

# 2,2-Dimethylpropane

## Safety Data Sheet 1100101

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 06/23/2015

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### SECTION 1: Identification

#### 1.1. Identification

Product form : Substance  
 Substance name : 2,2-Dimethylpropane  
 CAS No : 463-82-1  
 Product code : 1100-1-01  
 Formula : C<sub>5</sub>H<sub>12</sub>  
 Synonyms : 2,2-Dimethylpropane / tert-Pentane / Propane, 2,2-dimethyl- / Dimethyl propane / Dimethylpropane, 2,2-

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Scientific research and development, Laboratory chemicals, Manufacture of substances

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

SynQuest Laboratories, Inc.  
 P.O. Box 309  
 Alachua, FL 32615 - United States of America  
 T (386) 462-0788 - F (386) 462-7097  
[info@synquestlabs.com](mailto:info@synquestlabs.com) - [www.synquestlabs.com](http://www.synquestlabs.com)

#### 1.4. Emergency telephone number

Emergency number : (844) 523-4086 (3E Company - Account 10069)

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS-US)

Simple Asphy H380 - May displace oxygen and cause rapid suffocation  
 Flam. Gas 1 H220 - Extremely flammable gas  
 Compressed gas H280 - Contains gas under pressure; may explode if heated  
 Aquatic Chronic 2 H411 - Toxic to aquatic life with long lasting effects

Full text of H-phrases: see section 16

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H220 - Extremely flammable gas  
 H280 - Contains gas under pressure; may explode if heated  
 H380 - May displace oxygen and cause rapid suffocation  
 H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US)

: P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking  
 P273 - Avoid release to the environment  
 P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely  
 P381 - Eliminate all ignition sources if safe to do so  
 P391 - Collect spillage  
 P403 - Store in a well-ventilated place  
 P410+P403 - Protect from sunlight. Store in a well-ventilated place  
 P501 - Dispose of contents/container to an approved waste disposal plant

#### 2.3. Other hazards

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

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### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Name	Product identifier	%	Classification (GHS-US)
2,2-Dimethylpropane (Main constituent)	(CAS No) 463-82-1	100	Simple Asphy, H380 Flam. Gas 1, H220 Compressed gas, H280 Aquatic Chronic 2, H411

Full text of H-phrases: see section 16

#### 3.2. Mixture

Not applicable

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.  
First-aid measures after skin contact : Wash skin with plenty of water.  
First-aid measures after eye contact : Rinse eyes with water as a precaution.  
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

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

No additional information available

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

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable gas.  
Reactivity : Extremely flammable gas.

#### 5.3. Advice for firefighters

Firefighting instructions : Eliminate all ignition sources if safe to do so. Leaking gas fire: Do not extinguish, unless leak can be stopped safely.  
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking.

##### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.  
Methods for cleaning up : Notify authorities if product enters sewers or public waters.  
Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Wear personal protective equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Eliminate all ignition sources if safe to do so. Use only outdoors or in a well-ventilated area.

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Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Protect from sunlight. Store in a well-ventilated place. Keep cool.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

2,2-Dimethylpropane (463-82-1)		
ACGIH	ACGIH TWA (ppm)	1000 ppm

### 8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Hand protection : Protective gloves.  
Eye protection : Safety glasses.  
Skin and body protection : Wear suitable protective clothing.  
Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.  
Environmental exposure controls : Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Gas  
Appearance : Colorless gas at room temperature and pressure. Shipped as a liquefied gas.  
Color : Colorless  
Odor : No data available  
Odor threshold : No data available  
pH : No data available  
Melting point : -17 °C  
Freezing point : No data available  
Boiling point : 9 °C  
Flash point : No data available  
Relative evaporation rate (butyl acetate=1) : No data available  
Flammability (solid, gas) : No data available  
Explosion limits : No data available  
Explosive properties : No data available  
Oxidizing properties : No data available  
Vapor pressure : 1100 mm Hg (at 22 °C)  
Relative density : No data available  
Relative vapor density at 20 °C : No data available  
Solubility : No data available  
Log Pow : 3.2 - 3.3  
Auto-ignition temperature : 450 °C  
Decomposition temperature : No data available  
Viscosity : No data available  
Viscosity, kinematic : No data available  
Viscosity, dynamic : No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Extremely flammable gas.

### 10.2. Chemical stability

Stable under normal conditions.

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### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

2,2-Dimethylpropane (463-82-1)	
Log Pow	3.2 - 3.3

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

## SECTION 14: Transport information

### Department of Transportation (DOT)



In accordance with DOT

Transport document description	: UN2044 2,2-Dimethylpropane, 2.1
UN-No.(DOT)	: UN2044
Proper Shipping Name (DOT)	: 2,2-Dimethylpropane
Transport hazard class(es) (DOT)	: 2.1 - Class 2.1 - Flammable gas 49 CFR 173.115

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Hazard labels (DOT)	: 2.1 - Flammable gas
	
Dangerous for the environment	: Yes
Marine pollutant	: Yes
	
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 304
DOT Packaging Bulk (49 CFR 173.xxx)	: 314;315
DOT Packaging Exceptions (49 CFR 173.xxx)	: 306
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: Forbidden
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 150 kg
DOT Vessel Stowage Location	: E - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length, but is prohibited from carriage on passenger vessels in which the limiting number of passengers is exceeded.
DOT Vessel Stowage Other	: 40 - Stow "clear of living quarters"
Emergency Response Guide (ERG) Number	: 115
Other information	: No supplementary information available.

### TDG

No additional information available

### Transport by sea

UN-No. (IMDG)	: 2044
Proper Shipping Name (IMDG)	: 2,2-DIMETHYLPROPANE
Class (IMDG)	: 2 - Gases

### Air transport

UN-No. (IATA)	: 2044
Proper Shipping Name (IATA)	: 2,2-Dimethylpropane
Class (IATA)	: 2

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

2,2-Dimethylpropane (463-82-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

CANADA	
2,2-Dimethylpropane (463-82-1)	
Listed on the Canadian DSL (Domestic Sustances List)	
WHMIS Classification	Class A - Compressed Gas Class B Division 1 - Flammable Gas

### EU-Regulations

No additional information available

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### National regulations

#### 2,2-Dimethylpropane (463-82-1)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on INSQ (Mexican national Inventory of Chemical Substances)

### 15.3. US State regulations

#### 2,2-Dimethylpropane (463-82-1)

State or local regulations	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
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## SECTION 16: Other information

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Full text of H-phrases:

Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Compressed gas	Gases under pressure Compressed gas
Flam. Gas 1	Flammable gases Category 1
Simple Asphy	Simple Asphyxiant
H220	Extremely flammable gas
H280	Contains gas under pressure; may explode if heated
H380	May displace oxygen and cause rapid suffocation
H411	Toxic to aquatic life with long lasting effects

SDS US (GHS HazCom 2012)

*The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is offered solely for your consideration, investigation, and verification. It does not represent any guarantee of the properties of the product nor that the hazard precautions or procedures described are the only ones which exist. SynQuest shall not be held liable for any damage resulting from handling or from contact with the above product.*