

# Safety Data Sheet

acc. to OSHA HCS

Printing date 07/19/2024

Reviewed on 07/19/2024

## 1 Identification

- **Product identifier**
- **Trade name:** Dimethylbutane  
2,2-dimethylbutane
- **Article number:** D4781
- **CAS Number:**  
75-83-2
- **EC number:**  
200-906-8
- **Index number:**  
601-007-00-7
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Aqua Solutions, Inc.  
6913 Highway 225  
DEER PARK, TX 77536  
USA  
800-256-2586
- **Information department:**  
Technical Coordinator  
Sherman Nelson [shermann@aquasolutions.org](mailto:shermann@aquasolutions.org)
- **Emergency telephone number:**  
Chemtrec: 800-424-9300  
Canutec: 613-996-6666



## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable Liquids 2

H225 Highly flammable liquid and vapor.



GHS08 Health hazard

Aspiration Hazard 1

H304 May be fatal if swallowed and enters airways.



GHS07

Skin Irritation 2

H315 Causes skin irritation.

Specific Target Organ Toxicity - Single Exposure 3 H336 May cause drowsiness or dizziness.

- **Label elements**
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02



GHS07



GHS08

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**Trade name: Dimethylbutane**  
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- **Signal word** *Danger*

- **Hazard statements**

*Highly flammable liquid and vapor.*

*Causes skin irritation.*

*May cause drowsiness or dizziness.*

*May be fatal if swallowed and enters airways.*

- **Precautionary statements**

*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.*

*Avoid breathing dust/fume/gas/mist/vapors/spray*

*Wash thoroughly after handling.*

*Use only outdoors or in a well-ventilated area.*

*Avoid release to the environment.*

*Wear protective gloves/protective clothing/eye protection/face protection.*

*If swallowed: Immediately call a poison center/doctor.*

*Specific treatment (see on this label).*

*Do NOT induce vomiting.*

*If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*

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

*Call a poison center/doctor if you feel unwell.*

*If skin irritation occurs: Get medical advice/attention.*

*Take off contaminated clothing.*

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

*Store in a well-ventilated place. Keep cool.*

*Store locked up.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



*Health = 1*

*Fire = 3*

*Reactivity = 0*

- **HMIS-ratings (scale 0 - 4)**



*Health = 2*

*Fire = 3*

*Reactivity = 0*

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** *Not applicable.*

- **vPvB:** *Not applicable.*

## \* 3 Composition/information on ingredients

- **Chemical characterization: Substances**

- **CAS No. Description**

CAS: 75-83-2 Dimethylbutane

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- **Identification number(s)**
- **EC number:** 200-906-8
- **Index number:** 601-007-00-7

## 4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to section 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**
- **PAC-1:** 1,000 ppm
- **PAC-2:** 11000\*\* ppm
- **PAC-3:** 66000\*\*\* ppm

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.

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Protect against electrostatic charges.

- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
  - Keep receptacle tightly sealed.
  - Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

## \* 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

**CAS: 75-83-2 Dimethylbutane**

REL	Long-term value: 350 mg/m <sup>3</sup> , 100 ppm Ceiling limit value: 1800* mg/m <sup>3</sup> , 510* ppm *15-min
TLV	Long-term value: 200 ppm A3

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing.
  - Wash hands before breaks and at the end of work.
  - Avoid contact with the skin.
  - Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· **Eye protection:**

Tightly sealed goggles

· **Body protection:** Protective work clothing

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

<b>Form:</b>	Liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic
<b>Odor threshold:</b>	Not determined.

· **pH-value:** Not determined.· **Change in condition**

<b>Melting point/Melting range:</b>	-100 °C (-148 °F)
<b>Boiling point/Boiling range:</b>	50 °C (122 °F)

· **Flash point:** -29 °C (-20.2 °F)· **Flammability (solid, gaseous):** Highly flammable.· **Auto igniting:** 435 °C (815 °F)· **Decomposition temperature:** Not determined.· **Ignition temperature:** Not determined.· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.· **Explosion limits:**

<b>Lower:</b>	1.2 Vol %
<b>Upper:</b>	7 Vol %

· **Vapor pressure at 55 °C (131 °F):** 1,235.9 hPa (927.9 mm Hg)· **Density at 20 °C (68 °F):** 0.649 g/cm<sup>3</sup> (5.41591 lbs/gal)· **Relative density** Not determined.· **Vapor density** Not determined.· **Evaporation rate** Not determined.· **Solubility in / Miscibility with**· **Water:** Not determined.· **Partition coefficient (n-octanol/water):** Not determined.· **Viscosity:**

<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.

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· **Other information** No further relevant information available.

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** Substance is not listed.
- **NTP (National Toxicology Program)** Substance is not listed.
- **OSHA-Ca (Occupational Safety & Health Administration)** Substance is not listed.

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
- Water hazard class 2 (Self-assessment): hazardous for water
- Do not allow product to reach ground water, water course or sewage system.
- Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

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## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

<ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, IMDG, IATA</b></li> </ul>	<p style="text-align: center;">UN1208</p>
<ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul>	<p style="text-align: center;">Hexanes HEXANES, MARINE POLLUTANT HEXANES</p>
<ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT</b></li> </ul>	<div style="text-align: center;">  </div>
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	<p style="text-align: center;">3 Flammable liquids 3</p>
<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> </ul>	<div style="text-align: center;">  </div>
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	<p style="text-align: center;">3 Flammable liquids 3</p>
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<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	<p style="text-align: center;">3 Flammable liquids 3</p>
<ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, IMDG, IATA</b></li> </ul>	<p style="text-align: center;">II</p>
<ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> </ul>	<p style="text-align: center;">Environmentally hazardous substance, liquid; Marine Pollutant No Symbol (fish and tree)</p>
<ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>Hazard identification number (Kemler code):</b></li> </ul>	<p style="text-align: center;">Warning: Flammable liquids 33</p>

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· <b>EMS Number:</b>	F-E,S-D
· <b>Stowage Category</b>	E
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>DOT</b>	
· <b>Quantity limitations</b>	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	UN 1208 HEXANES, 3, II

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
No further relevant information available.
- **Sara**
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is not listed.
- **TSCA (Toxic Substances Control Act):** ACTIVE
- **Hazardous Air Pollutants** Substance is not listed.
- **Proposition 65**
- **Chemicals known to cause cancer:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
- **Chemicals known to cause developmental toxicity:** Substance is not listed.
- **Carcinogenic categories**
- **EPA (Environmental Protection Agency)** Substance is not listed.
- **TLV (Threshold Limit Value)** Substance is not listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02    GHS07    GHS08

- **Signal word** *Danger*
- **Hazard statements**  
*Highly flammable liquid and vapor.*  
*Causes skin irritation.*  
*May cause drowsiness or dizziness.*  
*May be fatal if swallowed and enters airways.*

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**Trade name: Dimethylbutane**  
**2,2-dimethylbutane**

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· **Precautionary statements**

- 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.
  - Avoid breathing dust/fume/gas/mist/vapors/spray
  - Wash thoroughly after handling.
  - Use only outdoors or in a well-ventilated area.
  - Avoid release to the environment.
  - Wear protective gloves/protective clothing/eye protection/face protection.
  - If swallowed: Immediately call a poison center/doctor.
  - Specific treatment (see on this label).
  - Do NOT induce vomiting.
  - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
  - Call a poison center/doctor if you feel unwell.
  - If skin irritation occurs: Get medical advice/attention.
  - Take off contaminated clothing.
  - Store in a well-ventilated place. Keep container tightly closed.
  - Store in a well-ventilated place. Keep cool.
  - Store locked up.
  - Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

\* **16 Other information**

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Department issuing SDS:** Environment protection department.

· **Contact:**

*Date of Preparation / Last Revision:*

· **Date of preparation / last revision**

*Revision 1.2 07/18/2024: Reviewed SDS for accuracy. MH/STN  
 07/19/2024 / 1.1*

· **Abbreviations and acronyms:**

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*NIOSH: National Institute for Occupational Safety*

*OSHA: Occupational Safety & Health*

*TLV: Threshold Limit Value*

*PEL: Permissible Exposure Limit*

*REL: Recommended Exposure Limit*

*Flammable Liquids 2: Flammable liquids – Category 2*

*Skin Irritation 2: Skin corrosion/irritation – Category 2*

*Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3*

*Aspiration Hazard 1: Aspiration hazard – Category 1*

· **\* Data compared to the previous version altered.**