

## Materials Safety Data Sheet –Diisobutyl ketone

### Section 1 - Chemical Product & Company

MSDS Name: 2,6-Dimethyl-4-heptanone, remainder mainly 4,6-dimethyl-2-heptanone

Synonyms: Diisobutyl ketone

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### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#	Hazard Symbols:	Risk Phrases:
108-83-8	2,6-dimethyl-4-heptanone	66%	203-620-1	XI	10 37
19549-80-5	4,6-dimethyl-2-heptanone	30%	243-148-3		

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Flammable. Irritating to respiratory system.

Potential Health Effects

Eye: May cause eye irritation. Causes redness and pain.

Skin: Prolonged and/or repeated contact may cause defatting of the skin and dermatitis. May cause irritation with burning pain, itching and redness.

Ingestion: May cause irritation of the digestive tract. May cause nausea and vomiting.

Inhalation: Causes respiratory tract irritation. May cause lung damage. May be harmful if inhaled. May cause nausea, dizziness, and headache. Inhalation of dust causes irritation of the nose and throat, coughing and sneezing.

Chronic: Prolonged or repeated exposure may cause liver or kidney damage.

### Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Do not induce vomiting. Get medical aid. Wash mouth out with water.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

## Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Will burn if involved in a fire. Flammable liquid and vapor.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.

## Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Remove all sources of ignition. Use a spark-proof tool.

## Section 7 - Handling and Storage

Handling: Use with adequate ventilation. Use spark-proof tools and explosion proof equipment. Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes.

Storage: Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Flammables-area.

## Section 8 - Exposure Controls, Personal Protection

### Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

### Exposure Limits

CAS# 108-83-8:

United Kingdom, WEL - TWA: 25 ppm TWA; 148 mg/m<sup>3</sup> TWA United Kingdom, WEL - STEL: 75 ppm STEL; 444 mg/m<sup>3</sup> STEL

United States OSHA: 50 ppm TWA; 290 mg/m<sup>3</sup> TWA

Belgium - TWA: 25 ppm VLE; 147 mg/m<sup>3</sup> VLE

France - VME: 25 ppm VME; 250 mg/m<sup>3</sup> VME

Germany: 50 ppm TWA; 290 mg/m<sup>3</sup> TWA

Malaysia: 25 ppm TWA; 145 mg/m<sup>3</sup> TWA

Netherlands: 25 ppm MAC; 150 mg/m<sup>3</sup> MAC

Spain: 25 ppm VLA-ED; 148 mg/m<sup>3</sup> VLA-ED

CAS# 19549-80-5:

## Personal Protective Equipment

Eyes: Wear chemical splash goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## Section 9 - Physical and Chemical Properties

Physical State:	Clear liquid
Color:	Clear to slight yellow
Odor:	Mild odor
pH:	Not available
Vapor Pressure:	1 hPa @ 20 deg C
Viscosity:	1.05 mPa.s@20 deg C
Boiling Point:	169 deg C @ 760.00mm Hg ( 336.20°F)
Freezing/Melting Point:	-46 deg C ( -50.80°F)
Autoignition Temperature:	345 deg C ( 653.00 deg F)
Flash Point:	49 deg C ( 120.20 deg F)
Explosion Limits:	Lower: .80 vol %
Explosion Limits:	Upper: 7.10 vol %
Decomposition Temperature:	Not available
Solubility in water:	0.05 g/100 ml water (20°C)
Specific Gravity/Density:	0.8102
Molecular Formula:	C <sub>9</sub> H <sub>18</sub> O
Molecular Weight:	142.24

## Section 10 - Stability and Reactivity

Chemical Stability:	Stable.
Conditions to Avoid:	Incompatible materials, ignition sources.
Incompatibilities with Other Materials	Strong oxidizing agents, strong reducing agents, strong bases.
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide.
Hazardous Polymerization	Will not occur.

## Section 11 - Toxicological Information

RTECS#: CAS# 108-83-8: MJ5775000

CAS# 19549-80-5: None listed

LD50/LC50: RTECS:

CAS# 108-83-8: Draize test, rabbit, eye: 500 mg Mild;

Oral, mouse: LD50 = 1416 mg/kg;

Oral, rat: LD50 = 5750 mg/kg;

Skin, rabbit: LD50 = 16 gm/kg;

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RTECS:

CAS# 19549-80-5:.

Carcinogenicity: 2,6-dimethyl-4-heptanone - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

4,6-dimethyl-2-heptanone - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: See actual entry in RTECS for complete information.

## Section 12 - Ecological Information

Ecotoxicity: Bacteria: IC50 = 255 mg/l; ;

Other: Avoid entering into waters or underground water. Do not empty into drains.

## Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

## Section 14 - Transport Information

	IATA	IMO	RID/ADR
Shipping Name:	DIISOBUTYL KETONE	DIISOBUTYL KETONE	DIISOBUTYL KETONE
Hazard Class:	3	3	3
UN Number:	1157	1157	1157
Packing Group:	III	III	III

## Section 15 - Regulatory Information

### European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XI

**Risk Phrases:**

R 10 Flammable.

R 37 Irritating to respiratory system.

**Safety Phrases:**

S 24 Avoid contact with skin.

WGK (Water Danger/Protection)

CAS# 108-83-8: 1

CAS# 19549-80-5: Not available

**Canada**

CAS# 108-83-8 is listed on Canada's DSL List

CAS# 19549-80-5 is listed on Canada's DSL List

**US Federal****TSCA**

CAS# 108-83-8 is listed on the TSCA Inventory.

CAS# 19549-80-5 is listed on the TSCA Inventory.

**Section 16 - Other Information**

MSDS Creation Date: 05/01/2018

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.