GARDENA, CA
NEW BRUNSWICK, NJ

# Material Safety Data Sheet

| NFPA | HMIS | Personal Protective Equipment |
|---|---|---|
|  | Health Hazard 2<br>Fire Hazard 2<br>Reactivity 0 |  <br>See Section 15. |

## Section 1. Chemical Product and Company Identification



| | |
|---|---|
| **Common Name/ Trade Name** | **Isoamyl alcohol** |
| **Manufacturer** | SPECTRUM LABORATORY PRODUCTS INC.<br>14422 S. SAN PEDRO STREET<br>GARDENA, CA 90248 |
| **Commercial Name(s)** | Not available. |
| **Synonym** | Isobutylcarbinol; Isopentyl alcohol; 2-Methyl-4-butanol; 3-Methy butanol; 3-Methylbutan-1-ol; Isoamylol; Isopentanol |
| **Chemical Name** | 3-Methyl-1-butanol |
| **Chemical Family** | Solvent. |
| **Chemical Formula** | (CH3)2CHCH2CH2OH |
| **Supplier** | SPECTRUM LABORATORY PRODUCTS INC.<br>14422 S. SAN PEDRO STREET<br>GARDENA, CA 90248 |

| | |
|---|---|
| **Catalog Number(s).** | I1047 |
| **CAS#** | 123-51-3 |
| **RTECS** | EL5425000 |
| **TSCA** | TSCA 8(b) inventory: Isoamyl alcohol |
| **CI#** | Not applicable. |

**IN CASE OF EMERGENCY**
**CHEMTREC (24hr) 800-424-9300**

CALL (310) 516-8000

## Section 2.Composition and Information on Ingredients

| | | Exposure Limits | | | |
|---|---|---|---|---|---|
| **Name** | **CAS #** | **TWA ($mg/m^3$)** | **STEL ($mg/m^3$)** | **CEIL ($mg/m^3$)** | **% by Weight** |
| 1) Isoamyl alcohol | 123-51-3 | 360 | 450 | | 100 |

**Toxicological Data on Ingredients**

**Isoamyl alcohol**:
ORAL (LD50): Acute: 1300 mg/kg [Rat]. 3438 mg/kg [Rabbit].
DERMAL (LD50): Acute: 3212 mg/kg [Rabbit].

## Section 3. Hazards Identification

**Potential Acute Health Effects**

Hazardous in case of skin contact (irritant), of eye contact (irritant). Slightly hazardous in case of skin contact (permeator), of ingestion, of inhalation.

**Potential Chronic Health Effects**

**CARCINOGENIC EFFECTS**: Not available.
**MUTAGENIC EFFECTS**: Not available.
**TERATOGENIC EFFECTS**: Not available.
**DEVELOPMENTAL TOXICITY**: Not available.
The substance may be toxic to lungs, liver, upper respiratory tract, skin, central nervous system (CNS). Repeated or prolonged exposure to the substance can produce target organs damage.

*Continued on Next Page*

## Section 4. First Aid Measures

| | |
|---|---|
| **Eye Contact** | Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention. |
| **Skin Contact** | In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention. |
| **Serious Skin Contact** | Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention. |
| **Inhalation** | If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. |
| **Serious Inhalation** | Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention. |
| **Ingestion** | Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband. |
| **Serious Ingestion** | Not available. |

## Section 5. Fire and Explosion Data

| | |
|---|---|
| **Flammability of the Product** | Flammable. |
| **Auto-Ignition Temperature** | 350°C (662°F) |
| **Flash Points** | CLOSED CUP: 42.778°C (109°F). OPEN CUP: 45.6°C (114.1°F) (Cleveland). |
| **Flammable Limits** | LOWER: 1.2% UPPER: 9% |
| **Products of Combustion** | These products are carbon oxides (CO, CO2). |
| **Fire Hazards in Presence of Various Substances** | Flammable in presence of open flames and sparks, of heat. |
| **Explosion Hazards in Presence of Various Substances** | Risks of explosion of the product in presence of mechanical impact: Not available.<br>Slightly explosive in presence of open flames and sparks, of heat. |
| **Fire Fighting Media and Instructions** | Flammable liquid, soluble or dispersed in water.<br>SMALL FIRE: Use DRY chemical powder.<br>LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion. |
| **Special Remarks on Fire Hazards** | When heated to decomposition it emits acrid smoke and irritating fumes. Vapor may travel considerable distance to source of ignition and flash back. Vapors may form explosive mixtures with air. |
| **Special Remarks on Explosion Hazards** | Interaction with hydrogen trisulfide is explosively violent. |

## Section 6. Accidental Release Measures

| | |
|---|---|
| **Small Spill** | Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. |
| **Large Spill** | Flammable liquid.<br>Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities. |

*Continued on Next Page*

## Section 7. Handling and Storage

| | |
|---|---|
| **Precautions** | Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, reducing agents. |
| **Storage** | Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). |

## Section 8. Exposure Controls/Personal Protection

| | |
|---|---|
| **Engineering Controls** | Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location. |
| **Personal Protection** | Splash goggles. Lab coat. Gloves.<br>Due to the low vapor pressure of this material, respiratory protection is not necessary for normal handling. Adequate general (room) ventilation or local exhaust (fume hood) is sufficient. Use a vapor respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapor, inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent. |
| **Personal Protection in Case of a Large Spill** | Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product. |
| **Exposure Limits** | TWA: 100 STEL: 125 (ppm) from OSHA (PEL) [United States]<br>TWA: 100 STEL: 125 (ppm) from ACGIH (TLV) [United States]<br>TWA: 360 STEL: 450 ($mg/m^3$) from NIOSH [United States]<br>TWA: 100 STEL: 125 (ppm) from NIOSH [United States]<br>TWA: 360 STEL: 450 ($mg/m^3$) from OSHA (PEL) [United States]<br>TWA: 100 STEL: 125 (ppm) [United Kingdom (UK)]<br>TWA: 366 STEL: 458 ($mg/m^3$) [United Kingdom (UK)]<br>TWA: 100 STEL: 125 (ppm) [Canada]<br>TWA: 360 STEL: 450 ($mg/m^3$) [Canada]<br><br>Consult local authorities for acceptable exposure limits. |

## Section 9. Physical and Chemical Properties

| | |
|---|---|
| **Physical state and appearance** | Liquid. (Oily liquid.) |
| **Molecular Weight** | 88.15g/mole |
| **pH (1% soln/water)** | Not available. |

| | |
|---|---|
| **Odor** | Characteristic. Disagreeable Alcohol like. |
| **Taste** | Pungent. Repulsive. |
| **Color** | Clear Colorless. |

| | |
|---|---|
| **Boiling Point** | 130°C (266°F) - 132.5 |
| **Melting Point** | -117.2°C (-179°F) |
| **Critical Temperature** | 307°C (584.6°F) |
| **Specific Gravity** | 0.8 - 0.813 (Water = 1) |
| **Vapor Pressure** | 0.3 kPa (@ 20°C) |
| **Vapor Density** | 3.04 (Air = 1) |
| **Volatility** | Not available. |
| **Odor Threshold** | Not available. |
| **Water/Oil Dist. Coeff.** | The product is more soluble in oil; log(oil/water) = 1.2 |
| **Ionicity (in Water)** | Not available. |
| **Dispersion Properties** | See solubility in water, acetone. |
| **Solubility** | Easily soluble in acetone.<br>Partially soluble in cold water. |

*Continued on Next Page*

## Section 10. Stability and Reactivity Data

| | |
|---|---|
| **Stability** | The product is stable. |
| **Instability Temperature** | Not available. |
| **Conditions of Instability** | Heat, ignition sources, incompatible materials |
| **Incompatibility with various substances** | Reactive with oxidizing agents, reducing agents. |
| **Corrosivity** | Non-corrosive in presence of glass. |
| **Special Remarks on Reactivity** | Incompatible with acid chlorides, acid anhydrides. |
| **Special Remarks on Corrosivity** | Not available. |
| **Polymerization** | Will not occur. |

## Section 11. Toxicological Information

| | |
|---|---|
| **Routes of Entry** | Absorbed through skin. Eye contact. Inhalation. |
| **Toxicity to Animals** | Acute oral toxicity (LD50): 1300 mg/kg [Rat].<br>Acute dermal toxicity (LD50): 3212 mg/kg [Rabbit]. |
| **Chronic Effects on Humans** | May cause damage to the following organs: lungs, liver, upper respiratory tract, skin, central nervous system (CNS). |
| **Other Toxic Effects on Humans** | Hazardous in case of skin contact (irritant).<br>Slightly hazardous in case of skin contact (permeator), of ingestion, of inhalation. |
| **Special Remarks on Toxicity to Animals** | Lethal Dose/Conc 50% Kill:<br>LD50 [Rabbit] - Route: Skin; Dose: 3970 uL/kg |
| **Special Remarks on Chronic Effects on Humans** | Narcotic effect; may cause nervous system disturbances. May cause cancer based on animal test data |
| **Special Remarks on other Toxic Effects on Humans** | Acute Potential Health Effects:<br>Skin: Causes skin irritation. It can be absorbed through the skin and cause systemic effects similar to that of ingestion.<br>Eyes: Causes eye irritation, conjunctivitis.<br>Inhalation: It can cause respiratory tract (nose, throat) irritation causing coughing, and/shortness of breath or suffocation. It can affect behavior/central nervous system (CNS) (CNS depressant, dizziness, lightheadedness, headache, faintness, delirium, weakness, coma). May cause nausea, vomiting, visual abnormalities, deafness.<br>Ingestion: It can cause burning in the chest, nausea, vomiting, diarrhea. It can affect behavior/central nervous system (CNS) (CNS depressant, dizziness, lightheadedness, headache, faintness, delirium, weakness, coma). It may affect the liver (fatty liver degeneration), urinary system, blood, cardiovascular system (increase in pulse rate). Aspiration of material into the lungs may cause chemical pneumonitis.<br>Chronic Potential Health Effects:<br>Skin: Prolonged or repeated skin contact can cause defatting dermatitis with drying and cracking of the skin.<br>Ingestion: Prolonged or repeated ingestion may cause liver damage.<br>Inhalation: Prolonged or repeated inhalation of high concentration may cause bronchitis to develop with cough, phlegm, and/or shortness of breath. It may also cause liver damage. |

## Section 12. Ecological Information

| | |
|---|---|
| **Ecotoxicity** | Not available. |
| **BOD5 and COD** | Not available. |
| **Products of Biodegradation** | Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. |
| **Toxicity of the Products of Biodegradation** | The products of degradation are less toxic than the product itself. |

**Continued on Next Page**

| | |
|---|---|
| **Special Remarks on the Products of Biodegradation** | Not available. |

## Section 13. Disposal Considerations

| | |
|---|---|
| **Waste Disposal** | Waste must be disposed of in accordance with federal, state and local environmental control regulations. |

## Section 14. Transport Information

| | |
|---|---|
| **DOT Classification** | CLASS 3: Flammable liquid. |
| **Identification** | : Pentanol UNNA: 1105 PG: III |
| **Special Provisions for Transport** | No DOT, ref 49CFR, 173.150 |
| **DOT (Pictograms)** |  |

## Section 15. Other Regulatory Information and Pictograms

| | |
|---|---|
| **Federal and State Regulations** | Illinois toxic substances disclosure to employee act: Isoamyl alcohol<br>Rhode Island RTK hazardous substances: Isoamyl alcohol<br>Pennsylvania RTK: Isoamyl alcohol<br>Minnesota: Isoamyl alcohol<br>Massachusetts RTK: Isoamyl alcohol<br>New Jersey: Isoamyl alcohol<br>California Direct List of Hazardous Substances: Isoamyl alcohol<br>TSCA 8(b) inventory: Isoamyl alcohol |
| **California Proposition 65 Warnings** | California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.<br>California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found. |
| **Other Regulations** | OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).<br>EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 204-633-5).<br>Canada: Listed on Canadian Domestic Substance List (DSL).<br>China: Listed on National Inventory.<br>Japan: Listed on National Inventory (ENCS).<br>Korea: Listed on National Inventory (KECI).<br>Philippines: Listed on National Inventory (PICCS).<br>Australia: Listed on AICS. |
| **Other Classifications** | **WHMIS (Canada)**: CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).<br>CLASS D-2B: Material causing other toxic effects (TOXIC).<br>**DSCL (EEC)**: R10- Flammable.<br>R22- Harmful if swallowed.<br>R36/38- Irritating to eyes and skin.<br>S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.<br>S37- Wear suitable gloves.<br>S46- If swallowed, seek medical advice immediately and show this container or label. |

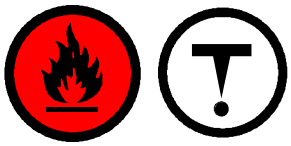
*Continued on Next Page*

**HMIS (U.S.A.)**

| | |
|---|---|
| Health Hazard | 2 |
| Fire Hazard | 2 |
| Reactivity | 0 |
| Personal Protection | j |

**National Fire Protection Association (U.S.A.)**


**WHMIS (Canada) (Pictograms)**



**DSCL (Europe) (Pictograms)**


**TDG (Canada) (Pictograms)**

**ADR (Europe) (Pictograms)**

**Protective Equipment**

Gloves.

Lab coat.

Wear appropriate respirator when ventilation is inadequate.

Splash goggles.

## *Section 16. Other Information*

| | |
|---|---|
| **MSDS Code** | **A5415** |
| **References** | Not available. |
| **Other Special Considerations** | Uses: Synthetic flavor; intermediate in preparation of pharmaceuticals; for isoamyl acetate and other esters; for dithiophosphate esters; lubricating oil additive and hydroaulic fluid additive; solvent for fats, resins, alkaloids,etc.; for manufacture of amyl compounds, isovaleric acid, mercury fulminate, pyroxylin, artifical silk, lacquers, smokeless powders; in microscopy; for dehydrating celloidin solution; for determining fat in milk; non-alcoholic beverages; icream, ices, candy, baked goods, gelatins, puddings, chewing gum. |

*Continued on Next Page*

| | |
|---|---|
| **Validated by Sonia Owen on 6/20/2007.** | **Verified by Sonia Owen.**<br>**Printed 6/20/2007.** |

**CALL (310) 516-8000**

**Notice to Reader**

***All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.***