



# SAFETY DATA SHEET

Creation Date 26-Sep-2009

Revision Date 18-Sep-2018

Revision Number 3

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identification

Product Description: 2,2,4,4,6,8,8-Heptamethylnonane  
Cat No. : 156250000; 156250500; 156250010; 156252500  
Synonyms HMN  
CAS-No 4390-04-9  
EC-No. 224-506-8  
Molecular Formula C16 H34

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

Recommended Use Laboratory chemicals.  
Uses advised against No Information available

### 1.3. Details of the supplier of the safety data sheet

Company Acros Organics BVBA  
Janssen Pharmaceuticaaan 3a  
2440 Geel, Belgium  
E-mail address begel.sdsdesk@thermofisher.com

### 1.4. Emergency telephone number

For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

#### CLP Classification - Regulation (EC) No 1272/2008

##### Physical hazards

Based on available data, the classification criteria are not met

##### Health hazards

|                                                    |                   |
|----------------------------------------------------|-------------------|
| Aspiration Toxicity                                | Category 1 (H304) |
| Acute oral toxicity                                | Category 4 (H302) |
| Acute Inhalation Toxicity - Vapors                 | Category 4 (H332) |
| Specific target organ toxicity - (single exposure) | Category 2 (H371) |

##### Environmental hazards

Based on available data, the classification criteria are not met

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## 2.2. Label elements



Signal Word

Danger

### Hazard Statements

H302 - Harmful if swallowed  
H304 - May be fatal if swallowed and enters airways  
H332 - Harmful if inhaled  
H371 - May cause damage to organs  
EUH066 - Repeated exposure may cause skin dryness or cracking

### Precautionary Statements

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting  
P264 - Wash face, hands and any exposed skin thoroughly after handling  
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician  
P331 - Do NOT induce vomiting  
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing  
P260 - Do not breathe dust/fume/gas/mist/vapors/spray  
P308 + P313 - IF exposed or concerned: Get medical advice/ attention

## 2.3. Other hazards

No information available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

| Component                          | CAS-No    | EC-No.            | Weight % | CLP Classification - Regulation (EC) No 1272/2008                                                |
|------------------------------------|-----------|-------------------|----------|--------------------------------------------------------------------------------------------------|
| Nonane, 2,2,4,4,6,8,8-heptamethyl- | 4390-04-9 | EEC No. 224-506-8 | >95      | Acute Tox. 2 (H302)<br>Acute Tox. 4 (H332)<br>Asp. Tox. 1 (H304)<br>STOT SE 2 (H371)<br>(EUH066) |

Full text of Hazard Statements: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

#### General Advice

If symptoms persist, call a physician.

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|                                           |                                                                                                                                                                                                     |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye Contact</b>                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.                                                                                     |
| <b>Skin Contact</b>                       | Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.                                                                                   |
| <b>Ingestion</b>                          | Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting. Call a physician or Poison Control Center immediately. If vomiting occurs naturally, have victim lean forward. |
| <b>Inhalation</b>                         | Move to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur. Risk of serious damage to the lungs.                                                     |
| <b>Self-Protection of the First Aider</b> | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.                                                    |

## 4.2. Most important symptoms and effects, both acute and delayed

. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

## 4.3. Indication of any immediate medical attention and special treatment needed

**Notes to Physician** Treat symptomatically.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

#### **Suitable Extinguishing Media**

Dry chemical. Carbon dioxide (CO<sub>2</sub>). alcohol-resistant foam.

#### **Extinguishing media which must not be used for safety reasons**

No information available.

### 5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

#### **Hazardous Combustion Products**

Thermal decomposition can lead to release of irritating gases and vapors, Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>).

### 5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment.

### 6.2. Environmental precautions

Should not be released into the environment.

### 6.3. Methods and material for containment and cleaning up

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Keep in suitable, closed containers for disposal. Soak up with inert absorbent material.

## 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Wear personal protective equipment. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation.

#### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place.

### 7.3. Specific end use(s)

Use in laboratories

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### **Exposure limits**

List source(s):

#### **Biological limit values**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

#### **Monitoring methods**

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS70 General methods for sampling airborne gases and vapours

**Derived No Effect Level (DNEL)** No information available

| <u>Route of exposure</u> | <b>Acute effects (local)</b> | <b>Acute effects (systemic)</b> | <b>Chronic effects (local)</b> | <b>Chronic effects (systemic)</b> |
|--------------------------|------------------------------|---------------------------------|--------------------------------|-----------------------------------|
| Oral                     |                              |                                 |                                |                                   |
| Dermal                   |                              |                                 |                                |                                   |
| Inhalation               |                              |                                 |                                |                                   |

**Predicted No Effect Concentration (PNEC)** No information available.

### 8.2. Exposure controls

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## Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

## Personal protective equipment

### Eye Protection

Safety glasses with side-shields Goggles (European standard - EN 166)

### Hand Protection

Protective gloves

| Glove material | Breakthrough time | Glove thickness | EU standard | Glove comments        |
|----------------|-------------------|-----------------|-------------|-----------------------|
| Natural rubber | See manufacturers | -               | EN 374      | (minimum requirement) |
| Nitrile rubber | recommendations   |                 |             |                       |
| Neoprene       |                   |                 |             |                       |
| PVC            |                   |                 |             |                       |

### Skin and body protection

Long sleeved clothing

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

### Respiratory Protection

Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

### Large scale/emergency use

Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

**Recommended Filter type:** Organic gases and vapours filter Type A Brown conforming to EN14387

### Small scale/Laboratory use

Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Recommended half mask:-** Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141

When RPE is used a face piece Fit Test should be conducted

### Environmental exposure controls

No information available.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

#### Appearance

Colorless

#### Physical State

Liquid

#### Odor

Characteristic

#### Odor Threshold

No data available

#### pH

No information available

#### Melting Point/Range

No data available

#### Softening Point

No data available

#### Boiling Point/Range

240 °C / 464 °F

@ 760 mmHg

#### Flash Point

95 °C / 203 °F

**Method -** No information available

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|                                         |                          |             |
|-----------------------------------------|--------------------------|-------------|
| Evaporation Rate                        | No data available        |             |
| Flammability (solid,gas)                | Not applicable           | Liquid      |
| Explosion Limits                        | No data available        |             |
| Vapor Pressure                          | No data available        |             |
| Vapor Density                           | No data available        | (Air = 1.0) |
| Specific Gravity / Density              | 0.790                    |             |
| Bulk Density                            | Not applicable           | Liquid      |
| Water Solubility                        | Insoluble                |             |
| Solubility in other solvents            | No information available |             |
| Partition Coefficient (n-octanol/water) |                          |             |
| Autoignition Temperature                | No data available        |             |
| Decomposition Temperature               | No data available        |             |
| Viscosity                               | No data available        |             |
| Explosive Properties                    | No information available |             |
| Oxidizing Properties                    | No information available |             |

## 9.2. Other information

|                   |         |
|-------------------|---------|
| Molecular Formula | C16 H34 |
| Molecular Weight  | 226.44  |

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

None known, based on information available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

|                          |                                          |
|--------------------------|------------------------------------------|
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions      | None under normal processing.            |

### 10.4. Conditions to avoid

Incompatible products. Excess heat.

### 10.5. Incompatible materials

Oxidizing agents.

### 10.6. Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapors. Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

#### Product Information

#### (a) acute toxicity;

|            |                   |
|------------|-------------------|
| Oral       | Category 4        |
| Dermal     | No data available |
| Inhalation | Category 4        |

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|                                            |                                                                                     |
|--------------------------------------------|-------------------------------------------------------------------------------------|
| (b) skin corrosion/irritation;             | No data available                                                                   |
| (c) serious eye damage/irritation;         | No data available                                                                   |
| (d) respiratory or skin sensitization;     |                                                                                     |
| Respiratory                                | No data available                                                                   |
| Skin                                       | No data available                                                                   |
| (e) germ cell mutagenicity;                | No data available                                                                   |
| (f) carcinogenicity;                       | No data available                                                                   |
|                                            | There are no known carcinogenic chemicals in this product                           |
| (g) reproductive toxicity;                 | No data available                                                                   |
| (h) STOT-single exposure;                  | Category 2                                                                          |
| (i) STOT-repeated exposure;                | No data available                                                                   |
| Target Organs                              | None known.                                                                         |
| (j) aspiration hazard;                     | Category 1                                                                          |
| Other Adverse Effects                      | The toxicological properties have not been fully investigated.                      |
| Symptoms / effects, both acute and delayed | Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting |

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

#### Ecotoxicity effects

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

### 12.2. Persistence and degradability

#### Persistence

Insoluble in water, May persist, based on information available.

### 12.3. Bioaccumulative potential

May have some potential to bioaccumulate

### 12.4. Mobility in soil

Spillage unlikely to penetrate soil The product is insoluble and floats on water The product evaporates slowly Is not likely mobile in the environment due its low water solubility. Spillage unlikely to penetrate soil

### 12.5. Results of PBT and vPvB assessment

No data available for assessment.

### 12.6. Other adverse effects

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**Endocrine Disruptor Information**  
**Persistent Organic Pollutant**  
**Ozone Depletion Potential**

This product does not contain any known or suspected endocrine disruptors  
This product does not contain any known or suspected substance  
This product does not contain any known or suspected substance

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

**Waste from Residues / Unused Products**

Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

**Contaminated Packaging**

Dispose of this container to hazardous or special waste collection point.

**European Waste Catalogue (EWC)**

According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.

**Other Information**

Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

## SECTION 14: TRANSPORT INFORMATION

**IMDG/IMO**

Not regulated

**14.1. UN number**

**14.2. UN proper shipping name**

**14.3. Transport hazard class(es)**

**14.4. Packing group**

**ADR**

Not regulated

**14.1. UN number**

**14.2. UN proper shipping name**

**14.3. Transport hazard class(es)**

**14.4. Packing group**

**IATA**

Not regulated

**14.1. UN number**

**14.2. UN proper shipping name**

**14.3. Transport hazard class(es)**

**14.4. Packing group**

**14.5. Environmental hazards**

No hazards identified

**14.6. Special precautions for user**

No special precautions required

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable, packaged goods

## SECTION 15: REGULATORY INFORMATION

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

**International Inventories**

X = listed.

| Component | EINECS    | ELINCS | NLP | TSCA | DSL | NDSL | PICCS | ENCS | IECSC | AICS | KECL |
|-----------|-----------|--------|-----|------|-----|------|-------|------|-------|------|------|
| Nonane,   | 224-506-8 | -      |     | X    | X   | -    | -     | X    | X     | X    | X    |

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| 2,2,4,4,6,8,8-heptamethyl- |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|--|--|--|--|--|--|--|--|--|--|--|

## National Regulations

Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment.

## 15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

## SECTION 16: OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3

H302 - Harmful if swallowed  
H304 - May be fatal if swallowed and enters airways  
H332 - Harmful if inhaled  
H371 - May cause damage to organs  
EUH066 - Repeated exposure may cause skin dryness or cracking

### Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer

**PNEC** - Predicted No Effect Concentration

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

### Key literature references and sources for data

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - Volatile Organic Compounds

### Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

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**Revision Summary** SDS sections updated: 2, 3, 9, 10.

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## Disclaimer

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

**End of Safety Data Sheet**