SAFETY DATA SHEET

TEDIA®
High Purity Solvents

1000 Tedia Way
Fairfield, Ohio 45014
USA
Email: tedia@tedia.com
Web: www.tedia.com

24-Hour Emergency Number (CHEMTREC)
USA: 800-424-9300
International: 703-527-3887

All non-emergency numbers should be directed to Customer Service at 800-PURITY1

ISOAMYL ALCOHOL

SDS No. M0125

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Isoamyl Alcohol
Synonyms: 3-Methyl-1-butanol; Isobutylcarbinol; Isopentanol
Recommended Use: This product is recommended for laboratory and manufacturing use only. It is not recommended for drug, food or household use.

2. HAZARDS IDENTIFICATION

Classification:
Flammable Liquids: GHS Category 3
Acute Toxicity, Inhalation: GHS Category 4
Skin Irritation: GHS Category 2
Eye Irritation: GHS Category 2A
Specific Target Organ Toxicity – Single Exposure: GHS Category 3

Label Elements
Signal Word: DANGER!
Hazard Statements:

H226 – Flammable liquid and vapor.
H315 – Causes skin irritation
H319 – Causes serious eye irritation.
H332 – Harmful if inhaled.
H335 – May cause respiratory irritation.

Precautionary Statements:

P210 – Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P243 – Take precautionary measures against static electricity.
P280 – Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 – If on skin or hair: Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.

Emergency Overview

Causes irritation to eyes, skin, and respiratory tract. May be harmful if swallowed or inhaled. Aspiration hazard. Can enter lings and cause damage. May cause central nervous system effects. Flammable liquid and vapor. Target Organs: Central nervous system, lungs, eyes, and skin.

HMIS Rating:

Health – 2* Flammability – 2 Physical Hazard – 0 PPE – User supplied

NOTE: HMIS ratings use a numbering scale that ranges from 0 - 4 to indicate the degree of hazard. A value of zero means the chemical presents no hazard while a value of four indicates a high hazard. These ratings are based on the inherent properties of this chemical under expected conditions of normal use and are not intended to be used in emergency situations. PPE is determined by the user based on their needs and conditions.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Ingredient	CAS No	Percent	Hazardous
Isoamyl Alcohol	123-51-3	>99%	Yes

4. FIRST-AID MEASURES

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Ingestion: Potential aspiration hazard if swallowed. Get medial help immediately. Do not induce vomiting unless directed by medical personnel. If vomiting occurs naturally, have victim lean forward. Never give anything by mouth to an unconscious person.

Skin Contact: Remove any contaminated clothing. Wash skin with soap or mild detergent and water for at least 15 minutes. Get medical attention if irritation persists.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention if irritation persists.

Notes to Physician: Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Flammability: Flammable liquid and vapor (GHS Category 3)

Auto-ignition Temperature: 350° C (662° F)

Flash Point: 43° C (109° F)

Flammable Limits: Lower Limit – 1.2 vol %, Upper Limit – 9.0 vol %

Products of Combustion: May decompose into irritating and highly toxic gases under fire conditions (carbon monoxide and carbon dioxide).

Specific Fire Hazards: As in any fire, always wear self-contained breathing apparatus in pressure-demand (MSA/NIOSH approved or equivalent), and full protective gear. Use water spray to keep fire-exposed containers cool. Containers may explode if exposed to fire. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas.

Fire Fighting Media: Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam.

National Fire Protective Association: Health - 1, Flammability - 2, Reactivity - 0

NOTE: NFPA ratings use a numbering scale that ranges from 0 - 4 to indicate the degree of hazard. A value of zero means the chemical presents no hazard while a value of four indicates a high hazard. They are for use by emergency personnel to address the hazards that are presented by short term, acute exposure to this product under fire, spill, or similar emergencies. Ratings involve data and interpretations that may vary from company to company.

6. ACCIDENTAL RELEASE MEASURES

Absorb spilled liquid with sorbent pads, socks, or other inert material such as vermiculite, sand, or earth. Do not use sawdust or any combustible material. Use spark-proof tools. Provide ventilation to the affected area and remove all ignition

sources. Prevent spread of vapors. Approach the spill from upwind and pick up absorbed material and place it in a suitable container. Always use proper personal protective equipment as described in section 8.

7. HANDLING AND STORAGE

Precautions: Always use proper personal protective equipment as described in section 8. Wash thoroughly after handling. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Remove contaminated clothing and wash before reuse. Empty containers contain product residue (liquid and vapor) and can be dangerous. Keep container tightly closed and away from heat, spark, and flame. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks, or open flames. Use with adequate ventilation. Avoid breathing vapor or mist.
Storage: Keep in a flammables area away in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from sources of ignition.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or using the material should be equipped with eyewash station and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.
Personal Protection: Wear protective chemical goggles or other appropriate eye protection. Use butyl rubber gloves and protective clothing to prevent skin exposure. A respiratory protection program that meets OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever possible. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.
Exposure Limits:

ACGIH – 20 ppm TWA; 125 ppm STEL
NIOSH – 100 ppm TWA; 360 mg/m3 TWA 500 ppm IDLH
OSHA Final PELs – 100 ppm TWA; 360 mg/m^3 TWA

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State and Appearance: Clear, colorless liquid.
Odor: Strong and disagreeable
Odor Threshold: 10 to 35 ppm
Molecular Formula: $(CH_3)_2CHCH_2CH_2OH$
Molecular Weight: 88.15
Auto-ignition Temperature: 350° C (662° F)
Flash Point: 43° C (109° F)
Flammable Limits: Lower Limit – 1.2 vol %, Upper Limit – 9.0 vol %
pH: Not available.
Boiling Point: 130° C
Freezing/Melting Point: -117° C
Decomposition Temperature: Not available
Specific Gravity: 0.8 g/cm^3
Vapor Density (Air=1): 3.04
Vapor Pressure: 2.37 mm Hg @ 25° C.
Evaporation Rate (ether = 1): 0.03
Viscosity: 4.37 cps @ 20° C
Solubility: 2g/100ml @ 14°C

10. STABILITY AND REACTIVITY

Stability: Stable under normal temperature and pressure.
Conditions to Avoid: Ignition sources, excess heat.

Incompatibility With Various Substances: Strong oxidizing agents, acid chlorides, acid anhydrides, and reducing agents.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation, skin absorption, skin contact
Acute Exposure Hazards:

INHALATION HAZARD: Causes respiratory tract irritation. May cause visual abnormalities. May be harmful if inhaled. Causes narcotic effects including headache, dizziness, weakness, unconsciousness.

INGESTION HAZARD: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal. May cause a narcotic effect with possible coma. May be harmful if swallowed.

SKIN CONTACT HAZARD: Causes skin irritation. Repeated or prolonged exposure may cause drying and cracking of skin.

EYE CONTACT HAZARD: Causes eye irritation.

Chronic Exposure Hazards: No information found.
Animal Toxicity:

Draize test, rabbit, eye: 20 mg/24H Moderate;
Draize test, rabbit, skin: 20 mg/24H Moderate;
Oral, rabbit: LD50 = 3438 mg/kg;
Oral, rat: LD50 = 1300 mg/kg;
Oral, rat: LD50 = 4300 mg/kg;
Skin, rabbit: LD50 = 3970 uL/kg;

Carcinogenicity: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65
Epidemiology: No information available.
Reproductive Effects: No information available.
Mutagenicity: No information available.
Neurotoxicity: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity:
Goldfish (fresh water) 100ppm/82H (Lethal) Creek chub (river water) 400-600ppm/24H (Critical range)
Environmental Fate: Terrestrial: Highly mobile in soil and will leach into groundwater. Aquatic: Volatilizes into atmosphere. Atmospheric: Volatilizes rapidly, decomposed by photochemically produced hydroxyl radicals. Not expected to bioconcentrate. Readily biodegrades.

13. DISPOSAL CONSIDERATIONS

Material that cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Processing, use or contamination of this product may change the waste management options. Waste generators must decide if discarded material is a hazardous waste. State and local disposal regulations may differ from federal disposal definitions found in 40 CFR 261.3. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. TRANSPORT INFORMATION

US DOT
Proper Shipping Name: Pentanols
Hazard Class: 3
UN Number: UN1105
Packing Group: III

IMDG
Proper Shipping Name: Pentanols
Hazard Class: 3
UN Number: UN1105
Packing Group: III

IATA
Proper Shipping Name: Pentanols
Hazard Class: 3
UN Number: UN1105
Packing Group: III

15. REGULATORY INFORMATION

US Federal Regulations:
CERCLA Hazardous Substances: CAS# 123-51-3 does not have RQ
SARA Section 302: Does not have a TPQ
SARA Codes: CAS# 123-51-3 – immediate, fire
Section 313: Isoamyl alcohol (CAS# 123-51-3) is not subject to SARA Title III Section 313 and 40 CFR 373 reporting requirements.
OSHA: Not considered highly hazardous by OSHA.
US State Regulations:
CAS# 123-51-3 is on the following state right-to-know lists: California, New Jersey, Pennsylvania, and Massachusetts
California Prop 65: California No Significant Risk Level: Not listed

16. OTHER INFORMATION

Originally Prepared: 1/1/2006
Last Revised: 11/3/2014 – Updated hazard categories, hazard statements, and precautionary statements in Section 2 and incompatibilities with various substances in Section 10.

The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment.

TEDIA COMPANY, INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, TEDIA COMPANY, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.