Safety Data Sheet

Isopentyl Alcohol

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Isopentyl Alcohol

Synonyms/Generic Names: Isoamyl alcohol; Isobutyl Carbinol; 3-methylbutan-1-ol

SDS Number: 383.00

Product Use: For Educational Use Only

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

For More Information Contact: Ward's Science
5100 West Henrietta Rd.
PO Box 92912-9012
Rochester, NY 14692
(800) 962-2660 (Monday-Friday 7:30-7:00 Eastern Time)

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

2. HAZARDS IDENTIFICATION

OSHA Hazards: Combustible liquid, Target organ effect, Irritant

Target Organs: Central nervous system

Signal Words: Warning

Pictograms:

GHS Classification:

Flammable liquids	Category 3
Acute toxicity, Inhalation	Category 4
Acute toxicity, Dermal	Category 5
Skin irritation	Category 2
Eye irritation	Category 2A

GHS Label Elements, including precautionary statements:

Hazard Statements:

H226	Flammable liquid and vapor.
H313	May be harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

Precautionary Statements:

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.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Ingestion	May be harmful if swallowed

NFPA Ratings

Health	1
Flammability	2
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	2
Fire	2
Reactivity	0
Personal	H

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Isoamyl Alcohol	100	123-51-3	204-633-5	$C_5H_{12}O$	88.15 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 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. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Flammable liquid. Use alcohol foam, carbon dioxide, or water spray when fighting fires involving 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.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Neutralize spill with sodium bicarbonate or lime. Absorb spill with 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 regulations.

7. HANDLING AND STORAGE

Precautions for safe handling
See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use.

Conditions for safe storage, including any incompatibilities
Store in tightly closed, original containers in a cool, dry, well ventilated area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls: Ventilation and appropriate grounding of containers.

Component	Exposure Limits	Basis	Entity
Isoamyl Alcohol	100 ppm 361 mg/m^3	TLV	ACGIH
	125 ppm 452 mg/m^3	STEL	ACGIH
	100 ppm 360 mg/m^3	PEL	OSHA
	100 ppm 360 mg/m^3	REL	NIOSH
	125 ppm 450 mg/m^3	STEL	NIOSH
	500 ppm	IDLH	OSHA

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.
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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Colorless to yellow liquid
Odor	Disagreeable
Odor threshold	Not Available
pH	5.6 at 25 g/l
Melting point/freezing point	-117°C (-179°F) - lit.
Initial boiling point and boiling range	130°C (266°F) - lit
Flash point	43°C (109°F): Closed Cup
Evaporation rate	Not Available
Flammability (solid, gas)	Flammable
Upper/lower flammability or explosive limit	LEL: 1.2% UEL: 9%
Vapor pressure	2 mmHg
Vapor density	3.04
Relative density	Not Available
Solubility (ies)	Completely soluble in water
Partition coefficient: n-octanol/water	log Pow: 1.28
Auto-ignition temperature	350°C (662°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	Strong oxidizing agents, acid chlorides, acid anhydrides, reducing agents.
Hazardous Decomposition Products	Carbon oxides

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	LD50 Dermal - rabbit - >3000 mg/kg
Eyes	Eyes – rabbit – Eye irritation
Respiratory	LC50 Inhalation – rat – male and female – 6 hours - >14 mg/l
Ingestion	LD50 Oral - rat - >5000 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

Eyes	Causes irritation. Symptoms include redness, excessive blinking and watering eyes.
Inhalation	Inhalation can cause irritation of mucous membranes and central nervous system depression. Symptoms include coughing, wheezing, headache, disorientation, blurred vision, dizziness, fatigue or nausea.
Skin	Contact may cause irritation. Symptoms include burning, itching, redness.
Ingestion	Symptoms include nausea vomiting and central nervous system depression.

Chronic Toxicity	Not Available
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	Not Available
Aquatic Invertebrate	EC50 - Daphnia magna (Water flea) - 260 mg/l - 48 hours
Terrestrial	EC50 – Desmodesmus subspicatus (green algae) – 490 mg/l – 72 hours

Persistence and Degradability	> 70 % - Readily biodegradable
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 or resiudes.
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	UN1105, Pentanols, 3, pg III
TDG	UN1105, PENTANOLS, 3, pg III
IMDG	UN1105, PENTANOLS, 3, pg III
Marine Pollutant	No
IATA/ICAO	UN1105, Pentanols, 3, pg III

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	Isoamyl Alcohol
SARA 312	Isoamyl Alcohol
SARA 313	Not Listed
WHMIS Canada	Class B-3: Combustible liquid with a flash point between 37.8°C (100°F0 and 93.3°C (200°F)

16. OTHER INFORMATION

Revision	Date
Revision 1	01/31/2013