SAFETY DATA SHEET



1. Identification

Product identifier Other means of identification Product code Recommended use Recommended restrictions Manufacturer

Isopropyl Alcohol 99%

0303071 Solvent None known. The Oldham Group 2056 North Republic Street Springfield, IL 62702 US 800-468-4649 EMERGENCY CALL CHEMTREC 800-424-9300

Category 2

2. Hazard(s) identification

Physical hazards	Flammable liquids
Health hazards	Not classified.
Environmental hazards	Not classified.
OSHA defined hazards	Not classified.
Label elements	

Signal word	Danger
Hazard statement	
H225 H303 H302	Highly flammable liquid and vapor. May cause skin and eyes irritation. Harmful if swallowed.
Prevention	 P262 - Avoid eyes contact. P262 - Avoid prolonged skin contact. P260 - Avoid breathing vapors or mist P270 - Do not eat, drink or smoke when using this product. P210 - Keep away from heat/sparks/open flames/hot surfaces No smoking. P233 - Keep container tightly closed. 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. P280 - Wear protective gloves/eye protection/face protection.
Response	 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water. P308 + P313 - If exposed or concerned: Get medical advice/attention. P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P370 + P378 - In case of fire: Use appropriate media to extinguish.
Storage	P403 + P235 - Store in a well-ventilated place. Keep cool.
Disposal	P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Isopropanol		67-63-0	90-100

4. First-aid measures

Inhalation	If overexposure to vapors or mist, move to fresh air. Call a physician if breathing becomes difficult.
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. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
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.
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 Alcohol resistant foam. Water foq. Carbon dioxide (CO2). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only. Unsuitable extinguishing Do not use water jet as an extinguisher, as this will spread the fire. media Specific hazards arising from Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source the chemical of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed. Special protective equipment Self-contained breathing apparatus and full protective clothing must be worn in case of fire. and precautions for firefighters **Fire-fighting** In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do equipment/instructions so without risk. Specific methods Use standard firefighting procedures and consider the hazards of other involved materials. Highly flammable liquid and vapor.

General fire hazards

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. 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). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. 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. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.
	Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Environmental precautions	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe handling	Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not smoke. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
	For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".
Conditions for safe storage, including any incompatibilities	Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Avoid spark promoters. Eliminate sources of ignition. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep in an area equipped with sprinklers.

8. Exposure controls/personal protection

Occupational exposure limits

Components	ts for Air Contam T	уре		alue	
Isopropanol (CAS 67-63-0)	Р	EL	ç	80 mg/m3	
			4	00 ppm	
US. ACGIH Threshold Lin	nit Values				
Components	т	уре	١	alue	
Isopropanol (CAS 67-63-0)	S	TEL	4	00 ppm	
	Т	WA	2	00 ppm	
US. NIOSH: Pocket Guide					
Components	т	уре	١	alue	
Isopropanol (CAS 67-63-0)	S	TEL	1	225 mg/m3	
				00 ppm	
	Т	WA		80 mg/m3	
			4	00 ppm	
ological limit values					
ACGIH Biological Exposu Components	ire Indices Value	Determinant	Specimen	Sampling Time	
Isopropanol (CAS 67-63-0)	40 mg/l	Acetone	Urine	*	
* - For sampling details, ple	•	document.			
propriate engineering Explosion-proof general and local exhaust ventilation. Good general ventilation (typical		vpically 10 air			
ntrols	changes per house process end	changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborn levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.			
	airborne levels t				
lividual protection measu		o an acceptable level.	·		
lividual protection measu Eye/face protection	res, such as perso	o an acceptable level.	oment		
-	res, such as perso	to an acceptable level. Inal protective equip sses with side shields (oment		
Eye/face protection	res, such as perso Wear safety gla	to an acceptable level. Inal protective equip sses with side shields (oment		
Eye/face protection Hand protection	res, such as perso Wear safety gla Wear protective	to an acceptable level. Inal protective equip sses with side shields (oment or goggles).		

General hygiene considerations	When using do not smoke. Always observe good personal hygiene measures, such as washing a handling the material and before eating, drinking, and/or smoking. Routinely wash work clothin and protective equipment to remove contaminants.	
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9. Physical and chemical properties

Appearance	Clear.	
Physical state	Liquid.	
Form	Liquid.	
Color	Colorless.	
Odor	Typical Solvent.	
рН	Not available.	
Melting point/freezing point	N.D.	
Initial boiling point and boiling range	179.6 °F (82 °C) estimated	
Flash point	59.0 °F (15.0 °C) (Lowest flashing component)	
Evaporation rate	> 1 (Butyl Acetate = 1)	
Upper/lower flammability or explosive limits		
Flammability limit - lower (%)	2 % estimated	
Flammability limit - upper (%)	13 % estimated	
Vapor pressure	43 hPa (1 hPa = 0.75006 mmHg)	
Vapor density	> 1 (Air = 1)	
Solubility(ies)		
Solubility (water)	Soluble.	
Auto-ignition temperature	N.D.	
Other information		
Percent volatile	100 %	
Pounds per gallon	6.609 lb/gal	
Specific gravity	0.793	
VOC (Weight %)	100 %	

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Suitable precautions should be utilized if using this product at temperatures above the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizers and strong acids.
Hazardous decomposition products	No hazardous decomposition products are known if stored and applied as directed.

11. Toxicological information

Information on likely routes of exposure

Ingestion

Expected to be a low ingestion hazard.

Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

Components	Species	Test Results
sopropanol (CAS 67-63-0)		
Acute		
Dermal		
LD50	Rabbit	12800 mg/kg
Oral		
LD50	Dog	4797 mg/kg
	Mouse	3600 mg/kg
	Rabbit	5.03 g/kg
	Rat	4.7 g/kg
Other		
LD50	Mouse	1509 mg/kg
	Rat	1099 mg/kg
* Estimates for product may b	e based on additional component da	ta not shown.
Skin corrosion/irritation	Prolonged skin contact may cause	temporary irritation.
Serious eye damage/eye rritation	Direct contact with eyes may cause temporary irritation.	
Respiratory or skin sensitization	on	
Respiratory sensitization	Not available.	
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	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
US. OSHA Specifically Reg	ulated Substances (29 CFR 1910	.1001-1050)
Not listed.		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity single exposure	Not classified.	
Specific target organ toxicity repeated exposure	Not classified.	
Aspiration hazard	Not available.	
Chronic effects	Prolonged inhalation may be harm	ful.
12. Ecological informatio	on	
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

Bluegill (Lepomis macrochirus)

* Estimates for product may be based on additional component data not shown.

LC50

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.

Aquatic Fish

> 1400 mg/l, 96 hours

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 instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
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 (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT BULK / NON-BULK:

UN number	1993
Proper shipping name	Flammable Liquid, n.o.s., (Isopropanol)
Hazard class	3
Packing group	II
ERG code	128

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Yes

Hazard categories

Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312

Hazardous chemical

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act Not regulated. (SDWA)

US state regulations

US. Massachusetts RTK - Substance List

Isopropanol (CAS 67-63-0)

- US. New Jersey Worker and Community Right-to-Know Act Not regulated.
- US. Pennsylvania RTK Hazardous Substances Isopropanol (CAS 67-63-0)

US. Rhode Island RTK

Isopropanol (CAS 67-63-0)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

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
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory

*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, including date of preparation or last revision

Issue date	09-09-2014
Version #	01
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Revision information	Conversion to SDS.