

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 07/14/2003

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1 Identification of substance:

- **Product details:**
- **Product name:** 2-Methylpentane
- **Stock number:** 31882
- **Manufacturer/Supplier:**
Alfa Aesar, A Johnson Matthey Company
Johnson Matthey Catalog Company, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Emergency Phone: (978) 521-6300
CHEMTREC: (800) 424-9300
Web Site: www.alfa.com
- **Information Department:** Health, Safety and Environmental Department
- **Emergency information:**
During normal hours the Health, Safety and Environmental Department.
After normal hours call Chemtrec at (800) 424-9300.

2 Composition/Data on components:

- **Chemical characterization:**
Description: (CAS#)
2-Methylpentane (CAS# 107-83-5); 100%
- **Identification number(s):**
- **EINECS Number:** 203-523-4
- **EU Number:** 601-007-00-7

3 Hazards identification

- **Hazard description:** F Highly flammable
- **Information pertaining to particular dangers for man and environment**
R 11 Highly flammable.
- **Classification system**
- **HMIS ratings (scale 0-4)**

(Hazardous Materials Identification System)
Health (acute effects) = 2
Flammability = 3
Reactivity = 1

4 First aid measures

- **After inhalation**
Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.
- **After skin contact**
Immediately wash with water and soap and rinse thoroughly.
Seek immediate medical advice.
- **After eye contact**
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing** Seek immediate medical advice.

5 Fire fighting measures

- **Suitable extinguishing agents**

Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- **For safety reasons unsuitable extinguishing agents**

Halogenated extinguisher

- **Special hazards caused by the material, its products of combustion or resulting gases:**

In case of fire, the following can be released:

Carbon monoxide and carbon dioxide

Formation of toxic gases is possible during heating or in case of fire.

- **Protective equipment:**

Wear self-contained respirator.

Wear fully protective impervious suit.

6 Accidental release measures

- **Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

- **Measures for environmental protection:**

Do not allow material to be released to the environment without proper governmental permits.

- **Measures for cleaning/collecting:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

Keep away from ignition sources.

- **Additional information:**

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- **Handling**

- **Information for safe handling:**

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Prevent formation of aerosols.

- **Information about protection against explosions and fires:**

Keep ignition sources away.

Protect against electrostatic charges.

Fumes can combine with air to form an explosive mixture.

- **Storage**

- **Requirements to be met by storerooms and receptacles:**

Store in a cool location.

- **Information about storage in one common storage facility:**

Store away from oxidizing agents.

Store away from halogens.

- **Further information about storage conditions:**

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

8 Exposure controls and personal protection

- **Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Components with limit values that require monitoring at the workplace:

Hexane isomers, other than n-hexane

ppm
ACGIH TLV 500; 1000-STEL
Belgium TWA 500; 1000-STEL
Denmark TWA 300
Finland TWA 500; 625-STEL
France TWA 500
Germany TWA 200
Ireland TWA 500; 1000-STEL
Sweden TWA 200; 300-STEL
Switzerland TWA 500

- **Additional information:** No data
- **Personal protective equipment**
- **General protective and hygienic measures**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.
- **Breathing equipment:**
Use suitable respiratory protective device in case of insufficient ventilation.
Use suitable respirator when high concentrations are present.
- **Protection of hands:** Impervious gloves
- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing.

9 Physical and chemical properties:

- **General Information**
- **Form:** Liquid
- **Color:** Colorless
- **Odor:** Mild
- **Value/Range Unit Method**
- **Change in condition**
- **Melting point/Melting range:** -154 ° C
- **Boiling point/Boiling range:** 62 ° C
- **Sublimation temperature / start:** Not determined
- **Flash point:** -12 ° C
- **Ignition temperature:** 305 ° C
- **Decomposition temperature:** Not determined
- **Danger of explosion:**
Product is not explosive. However, formation of explosive air/vapor mixtures is possible.
- **Explosion limits:**
- **Lower:** 1.2 Vol %
- **Upper:** 7.0 Vol %
- **Vapor pressure:** at 20 ° C 200 hPa
- **Density:** at 20 ° C 0.653 g/cm³
- **Solubility in / Miscibility with**

- **Water:** Not miscible or difficult to mix

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
Decomposition will not occur if used and stored according to specifications.
- **Materials to be avoided:**
Oxidizing agents
Halogens
- **Dangerous reactions** Reacts with strong oxidizing agents
- **Dangerous products of decomposition:** Carbon monoxide and carbon dioxide

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Subacute to chronic toxicity:**
Hexane causes skin irritation, CNS effects, lung irritation, headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech and unconsciousness. Causes reproductive and teratogenic effects in laboratory animals.
- **Additional toxicological information:**
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information:

- **General notes:**
Do not allow material to be released to the environment without proper governmental permits.

13 Disposal considerations

- **Product:**
- **Recommendation**
Consult state, local or national regulations to ensure proper disposal.
- **Uncleaned packagings:**
- **Recommendation:**
Disposal must be made according to official regulations.

14 Transport information

- **DOT regulations:**
- **Hazard class:** 3
- **Identification number:** UN1208
- **Packing group:** II
- **Hazardous substance:** 5000 lbs, 2270 kg
- **Proper shipping name (technical name):**
Hexanes
- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** 3 Flammable liquids
- **Item:** 3b
- **Danger code (Kemler):** 33
- **UN-Number:** 1208
- **Description of goods:** Hexanes

- **Maritime transport IMDG:**
- **IMDG Class:** 3
- **Page:** 3044
- **UN Number:** 1208
- **Packaging group:** II
- **EMS Number:** F-E,S-D
- **MFAG:** 310
- **Proper shipping name:** Hexanes

- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1208
- **Packaging group:** II
- **Proper shipping name:** Hexanes

15 Regulations

- **Product related hazard informations:**
- **Hazard symbols:** F Highly flammable
- **Risk phrases:** 11 Highly flammable.
- **Safety phrases:**
 - 9 Keep container in a well-ventilated place.
 - 16 Keep away from sources of ignition - No smoking.
 - 23 Do not breathe gas/fumes/vapour/spray.
 - 29 Do not empty into drains.
 - 33 Take precautionary measures against static discharges.
- **National regulations**

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.
- **Information about limitation of use:**

For use only by technically qualified individuals.

16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

- **Department issuing MSDS:** Health, Safety and Environmental Department.
- **Contact:** Darrell R. Sanders