SAFETY DATA SHEET
Isopropyl Alcohol 70%

1: Identification

GHS Product identifier Isopropyl Alcohol 70%
Other means of identification Isopropanol, IPA
Recommended use of the chemical and restrictions on use
General purpose solvent. Use in accordance with manufacturer's instructions.
Supplier's identifier maxill inc., 80 Elm Street, St. Thomas, Ontario, CANADA, N5R 6C8, 1-800-268-8633
maxill inc., 500 West Main Street, Cortland, OH, USA, 44410, 1-800-268-8633
Emergency phone number Velocity EHS Emergency Response Services
Canada & US: 1-800-255-3924, International: +1-813-248-0585

2: Hazard identification

Classification of the substance or mixture	Flammable liquids	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity (single exposure)	Category 3 narcotic effects

GHS label elements, including precautionary statements

Signal word	Danger
Hazard statement	Highly flammable liquid and vapor. Causes serious eye irritation. May cause drowsiness or dizziness.
Prevention	Keep away from heat, sparks, open flames, hot surfaces and other ignition sources - No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical and ventilating equipment. Use non-sparking tools. Take action to prevent static discharge. Avoid breathing mist, vapors, spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves and eye protection.
Response	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help if you feel unwell. 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 help. In case of fire: Use appropriate media to extinguish.
Storage	Keep cool. Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards which do not result in classification None known.

3: Composition/information on ingredients

Mixtures

Chemical name	CAS number	Percent (w/w)
Isopropyl alcohol	67-63-0	60 - 80

4: First-aid measures

Description of necessary first-aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center 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 help if symptoms occur. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical help if you feel unwell.

Most important symptoms/effects, acute and delayed

May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Indication of immediate medical attention and special treatment needed, if necessary

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.

5: Fire-fighting measures

Suitable extinguishing media Water fog. Alcohol resistant foam. Dry chemical powder.

Specific hazards arising from the chemical

Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed. Combustion products may include: carbon oxides.

Special protective equipment and precautions for fire-fighters

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

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/vapors/spray. 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

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

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. 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, and or other non-combustible material and transfer to containers for later disposal.

Wipe up with absorbent material (e.g. cloth, fleece). 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.

7: Handling and storage

Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not taste or swallow. Avoid contact with eyes. Avoid prolonged exposure. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8: Exposure controls/personal protection

Control parameters

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Isopropyl alcohol (CAS 67-63-0)	PEL	980 mg/m^3
		400 ppm

US. ACGIH Threshold Limit Values

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

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Isopropyl alcohol (CAS 67-63-0)	STEL	1225 mg/m^3
		500 ppm
	TWA	980 mg/m^3
		400 ppm

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. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection	Chemical goggles are recommended.
Skin (hand) protection	Wear appropriate chemical resistant gloves. Nitrile, butyl rubber or neoprene gloves are recommended. Other suitable gloves can be recommended by the glove supplier. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.
Skin (general) protection	Wear appropriate chemical resistant 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. Respirator type: Chemical respirator with organic vapor cartridge.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.

9: Physical and chemical properties and safety characteristics

Physical state	Liquid
Colour	Clear, colourless
Odour	Alcohol-like
Melting point / freezing point	-89°C
Boiling point	83°C
Flammability	Flammable
Lower and upper explosion limit / flammability limit	2% v/v & 12.7% v/v respectively for isopropyl alcohol
Flash point	12 – 21°C
Auto-ignition temperature	399°C
Decomposition temperature	Information not available (N/Av)
pH	N/Av
Kinematic viscosity	N/Av
Solubility	Soluble
Partition coefficient: *n*-octanol/water (log value)	N/Av
Vapour pressure	43.2 hPa for isopropyl alcohol @20°C
Density or specific gravity	0.87 g/mL
Relative vapour density	2.1 for isopropyl alcohol
Particle characteristics	Not applicable

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 is known under conditions of normal use.

Conditions to avoid Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Avoid direct light. Contact with incompatible materials.

Incompatible materials Acids. Strong oxidizing agents. Chlorine. Isocyanates.

Hazardous decomposition products No hazardous decomposition products are known.

11: Toxicological information

Information on the likely routes of exposure

Inhalation May cause drowsiness and dizziness.
Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact Repeated exposure may cause skin dryness or cracking.
Eye contact Causes serious eye irritation.
Ingestion May be harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Delayed and immediate effects and also chronic effects from short- and long-term exposure

Acute toxicity May be harmful if swallowed.
Skin corrosion/irritation Prolonged or repeated skin contact may cause drying, cracking, or irritation
Serious eye damage/eye irritation Causes serious eye irritation.
Respiratory or skin sensitization
Respiratory sensitization Not a respiratory sensitizer.
Skin sensitization This product is not expected to cause skin sensitization.
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.
IARC Monographs. Overall Evaluation of CarcinogenicityNot listed.
NTP Report on Carcinogens Not listed.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) Not regulated.
Reproductive toxicity This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure May cause drowsiness and dizziness.
Specific target organ toxicity - repeated exposure Not classified.
Aspiration hazard Not an aspiration hazard.
Chronic effects Prolonged inhalation may be harmful.
Numerical measures of toxicity (such as acute toxicity estimates) See below, “Mixtures”
Interactive effects Information not available.
Where specific chemical data are Information not available Information not available.
Mixtures

Components	Species	Test Results
<u>Isopropyl alcohol (CAS 67-63-0)</u>		
Acute		
Dermal		
LD50	Rabbit	12870 mg/kg
Inhalation		
Vapor		
LC50	Rat	72.6 mg/L, 4 Hours
Oral		
LD50	Rat	4710 mg/kg

Mixture versus ingredient information

Information not available.

Other information Information not available.

12: Ecological information

Toxicity
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.

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

Bioaccumulative potential
Partition coefficient n-octanol / water (log K_{ow})
Isopropyl alcohol (CAS 67-63-0) 0.05
Mobility in soil Expected to be mobile in soil.
Other adverse effects
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13: Disposal considerations

Disposal methods
Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. Dispose of contents/ container in accordance with local/regional/national/international regulations.
Empty containers may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14: Transport information

TDG

UN Number	UN1219
UN Proper Shipping Name	ISOPROPANOL
Transport hazard class(es)	Class 3,
Subsidiary risk	Not applicable.
Packing group	II
Environmental hazards	No
Special precautions for user	Read instructions, SDS and emergency procedures before handling.
Transport in bulk according to IMO instruments	Not applicable.

15: Regulatory information

Safety, health and environmental regulations specific for the product in question
International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	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
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 this product complies 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

Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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