alcohol (CAS 67-63-0)	STEL	984 mg/m3
		400 ppm
	TWA	492 mg/m3
		200 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Material	Type	Value
Isopropyl alcohol	STEL	400 ppm
	TWA	200 ppm

Components	Type	Value
Isopropyl alcohol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended

Material	Type	Value
Isopropyl alcohol	STEL	400 ppm
	TWA	200 ppm

Components	Type	Value
Isopropyl alcohol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

Canada. New Brunswick OELs: Threshold Limit Values (TLVs) Based on the 1991 and 1997 ACGIH TLVs and BEIs Publication (New Brunswick Regulation 91-191)

Material	Type	Value
Contec Gallon Bottles containing 100% Isopropyl alcohol (1000FLIQ)	STEL	400 ppm
	TWA	200 ppm

Components	Type	Value
Isopropyl alcohol (CAS 67-63-0)	STEL	1230 mg/m3
		500 ppm
	TWA	983 mg/m3
		400 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended

Material	Type	Value
Isopropyl alcohol	STEL	400 ppm
	TWA	200 ppm

Components	Type	Value
Isopropyl alcohol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Material	Type	Value
Isopropyl alcohol	STEL	1230 mg/m3
		500 ppm
	TWA	985 mg/m3
		400 ppm

Components	Type	Value
Isopropyl alcohol (CAS 67-63-0)	STEL	1230 mg/m3
		500 ppm
	TWA	985 mg/m3
		400 ppm

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended

Material	Type	Value
Isopropyl alcohol	15 minute	400 ppm
	8 hour	200 ppm

Components	Type	Value
Isopropyl alcohol (CAS 67-63-0)	15 minute	400 ppm
	8 hour	200 ppm

Biological limit values

ACGIH Biological Exposure Indices (BEI)

Material	Value	Determinant	Specimen	Sampling Time
Isopropyl alcohol	40 mg/l	Acetone	Urine	*

Components	Value	Determinant	Specimen	Sampling Time
Isopropyl alcohol (CAS 67-63-0)	40 mg/l	Acetone	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Take note of the information given by the manufacturer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). Recommended materials: Polyethylene. Neoprene. Chlorinated polyethylene (or Chlorosulfonated polyethylene). Natural rubber. Polyvinyl chloride (PVC). Nitrile rubber/Nitrile latex - NBR.. Ethyl vinyl alcohol laminate ("EVAL"). Unsuitable materials: Polyvinyl alcohol (PVA).
Other	Wear suitable protective clothing.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Selection and use of respiratory protective equipment should be in accordance with CSA Standard Z94.4. Check with respiratory protective equipment suppliers.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Liquid.
Colour	Colourless.
Odour	Alcohol-like.
Odour threshold	Property has not been measured.
pH	Property has not been measured.
Melting point/freezing point	Property has not been measured.
Initial boiling point and boiling range	> 82 - < 89 °C (> 179.6 - < 192.2 °F)
Flash point	20.5 °C (68.9 °F)
Evaporation rate	Property has not been measured.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	2 %
Explosive limit – upper (%)	12 %
Vapour pressure	43 hPa (32 mm Hg) (20 °C (68 °F))
Vapour density	Property has not been measured.
Relative density	0.872 (20 °C (68 °F))
Solubility(ies)	
Solubility (water)	Soluble in water.
Partition coefficient (n-octanol/water)	Not applicable to mixtures.
Auto-ignition temperature	399 °C (750.2 °F)
Decomposition temperature	Property has not been measured.
Viscosity	Property has not been measured.
Other information	
Dynamic viscosity	0.58 mPa.s (75 °C (167 °F))

Explosive properties	Not explosive.
Heat of combustion (NFPA 30B)	27.4 kJ/g
Kinematic viscosity	Property has not been measured.
Molecular formula	C3-H8-O
Molecular weight	Not applicable for mixtures.
Oxidising properties	Not oxidising.
Particle size	Not applicable.
Percent volatile	100 %
Surface tension	20.93 mN/m (25 °C (77 °F))

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials. Protect against direct sunlight.
Incompatible materials	Aldehydes. Halogenated organics. Halogens. Strong acids. Strong oxidising agents.
Hazardous decomposition products	Combustion may produce: Oxides of carbon and other organic substances.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause drowsiness or dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	Prolonged skin contact may cause temporary irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Ingestion may cause irritation and malaise.
Symptoms related to the physical, chemical and toxicological characteristics	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause drowsiness or dizziness. Headache. Nausea, vomiting.

Information on toxicological effects

Acute toxicity Not expected to be acutely toxic.

Components	Species	Test Results
Isopropyl alcohol (CAS 67-63-0)		
Acute		
Dermal		
LD50	Rabbit	12870 mg/kg
Inhalation		
Vapour		
LC50	Rat	72.6 mg/l, 4 hours
Oral		
LD50	Rat	4710 mg/kg

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.

Respiratory or skin sensitisation

Respiratory sensitisation	Not a respiratory sensitiser.
Skin sensitisation	This product is not expected to cause skin sensitisation.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.

ACGIH Carcinogens

Isopropyl alcohol (CAS 67-63-0) A4 Not classifiable as a human carcinogen.

Canada - Manitoba OELs: carcinogenicity

Isopropyl alcohol (CAS 67-63-0) Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

Isopropyl alcohol (CAS 67-63-0) 3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Frequent or prolonged contact may defat and dry the skin.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Isopropyl alcohol (CAS 67-63-0)			
Aquatic			
Acute			
Crustacea	LC50	Daphnia magna	> 10000 mg/l, 24 hours
Fish	LC50	Pimephales promelas	9640 mg/l, 96 hours
Chronic			
Crustacea	EC50	Daphnia magna	> 100 mg/l, 21 days
	NOEC	Daphnia magna	141 mg/l, 16 days
			30 mg/l, 21 days

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential Bioconcentration potential is low.

Partition coefficient n-octanol / water (log Kow)

Isopropyl alcohol (CAS 67-63-0) 0.05

Mobility in soil Isopropyl alcohol is highly mobile in soil.

Other adverse effects The product contains a volatile organic compound which has a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

TDG

UN number UN1219
UN proper shipping name Isopropanol
Transport hazard class(es)
Class 3
Subsidiary risk -
Packing group II
Environmental hazards No

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number	UN1219
UN proper shipping name	Isopropanol
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	No
ERG Code	3L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1219
UN proper shipping name	Isopropanol
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	No
EmS	F-E, S-D
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

Canadian regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto Protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

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Further information X - Ask Supervisor Further contact:
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List of abbreviations
EC50: Effective Concentration, 50%.
IATA: International Air Transport Association.
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.
IMDG: International Maritime Dangerous Goods.
LC50: Lethal Concentration, 50%.
LD50: Lethal Dose, 50%.
MARPOL: International Convention for the Prevention of Pollution from Ships.
NOEC: No Observed Effect Concentration.
STEL: Short-Term Exposure Limit.
TDG: Transportation of Dangerous Goods.
TWA : Time Weighed Average Value.

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