SECTION 1: PRODUCT IDENTIFICATION

Product Name:	Isopropyl Alcohol
Synonyms:	
Product Number:	95-4011 (1-gallon jug), 95-4015 (5-gallon pail)
Company:	Durável
Address:	227 Crompton St., Charlotte NC 28273
Business Phone:	(704) 837-7991
Emergency Phone:	Chemtrec US (800) 424-9300 CNN 1014580
Date of Current Revision:	November 16, 2023

SECTION 2: HAZARD IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable Liquids, H225	Category 2
Eye Irritation, H319	Category 2A
Specific target organ toxicity (single exposure), Central Nervous System, H336	Category 3

EMERGENCY OVERVIEW: This product is a clear liquid.

DANGER!

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

Appearance: Transparent Liquid **Physical State**: Liquid **Odor**: Alcohol

Precautionary Statements – Prevention

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.
P261 – Avoid breathing mist or vapors.
P264 – Wash skin thoroughly after handling.
P271 – Use only outdoors or in a well-ventilated area.
P280 – Wear protective gloves/ eye protection/ face protection.

Precautionary Statements – Response

P303 + P361 + P353 – IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P312 – IF INHALED: remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 – If eye irritation persists: Get medical advice/ attention.
P370 + P378 – In case of fire: use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Precautionary Statements - Storage

P403 + P233 – Store in a well-ventilated place. Keep container tightly closed.
P405 + P235 – Store locked up. Keep cool.

Precautionary Statements – Disposal

P501 – Dispose of contents/ container to an approved waste disposal plant.

Hazards Not Otherwise Classified (HNOC)

May form explosive peroxides.

SECTION 3: COMPOSITION AND INFORMATION ON INGREDIENTS

Synonyms Isopropanol

Formula C3 H8 O

Molecular Weight 60.10 g/mol

Substance

Chemical Name	CAS No.	Weight - %	EC-No. Index No.
2-Propanol	67-63-0	<= 100%	200-661-7 603-117-00-0

SECTION 4: FIRST-AID MEASURES

Description of First Aid Measures

General Advice	Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.
Eye Contact	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.
Skin Contact	IF ON SKIN (or hair): Wash off with soap and plenty of water. Consult a physician.
Inhalation	IF INHALED: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion	IF SWALLOWED: Do NOT induce vomiting. Immediately make victim drink water (two glasses at most). Call a POISON CENTER or doctor/physician.

SECTION 5: FIRE-FIGHTING MEASURES

Conditions of Flammability
Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/ sparks/ open flame/ hot surface. No smoking.

Suitable Extinguishing Media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special Protective Equipment for Firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous Combustion Products
Hazardous decomposition products formed under fire conditions. - Carbon oxides

Explosion Data – Sensitivity to Mechanical Impact
No data available

Explosion Data – Sensitivity to Static Discharge
No data available

Further Information
Use water spray to cool unopened containers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental Precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and material for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice for safe handling Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.
Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Handle and store under inert gas. Hygroscopic.

SECTION 8: EXPOSURE CONTROLS – PERSONAL PROTECTION

Control parameters

Exposure guidelines

Components	CAS	Value	Control Parameters	Basis
2-Propanol	67-63-0	TWAEV	400 ppm 983 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWA	200 ppm	Canada. British Columbia OEL
		STEL	400 ppm	Canada. British Columbia OEL
		STEL	400 ppm 984 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWA	200 ppm 492 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		STEL	500 ppm 1230 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWA	400 ppm 983 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		STEV	500 ppm 1230 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
		STEL	400 ppm	USA. ACGIH Threshold Limit Values (TLV)

Appropriate engineering controls

Engineering controls Adequate local or mechanical to reduce vapor or mist to below the PEL or TLV.

Monitoring Follow accepted work practices for handling a flammable material. Do not eat, drink, or smoke in areas where this chemical is used or stored. Have eye wash stations and safety showers readily available.

Individual protection measures, such as personal protective equipment

Respiratory Protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand Protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.4 mm
Break through time: 480 min
Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.2 mm
Break through time: 60 min
Material tested:Dermatril® P (KCL 743 / Aldrich Z677388, Size M)

Data Source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Eye Protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and Body Protection

Impervious clothing, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Specific Engineering Controls

Use mechanical exhaust or laboratory fumehood to avoid exposure.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	**Odor**	Alcohol odor
Appearance	Clear, colorless, liquid	**Odor Threshold**	No data available
Color	Clear		

Property	**Values**	**Remarks/Method**
pH	Not Available	
Melting point/freezing point	-89.5° C (-129.1° F)	
Boiling point/Boiling range	81.0-83.0° C (177.8-181.4° F)	
Flash point	12.0° C (53.6° F)	CC (closed cup)
Evaporation rate	3.0	
Flammability (solid, gas)	Not Relevant	
Flammability Limit in Air		
Upper flammability limit:	Not available	
Lower flammability limit:	Not available	
Lower explosion limit	2% (V)	
Upper explosion limit	12.7% (V)	
Vapor pressure	43.2 hPa (32.4 mmHg) @ 20° C (68° F) 58.7 hPa (44.0 mmHg) @ 25° C (77° F)	
Vapor density	Not available	
Specific Gravity	Not available	
Water solubility	Completely soluble	
Solubility in other solvents	Not Available	
Partition coefficient	Log Pow: 0.05	
Ignition temperature	425° C (797.0° F)	
Autoignition temperature	425° C (797.0° F)	
Decomposition temperature	Not Available	
Kinematic viscosity	Not Available	
Dynamic viscosity	Not Available	
Explosive properties	Not Available	
Oxidizing properties	Not Available	

Other Information

Softening point	Not Relevant
Molecular weight	Not Available
VOC Content (%)	< 10% g/L
Density	0.78 g/cm3
Bulk Density	Not Available

SECTION 10: STABILITY AND REACTIVITY

Polymerization Conditions to Avoid
None

Chemical stability
Stable under recommended storage conditions. Test for peroxide formation before distillation or evaporation. Test for peroxide formation or discard after 1 year.

Possibility of Hazardous Reactions
Vapors may form explosive mixture with air.

Conditions to avoid
Heat, flames and sparks. Extremes of temperature and direct sunlight.

Incompatible materials
Oxidizing agents, Acid anhydrides, Aluminium, Halogenated compounds, Acids

Hazardous Decomposition Products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - no data available

SECTION 11: TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	May cause irritation to the upper respiratory tract and CNS depression. Low to moderate degree of toxicity by inhalation.
Eye contact	Causes eye irritation including stinging, watering and redness which may result in corneal injury.
Skin contact	Contact may cause mild skin irritation including redness, burning, and drying/cracking of the skin.
Acute Toxicity Value	See Health Hazards below
Chronic (Long Term) Effects	Prolonged or repeated exposure can cause:, Nausea, Headache, Vomiting, narcosis, Drowsiness, Overexposure may cause mild, reversible liver effects., Aspiration may lead to: Lung oedema, Pneumonia.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
2-Propanol	Rat – 5045 mg/kg	Rabbit – 12800 mg/kg	Rat – 8h – 16000 ppm

Information on toxicological effects

Symptoms May cause drowsiness or dizziness if inhaled. May cause respiratory irritation. Causes serious eye irritation. Causes skin irritation.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Reproductive Effects	Not Available
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Sensitization to Product	Not Available
Synergistic Products	Not Available
Carcinogenicity	Not Listed as Carcinogen

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity Information not available

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 9,640.00 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 5,102.00 mg/l - 24 h
Toxicity to algae EC50 - Desmodesmus subspicatus (green algae) - > 2,000.00 mg/l - 72 h
EC50 - Algae - > 1,000.00 mg/l - 24 h

Mobility Information not available

Degradability Information not available

BioAccumulation No bioaccumulation is to be expected (log Pow <= 4).

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging Dispose of as unused product.

SECTION 14: TRANSPORTATION INFORMATION

DOT UN1219, Isopropanol, 3, II

IATA UN1219, Isopropanol, 3, II

IMDG UN1219, Isopropanol, 3, II

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

SARA 302
This material does not contain any components with a section 302 EHS TPQ.

SARA 313
The following components are subject to reporting levels established by SARA Title III, Section 313, Revision Date 2007-03-01: 2-Propanol CAS 67-63-0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic health hazard	Yes
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive hazard	No

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

US State Right-To-Know Regulateions

Massachusetts Right To Know Components
2-Propanol CAS 67-63-0, Revision Date 2007-03-01

Pennsylvania Right To Know Components
2-Propanol CAS 67-63-0, Revision Date 2007-03-01

SECTION 16: OTHER INFORMATION

NFPA Class IB Liquid: Flash Point below 73° F, Boiling Point above 100° F

Issue Date	April 24, 2023
Revision Date	November 16, 2023
Revision Note	Address

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Durável assumes no responsibility for injury to vendee or third party person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, Durável assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety precautions are followed.

END OF SAFETY DATA SHEET