

## SAFETY DATA SHEET

Preparation Date: 11/25/2014

Revision Date: 12/2/2016

Revision Number: G1

### 1. IDENTIFICATION

**Product identifier**

**Product code:** I1274  
**Product Name:** Isovaleronitrile

**Other means of identification**

**Synonyms:** Butyronitrile, 3-methyl-  
 Isoamyl nitrile  
 Isobutyl cyanide  
 Isopentane nitrile  
 2-Methylbutane secondary mononitrile  
 3-Methylbutyronitrile

**CAS #:** 625-28-5  
**RTECS #** NY1750000  
**CI#:** Not available

**Recommended use of the chemical and restrictions on use**

**Recommended use:** For manufacturing or laboratory use only.  
**Uses advised against** No information available

**Supplier:** Spectrum Chemical Mfg. Corp  
 14422 South San Pedro St.  
 Gardena, CA 90248  
 (310) 516-8000.

**Order Online At:** <https://www.spectrumchemical.com>

**Emergency telephone number** Chemtrec 1-800-424-9300

**Contact Person:** Martin LaBenz (West Coast)

**Contact Person:** Ibad Tirmiz (East Coast)

### 2. HAZARDS IDENTIFICATION

**Classification**

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 3
Acute toxicity - Dermal	Category 3
Acute toxicity - Inhalation (Vapors)	Category 3
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Flammable liquids	Category 3

**Label elements**

**Danger**

**Hazard statements**

Toxic if swallowed  
Toxic in contact with skin  
Toxic if inhaled  
Causes skin irritation  
Causes serious eye irritation  
Flammable liquid and vapor



**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

Not available

**Precautionary Statements - Prevention**

Keep away from heat/sparks/open flames/hot surfaces. — No smoking  
Ground/bond container and receiving equipment  
Use explosion-proof electrical/ventilating/lighting/./? /equipment  
Use only non-sparking tools  
Take precautionary measures against static discharge  
Do not eat, drink or smoke when using this product  
Wear protective gloves/protective clothing/eye protection/face protection  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Wash face, hands and any exposed skin thoroughly after handling  
Keep container tightly closed  
Keep cool

**Precautionary Statements - Response**

*Immediately call a POISON CENTER or doctor/physician*

IN CASE OF FIRE: Use dry chemical, water spray, alcohol-resistant foam or CO2 to extinguish.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

If skin irritation occurs: Get medical advice/attention

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF SWALLOWED: Rinse mouth.

**Precautionary Statements - Storage**

Store locked up

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

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Components	CAS-No.	Weight %
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Product code: I1274

Product name: Isovaleronitrile

Isovaleronitrile	625-28-5	100
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## 4. FIRST AID MEASURES

### First aid measures

- General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.
- Skin Contact:** Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician or Poison Control Centre immediately. Toxic in contact with skin.
- Eye Contact:** Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.
- Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
- Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Toxic if swallowed.

### Most important symptoms and effects, both acute and delayed

- Symptoms** Toxic by inhalation, in contact with skin and if swallowed. Causes eye irritation. Eye contact may result in redness or pain. Causes skin irritation. Skin contact may result in redness, pain, inflammation, itching, scaling.

### Indication of any immediate medical attention and special treatment needed

- Notes to Physician:** Treat symptomatically.

### Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

## 5. FIRE-FIGHTING MEASURES

### Extinguishing Media

- Suitable Extinguishing Media:** Carbon dioxide (CO2). Dry chemical. Water spray.
- Unsuitable Extinguishing Media:** Do not use a solid (straight) water stream as it may scatter and spread fire.

### Specific hazards arising from the chemical

- Hazardous Combustion Products:** Carbon oxides; Nitrogen oxides
- Hazardous Combustion Products:** No information available.
- Specific hazards:** Flammable  
May be ignited by heat, sparks or flames  
Container explosion may occur under fire conditions or

when heated  
Vapors may travel to source of ignition and flash back  
Vapours may form explosive mixtures with air.  
Most vapors are heavier than air. They will spread along the ground and collect in low or confined areas (sewers, basements, tanks)

### **Special Protective Actions for Firefighters**

#### **Specific Methods:**

Water mist may be used to cool closed containers. For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out. Dike fire-control water for later disposal; do not scatter the material.

#### **Special Protective Equipment for Firefighters:**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

## **6. ACCIDENTAL RELEASE MEASURES**

### **Personal precautions, protective equipment and emergency procedures**

#### **Personal Precautions:**

Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment. In case of large spill, water spray or vapor suppressing foam may be used to reduce vapors, but may not prevent ignition in closed spaces.

#### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

### **Methods and material for containment and cleaning up**

#### **Methods for containment**

Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth). In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

#### **Methods for cleaning up**

Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use only non-sparking tools. Clean contaminated surface thoroughly.

## **7. HANDLING AND STORAGE**

### **Precautions for safe handling**

#### **Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.

#### **Safe Handling Advice**

Wear personal protective equipment. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not breathe vapors or spray mist. Do not ingest. When using do not smoke. Handle in accordance with good industrial hygiene and safety practice.

### **Conditions for safe storage, including any incompatibilities**

**Technical Measures/Storage Conditions:**

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials. Store in a segregated and approved area. Keep away from heat and sources of ignition.

**Incompatible Materials:**

Strong oxidizing agents

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters****National occupational exposure limits****United States**

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WHEEL
Isovaleronitrile	625-28-5	None	None	None	None

**Canada**

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Isovaleronitrile	625-28-5	None	None	None	11 mg/m <sup>3</sup> Ceiling (as CN)

**Australia and Mexico**

Components	CAS-No.	Australia	Mexico
Isovaleronitrile	625-28-5	None	5 mg/m <sup>3</sup> TWA VLE-PPT (as CN)

**Appropriate engineering controls****Engineering measures to reduce exposure:**

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

**Individual protection measures, such as personal protective equipment****Personal Protective Equipment**

- Eye protection:** Goggles Safety glasses with side-shields
- Skin and body protection:** Long sleeved clothing. Chemical resistant apron. Gloves.
- Respiratory protection:** Vapor respirator. Be sure to use an approved/certified respirator or equivalent.
- Hygiene measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state:**

Liquid

**Appearance:**

Clear.

**Color:**

Colorless.

**Odor:**

No information available.

**Taste**

No information available.

**Formula:**

C<sub>5</sub>H<sub>9</sub>N

<b>Molecular/Formula weight:</b> 83.13	<b>Flammability:</b> Flammable	<b>Flashpoint (°C/°F):</b> 28°C/82°F
<b>Flash Point Tested according to:</b> Not available	<b>Autoignition Temperature (°C/°F):</b> No information available	<b>Lower Explosion Limit (%):</b> No information available
<b>Upper Explosion Limit (%):</b> No information available	<b>Melting point/range(°C/°F):</b> -101°C/-150°F	<b>Decomposition temperature(°C/°F):</b> No information available
<b>Boiling point/range(°C/°F):</b> 130°C/266°F	<b>Bulk density:</b> No information available	<b>Density (g/cm3):</b> 0.79
<b>Specific gravity:</b> No information available	<b>pH:</b> No information available	<b>Vapor pressure @ 20°C (kPa):</b> No information available
<b>Evaporation rate:</b> No information available	<b>Vapor density:</b> No information available	<b>VOC content (g/L):</b> No information available
<b>Odor threshold (ppm):</b> No information available	<b>Partition coefficient (n-octanol/water):</b> No information available	<b>Viscosity:</b> No information available
<b>Miscibility:</b> No information available	<b>Solubility:</b> No information available	

## 10. STABILITY AND REACTIVITY

### Reactivity

Reactive with oxidizing agents

### Chemical stability

**Stability:** Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** In use, may form flammable/explosive vapor-air mixture

**Conditions to avoid:** Heat. Exposure to light. Ignition sources. Incompatible materials.

**Incompatible Materials:** Strong oxidizing agents

**Hazardous decomposition products:** Carbon oxides. Nitrogen oxides (NO<sub>x</sub>).

### Other Information

**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

**Principal Routes of Exposure:**  
Eyes. Ingestion. Inhalation. Skin.

### Acute Toxicity

### Component Information

Isovaleronitrile	
CAS-No.	625-28-5

**LD50/oral/rat** = No information available  
**LD50/oral/mouse** = 233 mg/kg  
**LD50/dermal/rabbit** = No information available  
**LD50/dermal/rat** = No information available  
**LC50/inhalation/rat** = No information available  
**LC50/inhalation/mouse** = No information available  
**Other LD50 or LC50 information** = 400 mg/kg, parenteral, mouse LDLo;  
3800 mg/kg, subcutaneous, frog LDLo;  
43400 ug/kg, subcutaneous, rabbit LDLo

**Product Information**

**LD50/oral/rat** =  
**VALUE- Acute Tox Oral** = No information available

**LD50/oral/mouse** =  
**Value - Acute Tox Oral** = 233 mg/kg

**LD50/dermal/rabbit**  
**VALUE-Acute Tox Dermal** = No information available

**LD50/dermal/rat**  
**VALUE -Acute Tox Dermal** = No information available

**LC50/inhalation/rat**  
**VALUE-Vapor** = No information available  
**VALUE-Gas** = No information available  
**VALUE-Dust/Mist** = No information available

**LC50/Inhalation/mouse**  
**VALUE-Vapor** = No information available  
**VALUE - Gas** = No information available  
**VALUE - Dust/Mist** = No information available

**Symptoms**

**Skin Contact:** Toxic in contact with skin. Causes skin irritation. Skin contact may result in redness, pain, inflammation, itching, scaling, and/or blistering. May cause cyanosis.

**Eye Contact:** Causes serious eye irritation.

**Inhalation** Toxic by inhalation.

**Ingestion** Toxic if swallowed.

**Aspiration hazard** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Chronic Toxicity** No information available.

**Sensitization:** No information available.

**Mutagenic Effects:** No information available

**Carcinogenic effects:** Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Isovaleronitrile	625-28-5	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

*ACGIH (American Conference of Governmental Industrial Hygienists)*

*IARC (International Agency for Research on Cancer)*

*NTP (National Toxicology Program)*

*OSHA (Occupational Safety and Health Administration of the US Department of Labor)*

**Reproductive toxicity** No data is available

**Reproductive Effects:** No information available

**Developmental Effects:** No information available

**Teratogenic Effects:** No information available

**Specific Target Organ Toxicity**

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Target Organs:** No information available.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Ecotoxicity effects:** No data available.

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available.

**Mobility:** No information available.

## 13. DISPOSAL CONSIDERATIONS

**Disposal Methods**

**Waste from residues / unused products:**

Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**

Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Isovaleronitrile	625-28-5	None	None	None	None

## 14. TRANSPORT INFORMATION

**DOT**

**UN-No:** UN1992

**Proper Shipping Name:** Flammable liquids, toxic, n.o.s. (Isovaleronitrile)

**Product code:** I1274

**Product name:** Isovaleronitrile



**Hazard Class:** 3  
**Subsidiary Class** 6.1  
**Packing group:** III  
**Emergency Response Guide Number** 131  
**Marine Pollutant** No data available  
**DOT RQ (lbs):** No information available  
**Special Provisions** B1, IB3, T7, TP1, TP28  
**Symbol(s):** [DOT]: (G) - Identifies proper shipping names for which one or more technical names of the hazardous material must be entered in parentheses, in association with the basic description.  
**Description:** UN1992, Flammable liquids, toxic, n.o.s. (Isovaleronitrile), 3 (6.1), III

#### TDG (Canada)

**UN-No:** UN1992  
**Proper Shipping Name:** Flammable liquid, toxic, n.o.s.  
**Hazard Class:** 3  
**Subsidiary Risk:** (6.1)  
**Packing Group:** III  
**Marine Pollutant** No Information available  
**Description:** UN1992, FLAMMABLE LIQUID, TOXIC, N.O.S. (Isovaleronitrile), 3 (6.1), III

#### ADR

**UN-No:** UN1992  
**Proper Shipping Name:** Flammable liquid, toxic, n.o.s.  
**Hazard Class:** 3  
**Packing Group:** III  
**Subsidiary Risk:** 6.1  
**Special Provisions** 274  
**Description:** UN1992, FLAMMABLE LIQUID, TOXIC, N.O.S. (Isovaleronitrile), 3 (6.1), III

#### IMO / IMDG

**UN-No:** UN1992  
**Proper Shipping Name:** Flammable liquid, toxic, n.o.s.  
Flammable liquids, toxic, n.o.s. (Isovaleronitrile)  
**Hazard Class:** 3  
**Subsidiary Risk:** 6.1  
**Packing Group:** III  
**Marine Pollutant** No information available  
**EMS:** F-E  
**Special Provisions** 223, 274  
**Description** UN1992, FLAMMABLE LIQUID, TOXIC, N.O.S. (Isovaleronitrile), 3 (6.1), III

#### RID

**UN-No:** UN1992  
**Proper Shipping Name:** Flammable liquid, toxic, n.o.s.  
**Hazard Class:** 3  
**Subsidiary Risk:** 6.1  
**Packing Group:** III  
**Special Provisions** 274  
**Description:** UN1992, FLAMMABLE LIQUID, TOXIC, N.O.S. (Isovaleronitrile), 3 (6.1), III

#### ICAO

**UN-No:** UN1992  
**Proper Shipping Name:** Flammable liquid, toxic, n.o.s.  
**Hazard Class:** 3  
**Subsidiary Risk:** 6.1  
**Packing Group:** III  
**Description:** UN1992, FLAMMABLE LIQUID, TOXIC, N.O.S. (Isovaleronitrile), 3 (6.1), III  
**Special Provisions** A3

**IATA**

**UN-No:** UN1992  
**Proper Shipping Name:** Flammable liquid, toxic, n.o.s.  
**Hazard Class:** 3  
**Subsidiary Risk:** 6.1  
**Packing Group:** III  
**ERG Code:** 3P  
**Special Provisions** No information available  
**Description:** UN1992, FLAMMABLE LIQUID, TOXIC, N.O.S. (Isovaleronitrile), 3 (6.1), III

<b>15. REGULATORY INFORMATION</b>
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**International Inventories**

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>Isovaleronitrile</i>	625-28-5	Present	Present KE-09093	Not present	Not present	Present	Present	Present 210-884-1

**U.S. Regulations****California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.****Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

**Chemicals Known to the State of California to Cause Reproductive Toxicity:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
<i>Isovaleronitrile</i>	625-28-5	Not Listed	Not Listed	Not Listed	Not Listed

**CERCLA/SARA**

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
<i>Isovaleronitrile</i>	625-28-5	None	None	None	None	None

**U.S. TSCA**

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
<i>Isovaleronitrile</i>	625-28-5	Not Applicable	Not Applicable

**Canada****WHMIS hazard class:**

B2 Flammable liquid  
 D1B Toxic materials  
 D2B Toxic materials

**Canada Controlled Products Regulation:**

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

## Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Isovaleronitrile	625-28-5	Not Listed	Present

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Isovaleronitrile	625-28-5	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Isovaleronitrile	625-28-5	Not listed

### EU Classification

#### R-phrase(s)

R10 - Flammable.

R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed.

R36/38 - Irritating to eyes and skin.

#### S -phrase(s)

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S46 - If swallowed, seek medical advice immediately and show this container or label.

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Isovaleronitrile	625-28-5		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

### Indication of danger:

Flammable

Xn - Harmful.

Xi - Irritant.

Xn



Xi



## 16. OTHER INFORMATION

**Preparation Date:** 11/25/2014  
**Revision Date:** 12/2/2016  
**Prepared by:** Roumann Pangilinan

### Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) 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 SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. 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 SDS is based on

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**End of Safety Data Sheet**