

Printing date 02.11.2016 Version number 1 Revision: 02.11.2016

SECTION 1: Identification of the substance/mixture and of the company/undertaking

· 1.1 Product identifier

· Product name: 2,2,4,4,6,8,8-Heptamethylnonane

· Part number: DRE-C14123500

• CAS Number: 4390-04-9 • EC number:

• **EC number:** 224-506-8

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

No further relevant information available.

· Application of the substance / the mixture Reference material for laboratory use only

· Manufacturer/Supplier:

LGC LimitedTel:+44 (0) 20 8943 7000Queens RoadFax:+44 (0) 20 8943 2767TeddingtoneMail: gb@lgcstandards.comMiddlesex TW11 0LYWeb: www.lgcstandards.com

UNITED KINGDOM

· Further information obtainable from:

Product safety department

eMail: sds-request@lgcgroup.com

· 1.4 Emergency telephone number: +44 (0) 20 8943 7000 (Monday - Friday : 8am - 5pm)

SECTION 2: Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008



GHS08 health hazard

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



Acute Tox. 4 H332 Harmful if inhaled.

- · 2.2 Label elements
- · Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

· Hazard pictograms





GHS07

GHS08

- · Signal word Danger
- · Hazard statements

H332 Harmful if inhaled.

H304 May be fatal if swallowed and enters airways.

· Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 Call a POISON CENTER/doctor if you feel unwell.

(Contd. on page 2)



Printing date 02.11.2016 Version number 1 Revision: 02.11.2016

Product name: 2,2,4,4,6,8,8-Heptamethylnonane

(Contd. from page 1)

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international

regulations.

· Additional information:

EUH066 Repeated exposure may cause skin dryness or cracking.

- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

- · 3.1 Chemical characterisation: Substances
- · CAS No. Description
- 4390-04-9 2,2,4,4,6,8,8-heptamethylnonane
- · Identification number(s) None
- · EC number: 224-506-8
- · RTECS: -
- · Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- · 4.1 Description of first aid measures
- · General information:

Symptoms of poisoning may occur even after several hours; therefore medical observation for at least 48 hours after the accident is recommended.

· After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient in recovery position for transport.

Seek medical treatment.

- · 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:

Rinse mouth. Do not induce vomiting.

Call for a doctor immediately.

- · 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.
- · 4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- · Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

 \cdot 5.2 Special hazards arising from the substance or mixture

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

- · 5.3 Advice for firefighters
- · Protective equipment:

Mouth respiratory protective device.

Wear self-contained respiratory protective device.

GB



Printing date 02.11.2016 Version number 1 Revision: 02.11.2016

Product name: 2,2,4,4,6,8,8-Heptamethylnonane

(Contd. from page 2)

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures Wear protective clothing.
- 6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · 6.3 Methods and material for containment and cleaning up:

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

Dispose of contaminated material as waste according to item 13.

Ensure adequate ventilation.

· 6.4 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.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Ensure good ventilation/extraction at the workplace.

Store in cool, dry place in tightly closed receptacles.

Prevent formation of aerosols.

- · Information about fire and explosion protection: No special measures required.
- · 7.2 Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles:

Store in a cool location.

Please refer to the manufacturer's certificate for specific storage and transport temperature conditions.

Store only in the original receptacle.

Keep container in a well-ventilated place. Keep away from sources of ignition and heat.

- · Information about storage in one common storage facility: Store away from foodstuffs.
- · Further information about storage conditions: Keep container tightly sealed.
- · 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

- · Additional information about design of technical facilities: No further data; see item 7.
- · 8.1 Control parameters
- · Ingredients with limit values that require monitoring at the workplace: Not required.
- · Additional information: Lists used were valid at the time of SDS preparation.
- · 8.2 Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

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

· Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

(Contd. on page 4)



Printing date 02.11.2016 Version number 1 Revision: 02.11.2016

Product name: 2,2,4,4,6,8,8-Heptamethylnonane

(Contd. from page 3)

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

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374



- · Material of gloves Nitrile rubber, NBR
- · 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.

· Eye protection: Safety glasses

SECTION 9: Physical and ch	• •
9.1 Information on basic physical a	nd chemical properties
General Information	
· Appearance: Form:	Liquid
Colour:	Colourless
· Odour:	Odourless
Odour threshold:	Not determined.
pH-value:	Not determined.
Change in condition	
Melting point/Melting range:	Not determined.
Boiling point/Boiling range:	240 °C
Flash point:	95 °C
Flammability (solid, gaseous):	Not determined.
Ignition temperature:	Not determined
Decomposition temperature:	Not determined.
Self-igniting:	Not determined.
Danger of explosion:	Not determined.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapour pressure:	Not determined.
Density at 20 °C:	$0.79 \ g/cm^3$
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
water:	Not determined.
Partition coefficient (n-octanol/wate	er): Not determined.
· Viscosity:	
Dynamic:	Not determined.



Printing date 02.11.2016 Version number 1 Revision: 02.11.2016

Product name: 2,2,4,4,6,8,8-Heptamethylnonane

(Contd. from page 4)

Kinematic at 25 °C: 4.3 mm²/s

• 9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity

- · 10.1 Reactivity Stable under normal conditions.
- · 10.2 Chemical stability Stable under normal conditions.
- · Thermal decomposition / conditions to be avoided:

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

- · 10.3 Possibility of hazardous reactions No dangerous reactions known.
- · 10.4 Conditions to avoid Heat.
- · 10.5 Incompatible materials: Strong oxidizing agents.
- · 10.6 Hazardous decomposition products:

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

SECTION 11: Toxicological information

- · 11.1 Information on toxicological effects
- · Acute toxicity

Harmful if inhaled.

- · Primary irritant effect:
- · Skin corrosion/irritation Based on available data, the classification criteria are not met.
- · Serious eye damage/irritation Based on available data, the classification criteria are not met.
- · Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- · CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity Based on available data, the classification criteria are not met.
- · Reproductive toxicity Based on available data, the classification criteria are not met.
- · STOT-single exposure Based on available data, the classification criteria are not met.
- · STOT-repeated exposure Based on available data, the classification criteria are not met.
- · Aspiration hazard

May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

- · 12.1 Toxicity
- · Aquatic toxicity: No further relevant information available.
- · 12.2 Persistence and degradability No further relevant information available.
- · 12.3 Bioaccumulative potential No further relevant information available.
- · 12.4 Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water Do not allow undiluted product to reach ground water, water course or sewage system.

- · 12.5 Results of PBT and vPvB assessment
- · **PBT**: Not applicable.
- · vPvB: Not applicable.
- 12.6 Other adverse effects No further relevant information available.

GB



Version number 1 Printing date 02.11.2016 Revision: 02.11.2016

Product name: 2,2,4,4,6,8,8-Heptamethylnonane

(Contd. from page 5)

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

Waste disposal key numbers from EWC have to be assigned depending on origin and processing.

- · Uncleaned packaging:
- · Recommendation: Dispose of in accordance with national regulations.

SECTION 14: Transport information		
· 14.1 UN-Number · ADR, ADN, IMDG, IATA · ADR, ADN, IMDG, IATA	Not applicable Not applicable	
· 14.3 Transport hazard class(es)		
· ADR, ADN, IMDG, IATA · Class	Not applicable	
· 14.4 Packing group · ADR, IMDG, IATA	Not applicable	
· 14.5 Environmental hazards:	Not applicable.	
· 14.6 Special precautions for user	Not applicable.	
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable.		
· UN ''Model Regulation'':	Not applicable	

SECTION 15: Regulatory information

- · 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Philippines Inventory of Chemicals and Chemical Substances Substance is not listed.
- · Australian Inventory of Chemical Substances Substance is listed.
- · Standard for the Uniform Scheduling of Medicines and Poisons Substance is not listed.
- · Directive 2012/18/EU
- · Named dangerous substances ANNEX I Substance is not listed.
- · REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- · 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

(Contd. on page 7)



Printing date 02.11.2016 Version number 1 Revision: 02.11.2016

Product name: 2,2,4,4,6,8,8-Heptamethylnonane

(Contd. from page 6)

The information in this safety data sheet (SDS) has been prepared with due care and is true and accurate to the best of our knowledge. The user must determine the suitability of the information for its particular purpose, ensure compliance with existing laws and regulations, and be aware that other or additional safety or performance considerations may arise when using, handling and/or storing the material. The information in this SDS does not purport to be all inclusive or a guarantee as to the properties of the material supplied, and should be used only as a guide. LGC makes no warranties or representations as to the accuracy and completeness of the information contained herein, shall not be held responsible for the suitability of this information for the user's intended purposes or the consequences of such use, and shall not be liable for any damage or loss, howsoever arising, direct or otherwise.

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society)

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative LC50: Lethal concentration, 50 percent SVHC: Substances of Very High Concern Acute Tox. 4: Acute toxicity – Category 4

Asp. Tox. 1: Aspiration hazard – Category 1

$\cdot \textit{Sources}$

Tables 3.1 and 3.2 from Annex 6 of EC 1272/2008, EC 1907/2006, EH40/2005 as amended 2011, Registry of Toxic Effects of Chemical Substances (RTECS), The Dictionary of Substances and their Effects, 1st Edition, IUCLID.

 $\cdot \ \underline{\textbf{\textit{Data compared to the previous version altered.}}} \ All \ sections \ have \ been \ updated.$

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