COLUMBUS CHEMICAL INDUSTRIES INC.

Safety Data Sheet

Isopropyl Alcohol, 99%, Purified

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Isopropyl Alcohol, 99%, Purified

Synonyms/Generic Names: IPA, Isopropanol, 2-propanol, *sec*-Propyl alcohol

Product Number: 2845

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information Call: 920-623-2140 (Monday-Friday 8:00-4:30)

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: Flammable liquid, Target Organ Effect, Irritant

Target Organs: Nerves, Kidney, Cardiovascular system, Gastrointestinal tract, Liver

Signal Words: Danger

Pictograms:

GHS Classification

Flammable liquids	Category 2
Skin irritation	Category 3
Eye irritation	Category 2A
Specific target organ toxicity- single exposure	Category 3

GHS Label Elements, including precautionary statements:

Hazard Statements:

H225	Highly flammable liquid and vapor
H316	Causes mild skin irritation
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness

Precautionary Statements:

P210	Keep away from heat/sparks/open flames/hot surfaces. –No smoking.
P261	Avoid breathing dust/fumes/gas/mist/vapors/spray.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.

Potential Health Effects

Eyes	Causes eye irritation.
Inhalation	May be harmful if inhaled. Causes respiratory tract irritation. Vapors may cause drowsiness and dizziness. Can cause irritation of mucous membranes and central nervous system depression.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Ingestion	May be harmful if swallowed.

NFPA Ratings

Health	1
Flammability	3
Reactivity	1
Specific hazard	Not Available

HMIS Ratings

Health	2
Fire	3
Reactivity	0
Personal	H

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Isopropyl Alcohol	>99	67-63-0	200-661-7	C_3H_8O	60.10 g/mol

4. FIRST-AID MEASURES

Eyes	In case of eye contact, rinse with plenty of water and seek medical attention if necessary.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if necessary.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention if necessary.
Ingestion	**Do Not Induce Vomiting!** Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention if necessary.

5. FIREFIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Flammable liquid. Use alcohol foam, carbon dioxide, or water spray when fighting fires with this material. Cool containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots. Use water spray to cool fire-exposed containers and disperse vapors. Containers may rupture in the heat of the fire. Do not use direct water stream, may spread the fire.
Specific hazards arising from the chemical	Emits toxic fumes (carbon oxides) under fire conditions. Vapors can travel to a source of ignition and flash back. Containers may explode in a fire. Cool containers from a distance using water spray. Flames may be invisible. (See also Stability and Reactivity section)

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment. Use personal protective equipment. Avoid breathing vapors, mist or gas.
Environmental precautions	Do not let product enter drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Absorb spill with vermiculite or other noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with local regulations.

7. HANDLING AND STORAGE

Precautions for safe handling
Use with adequate ventilation and grounding. Wash thoroughly after using. Keep container closed when not in use. See section 8 for recommendations on the use of personal protective equipment. Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use explosion-proof equipment. Take measure to prevent the buildup of electrostatic charge.

Conditions for safe storage, including any incompatibilities
Store in tightly closed, original containers in a cool, dry, well ventilated area. Do not store with strong oxidizing agents, strong acids, peroxides, aldehydes, halogens, ammonia, acid anhydrides or alkali metals. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls: Ventilation and appropriate grounding of containers.

Component	Exposure Limits	Basis	Entity
Isopropyl Alcohol	200 ppm 492 mg/m^3	TLV	ACGIH
	400 ppm 984 mg/m^3	STEL	ACGIH
	400 ppm 980 mg/m^3	PEL	OSHA
	2000 ppm	IDLH	OSHA
	400 ppm 980 mg/m^3	REL	NIOSH
	500 ppm 1225 mg/m^3	STEL	NIOSH

TWA: Time Weighted Average over 8 hours of work.
TLV: Threshold Limit Value over 8 hours of work.
REL: Recommended Exposure Limit
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit during x minutes.
IDLH: Immediately Dangerous to Life or Health
WEEL: Workplace Environmental Exposure Levels
CEIL: Ceiling

Personal Protection

Eyes	Wear chemical safety glasses or goggles with face shield.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, apron or lab coat
Other	Not Available

Other Recommendations
Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling. Have supplies and equipment for neutralization and running water available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Clear, colorless liquid
Odor	Mild alcohol
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	-89°C (-129°F)
Initial boiling point and boiling range	82°C (180°F)
Flash point	12°C (54°F)
Evaporation rate	3.0
Flammability (solid, gas)	Flammable
Upper/lower flammability or explosive limit	LEL: 2.5% UEL:12%
Vapor pressure	(@ 20°C) 33 mmHg
Vapor density	(air=1) 2.07
Relative density	Not Available
Solubility (ies)	Completely soluble in water
Partition coefficient: n-octanol/water	Log Pow: 0.05
Auto-ignition temperature	399°C (750°F)
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Keep away from heat, flame and sparks
Incompatible Materials	Acids, Alkali metals, Oxidizing agents, iron salts, potassium, aluminum. May attack plastics and rubber.
Hazardous Decomposition Products	Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	LD50 Dermal- rabbit- 12,800 mg/kg
Eyes	Eyes-rabbit- Eye irritation- 24 h
Respiratory	LD50 Inhalation- rat- 8 h- 16,000 ppm
Ingestion	LD50 Oral- rat- 5,045 mg/kg

Carcinogenicity

IARC	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Burning, itching, redness. May be harmful if absorbed through skin.
Eyes	Redness, excessive blinking and watering eyes.
Respiratory	Coughing, wheezing, headache, disorientation, blurred vision, dizziness, fatigue or nausea.
Ingestion	Nausea, vomiting and central nervous system depression.

Chronic Toxicity	Ingestion may cause blindness.
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Pre- and Post- implant mortality.
Specific Target Organ Toxicity	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	LC50 – Pimephales promelas (fathead minnow)- 9,640 mg/l- 96 h
Aquatic Invertebrate	EC50- Daphnia magna (water flea)- 5,102 mg/l- 24 h
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Not Available

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	UN1219, Isopropanol, 3, pg II
TDG	UN1219, ISOPROPANOL, 3, pg II
IMDG	UN1219, ISOPROPANOL, 3, pg II
Marine Pollutant	No
IATA/ICAO	UN1219, Isopropanol, 3, pg II

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Isopropyl Alcohol
SARA 312	Isopropyl Alcohol
SARA 313	Listed: Isopropyl Alcohol
WHMIS Canada	Class B-2: Flammable liquid

16. OTHER INFORMATION

Revision	Date
Revision 1	07-13-2011