# **Material Safety Data Sheet**

Version 4.0 Revision Date 07/24/2010 Print Date 09/09/2011

# 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Isoborneol

Product Number : I13901 Brand : Aldrich

Company : Sigma-Aldrich

3050 Spruce Street SAINT LOUIS MO 63103

USA

Telephone : +1 800-325-5832 Fax : +1 800-325-5052 Emergency Phone # : (314) 776-6555

# 2. HAZARDS IDENTIFICATION

# **Emergency Overview**

# **OSHA Hazards**

Flammable solid, Irritant

# GHS Label elements, including precautionary statements

Pictogram



Signal word Danger

Hazard statement(s)

H228 Flammable solid H315 Causes skin irritation.

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

**HMIS Classification** 

Health hazard: 2 Flammability: 1 Physical hazards: 3

NFPA Rating

Health hazard: 2 Fire: 1 Reactivity Hazard: 3

# **Potential Health Effects**

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.Skin May be harmful if absorbed through skin. Causes skin irritation.

**Eyes** Causes eye irritation.

**Ingestion** May be harmful if swallowed.

# 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C<sub>10</sub>H<sub>18</sub>O Molecular Weight : 154.25 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
0,10,140.	LO NO.	IIIGCX I 10.	Concontiation

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Exo-1,7,7-trimethylbicyclo[2.2.1]heptan-2-ol				
124-76-5	204-712-4	-	-	

#### 4. FIRST AID MEASURES

# **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

### In case of eye contact

Flush eyes with water as a precaution.

# If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### 5. FIRE-FIGHTING MEASURES

# Suitable extinguishing media

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

# Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

# **Further information**

Use water spray to cool unopened containers.

### 6. ACCIDENTAL RELEASE MEASURES

# Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Avoid breathing dust.

# **Environmental precautions**

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

#### Methods and materials for containment and cleaning up

Sweep up and shovel. 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 (see section 13). Keep in suitable, closed containers for disposal. Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).

# 7. HANDLING AND STORAGE

# Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

### Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Store in cool place.

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# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

# Personal protective equipment

# **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) 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.

### Eye protection

Safety glasses with side-shields conforming to EN166 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.

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

# **Appearance**

Form solid

# Safety data

pH no data available

Melting point 212 - 214 °C (414 - 417 °F) - lit.

Boiling point no data available

Flash point 93.4 °C (200.1 °F) - closed cup

Flammability (solid, The substance or mixture is a flammable solid with the subcategory 1.

gas)

Ignition temperature no data available
Lower explosion limit no data available
Upper explosion limit no data available
Water solubility no data available

# 10. STABILITY AND REACTIVITY

#### Chemical stability

Stable under recommended storage conditions.

### Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

# Materials to avoid

Strong oxidizing agents

# Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

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# 11. TOXICOLOGICAL INFORMATION

# **Acute toxicity**

LD50 Oral - rat - 5,200 mg/kg

LD50 Dermal - rabbit - > 5,000 mg/kg

#### Skin corrosion/irritation

Skin - rabbit - Skin irritation - 24 h

# Serious eye damage/eye irritation

no data available

# Respiratory or skin sensitization

no data available

# Germ cell mutagenicity

no data available

# Carcinogenicity

IARC: No component 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 component 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 component 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 component of this product present at levels greater than or equal to 0.1% is identified as a

carcinogen or potential carcinogen by OSHA.

# Reproductive toxicity

no data available

# Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

# Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

# **Aspiration hazard**

no data available

#### Potential health effects

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation.

**Ingestion** May be harmful if swallowed.

**Skin** May be harmful if absorbed through skin. Causes skin irritation.

**Eyes** Causes eye irritation.

# Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

# **Additional Information**

RTECS: NP7300000

# 12. ECOLOGICAL INFORMATION

# **Toxicity**

no data available

# Persistence and degradability

no data available

# Bioaccumulative potential

no data available

# Mobility in soil

no data available

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### PBT and vPvB assessment

no data available

#### Other adverse effects

no data available

#### 13. DISPOSAL CONSIDERATIONS

#### **Product**

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.

### 14. TRANSPORT INFORMATION

DOT (US)

UN-Number: 1325 Class: 4.1 Packing group: II

Proper shipping name: Flammable solids, organic, n.o.s. (Exo-1,7,7-trimethylbicyclo[2.2.1]heptan-2-ol)

Marine pollutant: No

Poison Inhalation Hazard: No.

**IMDG** 

UN-Number: 1325 Class: 4.1 Packing group: II EMS-No: F-A, S-G

Proper shipping name: FLAMMABLE SOLID, ORGANIC, N.O.S. (Exo-1,7,7-trimethylbicyclo[2.2.1]heptan-2-ol)

Marine pollutant: No

**IATA** 

UN-Number: 1325 Class: 4.1 Packing group: II

Proper shipping name: Flammable solid, organic, n.o.s. (Exo-1,7,7-trimethylbicyclo[2.2.1]heptan-2-ol)

# 15. REGULATORY INFORMATION

# **OSHA Hazards**

Flammable solid, Irritant

# **DSL Status**

All components of this product are on the Canadian DSL list.

# **SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

# **SARA 313 Components**

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

# SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard

# **Massachusetts Right To Know Components**

No components are subject to the Massachusetts Right to Know Act.

### Pennsylvania Right To Know Components

CAS-No. **Revision Date** 

Exo-1,7,7-trimethylbicyclo[2.2.1]heptan-2-ol 124-76-5

# **New Jersey Right To Know Components**

**Revision Date** CAS-No.

Exo-1,7,7-trimethylbicyclo[2,2,1]heptan-2-ol 124-76-5

# California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

# 16. OTHER INFORMATION

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# **Further information**

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