



# SAFETY DATA SHEET

Creation Date 04-Apr-2014

Revision Date 04-Apr-2014

Revision Number 1

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

### 1.1. Product identifier

|                      |                                         |
|----------------------|-----------------------------------------|
| Product Description: | <b>Piperitone</b>                       |
| Cat No. :            | <b>456210000; 456210010; 456210050</b>  |
| Synonyms             | 3-Carvomenthenone<br>p-Menth-1-en-3-one |
| CAS-No               | 89-81-6                                 |
| EC-No.               | 201-942-7                               |
| Molecular Formula    | C10 H16 O                               |

### 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<br>Janssen Pharmaceuticaan 3a<br>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

|                                                    |            |
|----------------------------------------------------|------------|
| Skin Corrosion/Irritation                          | Category 2 |
| Serious Eye Damage/Eye Irritation                  | Category 2 |
| Specific target organ toxicity - (single exposure) | Category 3 |

##### Environmental hazards

|                          |            |
|--------------------------|------------|
| Acute aquatic toxicity   | Category 1 |
| Chronic aquatic toxicity | Category 1 |

#### Classification according to EU Directives 67/548/EEC or 1999/45/EC

|           |                                                    |
|-----------|----------------------------------------------------|
| Symbol(s) | Xi - Irritant<br>N - Dangerous for the environment |
|-----------|----------------------------------------------------|

**SECTION 2: HAZARDS IDENTIFICATION****R-phrases(s)**

R36/37/38 - Irritating to eyes, respiratory system and skin  
R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

**2.2. Label elements****Signal Word****Warning****Hazard Statements**

H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H335 - May cause respiratory irritation  
H410 - Very toxic to aquatic life with long lasting effects

**Precautionary Statements**

P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P273 - Avoid release to the environment

**2.3. Other hazards**

No information available.

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

| Component                                       | CAS-No  | EC-No.            | Weight % | CLP Classification - Regulation (EC) No 1272/2008                                                                     | DSD Classification - 67/548/EEC |
|-------------------------------------------------|---------|-------------------|----------|-----------------------------------------------------------------------------------------------------------------------|---------------------------------|
| 2-Cyclohexen-1-one, 3-methyl-6-(1-methylethyl)- | 89-81-6 | EEC No. 201-942-7 | >95      | Skin Irrit. 2 (H315)<br>Eye Irrit. 2 (H319)<br>STOT SE 3 (H335)<br>Aquatic Chronic 1 (H410)<br>Aquatic Acute 1 (H400) | Xi; R36/37/38<br>N; R50/53      |

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

**SECTION 4: FIRST AID MEASURES****4.1. Description of first aid measures****General Advice**

If symptoms persist, call a physician.

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

**Ingestion**

Clean mouth with water and drink afterwards plenty of water.

**Inhalation** Move to fresh air. If breathing is difficult, give oxygen. Obtain medical attention.

**Protection of First-aiders** Use personal protective equipment.

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

None reasonably foreseeable.

**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**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

No information available.

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

Do not allow run-off from fire fighting to enter drains or water courses.

**Hazardous Combustion Products**

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**

Use personal protective equipment. Ensure adequate ventilation.

**6.2. Environmental precautions**

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

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

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

**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.

**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

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

#### 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.

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

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

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

### 8.2. Exposure controls

#### Engineering Measures

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** Goggles (European standard - EN 166)

**Hand Protection** Protective gloves

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

**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 compatibility, 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.

|                                        |                                                                                                                                                                                   |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Respiratory Protection</b>          | No protective equipment is needed under normal use conditions.                                                                                                                    |
| <b>Large scale/emergency use</b>       | Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced..                             |
| <b>Small scale/Laboratory use</b>      | Maintain adequate ventilation                                                                                                                                                     |
| <b>Hygiene Measures</b>                | Handle in accordance with good industrial hygiene and safety practice.                                                                                                            |
| <b>Environmental exposure controls</b> | Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained. |

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

|                                                |                           |                                          |
|------------------------------------------------|---------------------------|------------------------------------------|
| <b>Appearance</b>                              | Pale yellow               |                                          |
| <b>Physical State</b>                          | Liquid.                   |                                          |
| <b>Odor</b>                                    | No information available  |                                          |
| <b>Odor Threshold</b>                          | No data available         |                                          |
| <b>pH</b>                                      | No information available. |                                          |
| <b>Melting Point/Range</b>                     | No data available         |                                          |
| <b>Softening Point</b>                         | No data available         |                                          |
| <b>Boiling Point/Range</b>                     | No information available. |                                          |
| <b>Flash Point</b>                             | No information available. | <b>Method -</b> No information available |
| <b>Evaporation Rate</b>                        | No data available         |                                          |
| <b>Flammability (solid,gas)</b>                | Not applicable            | Liquid                                   |
| <b>Explosion Limits</b>                        | No data available.        |                                          |
| <b>Vapor Pressure</b>                          | No data available         |                                          |
| <b>Vapor Density</b>                           | No data available         | (Air = 1.0)                              |
| <b>Specific Gravity / Density</b>              | No data available         |                                          |
| <b>Bulk Density</b>                            | Not applicable            | Liquid                                   |
| <b>Water Solubility</b>                        | No information available  |                                          |
| <b>Solubility in other solvents</b>            | No information available  |                                          |
| <b>Partition Coefficient (n-octanol/water)</b> |                           |                                          |
| <b>Autoignition Temperature</b>                | No data available         |                                          |
| <b>Decomposition temperature</b>               | No data available         |                                          |
| <b>Viscosity</b>                               | No data available         |                                          |
| <b>Explosive Properties</b>                    | No information available  |                                          |
| <b>Oxidizing Properties</b>                    | No information available  |                                          |

### 9.2. Other information

|                          |           |
|--------------------------|-----------|
| <b>Molecular Formula</b> | C10 H16 O |
| <b>Molecular Weight</b>  | 152.24    |

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

None known, based on information available.

**SECTION 10: STABILITY AND REACTIVITY****10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions****Hazardous Polymerization**

No information available

**Hazardous Reactions**

None under normal processing.

**10.4. Conditions to avoid**

Incompatible products, Excess heat.

**10.5. Incompatible materials**

Strong oxidizing agents.

**10.6. Hazardous decomposition products**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**

Based on available data, the classification criteria are not met

**Dermal**

No data available

**Inhalation**

No data available

| Component                                       | LD50 Oral          | LD50 Dermal | LC50 Inhalation |
|-------------------------------------------------|--------------------|-------------|-----------------|
| 2-Cyclohexen-1-one, 3-methyl-6-(1-methylethyl)- | 2450 mg/kg ( Rat ) |             |                 |

**(b) skin corrosion/irritation;**

Category 2

**(c) serious eye damage/irritation;**

Category 2

**(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 3

**(i) STOT-repeated exposure;**

No data available

**Target Organs**

No information available

**(j) aspiration hazard;**

No data available

**Other Adverse Effects**

The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information

**Symptoms / effects, both acute and delayed**

No information available.

**SECTION 12: ECOLOGICAL INFORMATION****12.1. Toxicity****Ecotoxicity effects**

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

**12.2. Persistence and degradability****Degradation in sewage treatment plant**

Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

**12.3. Bioaccumulative potential**

No information available.

**12.4. Mobility in soil**

No information available.

**12.5. Results of PBT and vPvB assessment**

No data available for assessment

**12.6. Other adverse effects****Endocrine Disruptor Information**

This product does not contain any known or suspected endocrine disruptors

**Persistent Organic Pollutant**

This product does not contain any known or suspected substance

**Ozone Depletion Potential**

This product does not contain any known or suspected substance

**SECTION 13: DISPOSAL CONSIDERATIONS****13.1. Waste treatment methods****Waste from Residues / Unused Products**

Should not be released into the environment. 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**

Do not dispose of waste into sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Do not let this chemical enter the environment.

**SECTION 14: TRANSPORT INFORMATION****IMDG/IMO****14.1. UN number**

UN3082

**14.2. UN proper shipping name**

Environmentally hazardous substance, liquid, n.o.s

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

9

**14.4. Packing group**

III

**ADR****14.1. UN number**

UN3082

**14.2. UN proper shipping name**

Environmentally hazardous substance, liquid, n.o.s

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

9

**14.4. Packing group**

III

**IATA**

Piperitone

|                                                                                      |                                                                                                          |
|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| <b>14.1. UN number</b>                                                               | UN3082                                                                                                   |
| <b>14.2. UN proper shipping name</b>                                                 | Environmentally hazardous substance, liquid, n.o.s                                                       |
| <b>14.3. Transport hazard class(es)</b>                                              | 9                                                                                                        |
| <b>14.4. Packing group</b>                                                           | III                                                                                                      |
| <b>14.5. Environmental hazards</b>                                                   | Dangerous for the environment<br>Product is a marine pollutant according to the criteria set by IMDG/IMO |
| <b>14.6. Special precautions for user</b>                                            | No special precautions required                                                                          |
| <b>14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | 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 |
|-------------------------------------------------|-----------|--------|-----|------|-----|------|-------|------|-------|------|------|
| 2-Cyclohexen-1-one, 3-methyl-6-(1-methylethyl)- | 201-942-7 | -      |     | X    | X   | -    | X     | X    | X     | X    | -    |

### National Regulations

| Component                                       | Germany - Water Classification (VwVwS) | Germany - TA-Luft Class |
|-------------------------------------------------|----------------------------------------|-------------------------|
| 2-Cyclohexen-1-one, 3-methyl-6-(1-methylethyl)- | WGK 1                                  |                         |

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

Take note of Dir 94/33/EC on the protection of young people at work

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

### 15.2. Chemical safety assessment

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

## SECTION 16: OTHER INFORMATION

### Full text of R-phrases referred to under sections 2 and 3

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

R36/37/38 - Irritating to eyes, respiratory system and skin

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

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

### 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 Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**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

**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

**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

#### Key literature references and sources for data

Suppliers safety data sheet,

Chemadvisor - LOLI,

Merck index,

RTECS

#### Training Advice

Chemical incident response training.

**Creation Date** 04-Apr-2014

**Revision Date** 04-Apr-2014

**Revision Summary** Not applicable

**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**

#### Disclaimer

The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

**End of Safety Data Sheet**