

**Methylheptenone****5005744**

Version 2.0

Revision Date 11/10/2015

Print Date 03/02/2018

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : Methylheptenone  
 Substance name : 6-methylhept-5-en-2-one  
 CAS-No. : 110-93-0

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

Use of the Sub- : Ingredient for fragrances, Ingredient for flavours  
 stance/Mixture

**1.3 Details of the supplier of the safety data sheet**

Company : DSM Nutritional Products Ltd.  
 PO Box 2676  
 CH-4002 Basel  
 Telephone : +41618158888  
 Telefax : +41618157253  
 E-mail address Respon- : sds.nutritionalproducts@dsm.com  
 sible/issuing person

**1.4 Emergency telephone number**

+41 62 866 2314

**SECTION 2. HAZARDS IDENTIFICATION****Emergency Overview**

<b>CAUTION</b>	
Appearance	clear liquid
Colour	colourless, light yellow
Odour	herbal, like fruit

**GHS Classification**

Flammable liquids : Category 3

**GHS Label element**

Hazard pictograms :



Signal word : Warning

Hazard statements : H226 Flammable liquid and vapour.

Precautionary statements : **Prevention:**  
 P210 Keep away from heat/sparks/open flames/hot surfaces.  
 No smoking.  
 P233 Keep container tightly closed.  
 P240 Ground/bond container and receiving equipment.  
 P241 Use explosion-proof electrical/ ventilating/ lighting/ equip-  
 ment.  
 P242 Use only non-sparking tools.  
 P243 Take precautionary measures against static discharge.

**Methylheptenone****5005744**

Version 2.0

Revision Date 11/10/2015

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P280 Wear protective gloves/ eye protection/ face protection.

**Response:**

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

**Storage:**

P403 + P235 Store in a well-ventilated place. Keep cool.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

**Potential Health Effects**

Aggravated Medical Condition : None known.

Symptoms of Overexposure : No specific symptoms known.

**Experience with human exposure**

Inhalation :

May cause irritation of respiratory tract.

**Carcinogenicity:****IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**NTP**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Additional hazards and advice**

None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Synonyms : 5-Hepten-2-one, 6-methyl-MH

Brief description of the product : Substance

Molecular formula : C<sub>8</sub>-H<sub>14</sub>-O**Hazardous components**

No hazardous ingredients

**SECTION 4. FIRST AID MEASURES**General advice : Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.

**Methylheptenone****5005744**

Version 2.0

Revision Date 11/10/2015

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If inhaled	: Move to fresh air. Consult a physician after significant exposure.
In case of skin contact	: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water.
In case of eye contact	: Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	: Clean mouth with water and drink afterwards plenty of water. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Obtain medical attention.
Most important symptoms and effects, both acute and delayed	: No specific symptoms known.
Notes to physician	: Treat symptomatically.

**SECTION 5. FIREFIGHTING MEASURES****Flammable properties**

Flash point	: 122 °F (50 °C)
Ignition temperature	: 250 °C (DIN 51794)
Lower explosion limit	: 1.1 %(V)
Upper explosion limit	: 7.3 %(V)

**Fire fighting**

Suitable extinguishing media	: Alcohol-resistant foam Carbon dioxide (CO <sub>2</sub> ) Dry chemical Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	: High volume water jet
Further information	: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Use water spray to cool unopened containers.

**Protective equipment and precautions for firefighters**

Specific hazards during fire-fighting	: None known.
Special protective equipment for firefighters	: In the event of fire, wear self-contained breathing apparatus.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas.  
Use personal protective equipment.  
Ensure adequate ventilation.  
Remove all sources of ignition.  
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.  
Prevent product from entering drains.
- Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

**SECTION 7. HANDLING AND STORAGE**

- Advice on safe handling : For personal protection see section 8.  
Container may be opened only under exhaust ventilation hood.  
Do not smoke.
- Advice on protection against fire and explosion : Keep away from sources of ignition - No smoking.  
Take necessary action to avoid static electricity discharge.  
Avoid formation of aerosol.
- Conditions for safe storage : Protect from humidity.  
Protect against light.  
  
No smoking.  
Keep container tightly closed and dry.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Electrical installations / working materials must comply with the technological safety standards.
- Storage temperature : < 77 °F (< 25 °C)

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

**Personal protective equipment**

- Respiratory protection : In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.  
  
In the case of vapour formation use a respirator with an approved filter.
- Hand protection : Consider the hazard characteristics of this product and any special workplace conditions when selecting the appropriate type of protective gloves.

**Methylheptenone****5005744**

Version 2.0

Revision Date 11/10/2015

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	Glove material: for example nitrile rubber Solvent-resistant gloves
Eye protection	: Safety glasses with side-shields
Skin and body protection	: Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

Appearance	: clear liquid
Colour	: colourless - light yellow
Odour	: herbal, like fruit
Odour Threshold	: No information available.
pH	: No data available
Boiling point/boiling range	: 173 °C (at 1,013 hPa)
Flash point	: 50 °C
Evaporation rate	: not determined
Lower explosion limit	: 1.1 %(V)
Upper explosion limit	: 7.3 %(V)
Vapour pressure	: 1.2 hPa (at 20 °C)
Relative vapour density	: not determined
Density	: 0.857 g/cm <sup>3</sup> (at 20 °C, 1,013 hPa)
Water solubility	: 3.02 g/l (25 °C)
Solubility in other solvents	: various organic solvents: soluble
Partition coefficient: n-octanol/water	: log Pow 2.07 ( 25 °C)
Ignition temperature	: 250 °C (DIN 51794)
Thermal decomposition	: Not relevant
Viscosity, dynamic	: ca. 1 mPa.s (at 20 °C)
Explosive properties	: Not explosive
Oxidizing properties	: No data available

**9.2 Other information**

Molecular weight	: 126.20 g/mol
Surface tension	: ca. 27 mN/m (20 °C)

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	: No hazards to be specially mentioned.
Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: Possible incompatibility with materials listed under section 10.5.
Conditions to avoid	: Heat, flames and sparks.
Incompatible materials	: Strong acids and strong bases Strong oxidizing agents
Hazardous decomposition products	: No decomposition if used as directed.

**SECTION 11. TOXICOLOGICAL INFORMATION**

Acute oral toxicity	: LD50 (Mouse): > 2,000 mg/kg : LD50 (Rat): 3,500 mg/kg
Acute dermal toxicity	: LD50 (Rat): > 5,000 mg/kg
Skin irritation	: No skin irritation (Rabbit)
Eye irritation	: temporary redness (Rabbit, OECD Test Guideline 405)
Sensitisation	: Did not cause sensitization. (Guinea pig) : Did not cause sensitization. (human, Maximisation Test (GPMT))
Carcinogenicity	: No indication for carcinogenicity known.
Genotoxicity in vitro	: not mutagenic (Various test systems)
Reproductive toxicity	: This information is not available.
Teratogenicity	: not teratogenic not embryotoxic NOAEL: 200 mg/kg bw/d (Rat)
STOT - repeated exposure	: LOAEL (Oral, Rat) : 50 mg/kg bw/d Sub-chronic toxicity study (90-day)

**Methylheptenone****5005744**

Version 2.0

Revision Date 11/10/2015

Print Date 03/02/2018

(OECD Test Guideline 408)

Experience with human exposure: Inhalation : May cause irritation of respiratory tract.

Further information : Solvents may degrease the skin.

Aspiration toxicity : No aspiration toxicity classification

**SECTION 12. ECOLOGICAL INFORMATION****Toxicity**

Toxicity to fish : Leuciscus idus (Golden orfe)  
LC50 (96 h) ca. 73 mg/l  
(nominal concentration)  
(DIN 38412)

Toxicity to daphnia and other aquatic invertebrates : Daphnia magna (Water flea)  
EC50 (48 h) 74 mg/l  
(nominal concentration)  
(DIN 38412)

Toxicity to algae : Desmodesmus subspicatus (green algae)  
EC50 (72 h) 116 mg/l  
(nominal concentration)  
(DIN 38412)  
: Desmodesmus subspicatus (green algae)  
NOEC (72 h) 10 mg/l  
(DIN 38412)

Toxicity to bacteria : activated sludge  
EC50 (0.5 h) ca. 800 mg/l  
(nominal concentration)  
(OECD Test Guideline 209)

**Persistence and degradability**

Biodegradability : Readily biodegradable  
91 % (28 d)  
74 %, (14 d)  
(OECD Test Guideline 301F)

**Bioaccumulative potential**

Partition coefficient: n-octanol/water : log Pow 2.07 ( 25 °C )

**Mobility in soil**

Distribution among environmental compartments : No data available  
Surface tension : ca. 27 mN/m ( 20 °C )

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Revision Date 11/10/2015

Print Date 03/02/2018

**Results of PBT and vPvB assessment**

- Assessment : The substance does not fulfill the PBT criteria.  
 : The substance does not fulfill the vPvB criteria.

**Other adverse effects**

- Regulation 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
- Remarks This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

- Additional ecological information : Harmful to aquatic organisms.

**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

- Waste from residues : User must determine if any wastes generated exhibit hazardous characteristics as per 40 CFR Part 261 or other national / local legislation.

Discharge into the environment must be avoided.  
 Do not contaminate ponds, waterways or ditches with chemical or used container.  
 Do not dispose of waste into sewer.  
 Offer surplus and non-recyclable solutions to a licensed disposal company.

- Contaminated packaging : Do not burn, or use a cutting torch on, the empty drum.  
 Dispose of as unused product.  
 Do not re-use empty containers.

**SECTION 14. TRANSPORT INFORMATION****International Regulation****IATA-DGR**

- UN/ID No. : UN 1224
- Proper shipping name : Ketones, liquid, n.o.s.  
 (6-methylhept-5-en-2-one)
- Class : 3
- Packing group : III
- Labels : Flammable Liquids
- Packing instruction (cargo aircraft) : 366
- Packing instruction (passenger aircraft) : 355

**IMDG-Code**

- UN number : UN 1224
- Proper shipping name : KETONES, LIQUID, N.O.S.  
 (6-methylhept-5-en-2-one)
- Class : 3



**Methylheptenone****5005744**

Version 2.0

Revision Date 11/10/2015

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Packing group : III  
Labels : 3  
EmS Code : F-E, S-D  
Marine pollutant : no

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**National Regulations****49 CFR**

UN/ID/NA number : UN 1224  
Proper shipping name : Ketones, liquid, n.o.s.  
(6-methylhept-5-en-2-one)  
Class : 3  
Packing group : III  
Labels : FLAMMABLE LIQUID  
ERG Code : 127  
Marine pollutant : no

**Special precautions for user**

No additional requirements.

**SECTION 15. REGULATORY INFORMATION**

**TSCA list** : No substances are subject to a Significant New Use Rule.  
No substances are subject to TSCA 12(b) export notification requirements.

**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Fire Hazard  
Acute Health Hazard

**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**Clean Air Act**

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

**Methylheptenone****5005744**

Version 2.0

Revision Date 11/10/2015

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**Clean Water Act**

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

**Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know**

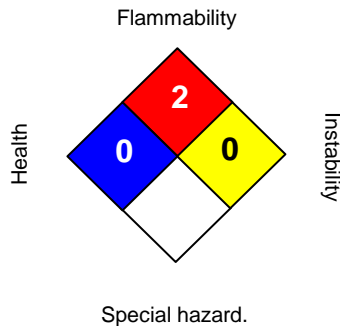
6-methylhept-5-en-2-one 110-93-0 90 - 100 %

**New Jersey Right To Know**

6-methylhept-5-en-2-one 110-93-0 90 - 100 %

**The components of this product are reported in the following inventories:**

**TSCA** : On TSCA Inventory

**SECTION 16. OTHER INFORMATION****Further information****NFPA:****HMIS III:**

<b>HEALTH</b>	<b>1</b>
<b>FLAMMABILITY</b>	<b>2</b>
<b>PHYSICAL HAZARD</b>	<b>0</b>

0 = not significant, 1 =Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

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.

**Abbreviations:** ACGIH = American Conference of Governmental Industrial Hygienists. CERCLA = Comprehensive Environmental Response, Compensation and Liability Act. CFR = Code of Federal Regulations. CPR = Controlled Products Regulations. DSL = Canadian Domestic Substance List. DOT = Department of Transportation. EINECS = European Inventory of New and Existing Chemical Substances. EPA = Environmental Protection Agency. HCS = Hazardous Communication Standard. HEPA = High Efficiency Particulate Air. HMIS = Hazardous Material Identification System. IARC = International Agency for Research on Cancer. IATA = International Air Transport Association. IMDG = International Maritime Dangerous

**Methylheptenone****5005744**

Version 2.0

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Good. NFPA = National Fire Protection Association. NIOSH = National Institute of Occupational Safety and Health. NJTSR = New Jersey Trade Secret Registry. NTP = National Toxicology Program. OSHA = Occupational Safety and Health Administration. SARA = Superfund Amendments and Reauthorization Act. TDG = Transportation of Dangerous Goods. TLV = Threshold Limit Value. TSCA = Toxic Substance Control Act. WHMIS = Workplace Hazardous Materials Information System.