

# SAFETY DATA SHEET

Creation Date 21-Jan-2015

Revision Date 24-Dec-2021

Revision Number 4

## 1. Identification

**Product Name** 2,3-Dimethylbutane

**Cat No. :** AC116100000; AC116100010; AC116100050; AC116101000

**CAS No** 79-29-8  
**Synonyms** Diisopropyl

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.

### Details of the supplier of the safety data sheet

**Company**

Fisher Scientific Company  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

**Emergency Telephone Number** For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

## 2. Hazard(s) identification

**Classification**

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

|  |            |
|--|------------|
| Flammable liquids                                | Category 2 |
| Skin Corrosion/Irritation                        | Category 2 |
| Serious Eye Damage/Eye Irritation                | Category 2 |
| Specific target organ toxicity (single exposure) | Category 3 |
| Target Organs - Central nervous system (CNS).    |            |
| Aspiration Toxicity                              | Category 1 |

**Label Elements****Signal Word**

Danger

**Hazard Statements**

Highly flammable liquid and vapor  
Causes skin irritation

Causes serious eye irritation  
May cause drowsiness or dizziness  
May be fatal if swallowed and enters airways



### Precautionary Statements

#### Prevention

Wash face, hands and any exposed skin thoroughly after handling  
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  
Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
Keep container tightly closed  
Ground/bond container and receiving equipment  
Use explosion-proof electrical/ventilating/lighting equipment  
Use only non-sparking tools  
Take precautionary measures against static discharge  
Keep cool

#### Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
Call a POISON CENTER or doctor/physician if you feel unwell

#### Skin

If skin irritation occurs: Get medical advice/attention  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
Wash contaminated clothing before reuse

#### Eyes

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

#### Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
Do NOT induce vomiting

#### Fire

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

#### Storage

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

#### Disposal

Dispose of contents/container to an approved waste disposal plant

#### Hazards not otherwise classified (HNOC)

Toxic to aquatic life with long lasting effects

## 3. Composition/Information on Ingredients

| Component          | CAS No  | Weight % |
|--------------------|---------|----------|
| 2,3-Dimethylbutane | 79-29-8 | > 98     |

## 4. First-aid measures

#### Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get

|  |  |
|--|--|
|  | medical attention.   |
| <b>Skin Contact</b>                        | Wash off immediately with plenty of water for at least 15 minutes. Get medical attention.  |
| <b>Inhalation</b>                          | Remove to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give 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. Risk of serious damage to the lungs (by aspiration). |
| <b>Ingestion</b>                           | Aspiration hazard. Do NOT induce vomiting. Call a physician or poison control center immediately. If vomiting occurs naturally, have victim lean forward.  |
| <b>Most important symptoms and effects</b> | Difficulty in breathing. . Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting   |
| <b>Notes to Physician</b>                  | Treat symptomatically  |

## 5. Fire-fighting measures

|   |   |
|---|---|
| <b>Suitable Extinguishing Media</b>     | CO <sub>2</sub> , dry chemical, dry sand, alcohol-resistant foam. Water mist may be used to cool closed containers. |
| <b>Unsuitable Extinguishing Media</b>   | Water may be ineffective  |
| <b>Flash Point</b>                      | -29 °C / -20.2 °F   |
| <b>Method -</b>                         | No information available  |
| <b>Autoignition Temperature</b>         | 415 °C / 779 °F   |
| <b>Explosion Limits</b>                 |   |
| <b>Upper</b>                            | 7.00 vol %  |
| <b>Lower</b>                            | 1.20 vol %  |
| <b>Sensitivity to Mechanical Impact</b> | No information available  |
| <b>Sensitivity to Static Discharge</b>  | No information available  |

### Specific Hazards Arising from the Chemical

Flammable. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition. Vapors may form explosive mixtures with air.

### Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

### Protective Equipment and Precautions for Firefighters

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

### NFPA

|               |                     |                    |                         |
|---------------|---------------------|--------------------|-------------------------|
| <b>Health</b> | <b>Flammability</b> | <b>Instability</b> | <b>Physical hazards</b> |
| 2             | 3                   | 0                  | N/A                     |

## 6. Accidental release measures

|   |   |
|---|---|
| <b>Personal Precautions</b>                 | Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. |
| <b>Environmental Precautions</b>            | Do not flush into surface water or sanitary sewer system.   |
| <b>Methods for Containment and Clean Up</b> | Remove all sources of ignition. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Use spark-proof tools and explosion-proof equipment. Take                            |

precautionary measures against static discharges.

## 7. Handling and storage

### Handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Use spark-proof tools and explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation. Contents may develop pressure upon prolonged storage. Use only non-sparking tools. Use spark-proof tools and explosion-proof equipment. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

### Storage.

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Flammables area. Incompatible Materials. Strong oxidizing agents.

## 8. Exposure controls / personal protection

### Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limit established by the region specific regulatory bodies.

| Component          | ACGIH TLV                      | OSHA PEL | NIOSH IDLH | Mexico OEL (TWA)               |
|--------------------|--------------------------------|----------|------------|--------------------------------|
| 2,3-Dimethylbutane | TWA: 500 ppm<br>STEL: 1000 ppm |          |            | TWA: 500 ppm<br>STEL: 1000 ppm |

### Engineering Measures

Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal Protective Equipment

#### Eye/face Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

#### Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

#### Respiratory Protection

No protective equipment is needed under normal use conditions.

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

|                                  |                             |
|----------------------------------|-----------------------------|
| Physical State                   | Liquid                      |
| Appearance                       | Colorless                   |
| Odor                             | Odorless                    |
| Odor Threshold                   | No information available    |
| pH                               | No information available    |
| Melting Point/Range              | -129 °C / -200.2 °F         |
| Boiling Point/Range              | 58 °C / 136.4 °F @ 760 mmHg |
| Flash Point                      | -29 °C / -20.2 °F           |
| Evaporation Rate                 | No information available    |
| Flammability (solid,gas)         | Not applicable              |
| Flammability or explosive limits |                             |
| Upper                            | 7.00 vol %                  |
| Lower                            | 1.20 vol %                  |
| Vapor Pressure                   | 267 mbar @ 20 °C            |
| Vapor Density                    | 3 (Air = 1.0)               |
| Specific Gravity                 | 0.662                       |
| Solubility                       | No information available    |

|  |                          |
|--|--------------------------|
| Partition coefficient; n-octanol/water | No data available        |
| Autoignition Temperature               | 415 °C / 779 °F          |
| Decomposition Temperature              | No information available |
| Viscosity                              | No information available |
| Molecular Formula                      | C6 H14                   |
| Molecular Weight                       | 86.18                    |

## 10. Stability and reactivity

|                                  |  |
|----------------------------------|--|
| Reactive Hazard                  | None known, based on information available   |
| Stability                        | Stable under normal conditions.  |
| Conditions to Avoid              | Keep away from open flames, hot surfaces and sources of ignition. Incompatible products. |
| Incompatible Materials           | Strong oxidizing agents  |
| Hazardous Decomposition Products | Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> )                                  |
| Hazardous Polymerization         | No information available.  |
| Hazardous Reactions              | None under normal processing.  |

## 11. Toxicological information

### Acute Toxicity

**Product Information** No acute toxicity information is available for this product

### Component Information

| Component          | LD50 Oral  | LD50 Dermal               | LC50 Inhalation                             |
|--------------------|------------|---------------------------|---|
| 2,3-Dimethylbutane | Not listed | LD50 > 5 mL/kg ( Rabbit ) | LC50 = 259354 mg/m <sup>3</sup> ( Rat ) 4 h |

**Toxicologically Synergistic Products** No information available

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

|                 |  |
|-----------------|--|
| Irritation      | Irritating to eyes and skin  |
| Sensitization   | No information available   |
| Carcinogenicity | The table below indicates whether each agency has listed any ingredient as a carcinogen. |

| Component          | CAS No  | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|--------------------|---------|------------|------------|------------|------------|------------|
| 2,3-Dimethylbutane | 79-29-8 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** Central nervous system (CNS)

**STOT - repeated exposure** None known

**Aspiration hazard** Category 1

**Symptoms / effects, both acute and delayed** Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

**Persistence and Degradability** Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its volatility.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

### DOT

UN-No UN2457  
 Proper Shipping Name 2,3-DIMETHYLBUTANE  
 Hazard Class 3  
 Packing Group II

### TDG

UN-No UN2457  
 Proper Shipping Name 2,3-DIMETHYLBUTANE  
 Hazard Class 3  
 Packing Group II

### IATA

UN-No UN2457  
 Proper Shipping Name 2,3-DIMETHYLBUTANE  
 Hazard Class 3  
 Packing Group II

### IMDG/IMO

UN-No UN2457  
 Proper Shipping Name 2,3-DIMETHYLBUTANE  
 Hazard Class 3  
 Packing Group II

## 15. Regulatory information

### United States of America Inventory

| Component          | CAS No  | TSCA | TSCA Inventory notification -<br>Active-Inactive | TSCA - EPA Regulatory<br>Flags |
|--------------------|---------|------|--|--------------------------------|
| 2,3-Dimethylbutane | 79-29-8 | X    | ACTIVE   | -                              |

### **Legend:**

**TSCA** US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

**TSCA 12(b)** - Notices of Export Not applicable

### International Inventories

Canada (DSL/NDL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea

(KECL).

| Component          | CAS No  | DSL | NDSL | EINECS    | PICCS | ENCS | ISHL | AICS | IECSC | KECL     |
|--------------------|---------|-----|------|-----------|-------|------|------|------|-------|----------|
| 2,3-Dimethylbutane | 79-29-8 | X   | -    | 201-193-6 | X     | X    | X    | X    | X     | KE-11249 |

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)**U.S. Federal Regulations**

|   |                                    |
|---|------------------------------------|
| <b>SARA 313</b>   | Not applicable                     |
| <b>SARA 311/312 Hazard Categories</b>                       | See section 2 for more information |
| <b>CWA (Clean Water Act)</b>                                | Not applicable                     |
| <b>Clean Air Act</b>  | Not applicable                     |
| <b>OSHA - Occupational Safety and Health Administration</b> | Not applicable                     |
| <b>CERCLA</b>   | Not applicable                     |

**California Proposition 65** This product does not contain any Proposition 65 chemicals.**U.S. State Right-to-Know Regulations**

| Component          | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|--------------------|---------------|------------|--------------|----------|--------------|
| 2,3-Dimethylbutane | X             | X          | X            | -        | -            |

**U.S. Department of Transportation**

|                             |   |
|-----------------------------|---|
| Reportable Quantity (RQ):   | N |
| DOT Marine Pollutant        | N |
| DOT Severe Marine Pollutant | N |

**U.S. Department of Homeland Security** This product does not contain any DHS chemicals.**Other International Regulations****Mexico - Grade** No information available**Authorisation/Restrictions according to EU REACH**

| Component          | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|--------------------|---|---|---|
| 2,3-Dimethylbutane | -   | Use restricted. See item 75. (see link for restriction details)               | -   |

<https://echa.europa.eu/substances-restricted-under-reach>**Safety, health and environmental regulations/legislation specific for the substance or mixture**

| Component          | CAS No  | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|--------------------|---------|----------|------------------------------|---------------------------|--|
| 2,3-Dimethylbutane | 79-29-8 | Listed   | Not applicable               | Not applicable            | Not applicable                             |

| Component | CAS No | Seveso III Directive | Seveso III Directive | Rotterdam | Basel Convention |
|-----------|--------|----------------------|----------------------|-----------|------------------|
|-----------|--------|----------------------|----------------------|-----------|------------------|

|                    |         | (2012/18/EC) -<br>Qualifying Quantities<br>for Major Accident<br>Notification | (2012/18/EC) -<br>Qualifying Quantities<br>for Safety Report<br>Requirements | Convention (PIC) | (Hazardous Waste) |
|--------------------|---------|---|--|------------------|-------------------|
| 2,3-Dimethylbutane | 79-29-8 | Not applicable  | Not applicable   | Not applicable   | Not applicable    |

## 16. Other information

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**Creation Date** 21-Jan-2015  
**Revision Date** 24-Dec-2021  
**Print Date** 24-Dec-2021  
**Revision Summary** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**