

## SAFETY DATA SHEET

Creation Date 10-May-2010

Revision Date 19-Nov-2019

Revision Number 7

### 1. Identification

**Product Name** Hexanal, stabilized

**Cat No. :** AC151850000; AC151850010; AC151850020; AC151850025;  
AC151855000

**CAS-No** 66-25-1  
**Synonyms** Caproaldehyde; Hexaldehyde

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.  
**Details of the supplier of the safety data sheet**

**Company**  
Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

**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

### 2. Hazard(s) identification

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|                                   |            |
|-----------------------------------|------------|
| Flammable liquids                 | Category 3 |
| Skin Corrosion/Irritation         | Category 2 |
| Serious Eye Damage/Eye Irritation | Category 2 |

**Label Elements**

**Signal Word**  
Warning

**Hazard Statements**  
Flammable liquid and vapor  
Causes skin irritation  
Causes serious eye irritation

**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
 Wear protective gloves/protective clothing/eye protection/face protection  
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
 Keep container tightly closed  
 Ground/bond container and receiving equipment  
 Use explosion-proof electrical/ventilating/lighting/equipment  
 Use only non-sparking tools  
 Take precautionary measures against static discharge

**Skin**

If skin irritation occurs: Get medical advice/attention  
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
 Wash contaminated clothing before reuse

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 If eye irritation persists: Get medical advice/attention

**Fire**

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

**Storage**

Store in a well-ventilated place. Keep cool

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

### 3. Composition/Information on Ingredients

| Component  | CAS-No  | Weight % |
|--|---------|----------|
| Hexaldehyde  | 66-25-1 | <=100    |
| 2H-1-Benzopyran-6-ol,<br>3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltri<br>decyl)-, [2R-[2R*(4R*,8R*)]]- | 59-02-9 | 0.05     |

### 4. First-aid measures

|                       |   |
|-----------------------|---|
| <b>General Advice</b> | If symptoms persist, call a physician.  |
| <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>Inhalation</b>     | Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.      |
| <b>Ingestion</b>      | Clean mouth with water and drink afterwards plenty of water.  |

|  |   |
|--|---|
| <b>Most important symptoms and effects</b> | . Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting |
| <b>Notes to Physician</b>                  | Treat symptomatically   |

## 5. Fire-fighting measures

|   |   |
|---|---|
| <b>Suitable Extinguishing Media</b>     | Carbon dioxide (CO <sub>2</sub> ). Dry chemical. Chemical foam. Water mist may be used to cool closed containers. |
| <b>Unsuitable Extinguishing Media</b>   | No information available  |
| <b>Flash Point</b>                      | 32 °C / 89.6 °F   |
| <b>Method -</b>                         | No information available  |
| <b>Autoignition Temperature</b>         | 220 °C / 428 °F   |
| <b>Explosion Limits</b>                 |   |
| <b>Upper</b>                            | No data available   |
| <b>Lower</b>                            | No data available   |
| <b>Sensitivity to Mechanical Impact</b> | No information available  |
| <b>Sensitivity to Static Discharge</b>  | No information available  |

### Specific Hazards Arising from the Chemical

Flammable. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Vapors may form explosive mixtures with air.

### Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

### Protective Equipment and Precautions for Firefighters

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

### NFPA

| Health | Flammability | Instability | Physical hazards |
|--------|--------------|-------------|------------------|
| 2      | 2            | 0           | N/A              |

## 6. Accidental release measures

|   |   |
|---|---|
| <b>Personal Precautions</b>                 | Ensure adequate ventilation. Use personal protective equipment as required. Remove all sources of ignition. Take precautionary measures against static discharges.            |
| <b>Environmental Precautions</b>            | Should not be released into the environment. Do not flush into surface water or sanitary sewer system.  |
| <b>Methods for Containment and Clean Up</b> | Keep in suitable, closed containers for disposal. Soak up with inert absorbent material. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. |

## 7. Handling and storage

|                 |   |
|-----------------|---|
| <b>Handling</b> | Ensure adequate ventilation. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Take precautionary measures against static discharges. |
| <b>Storage</b>  | Flammables area. Keep away from heat, sparks and flame. Keep containers tightly closed in a dry, cool and well-ventilated place. Containers should be dated when opened and tested periodically for the presence of peroxides.  |

## 8. Exposure controls / personal protection

|                                      |   |
|--------------------------------------|---|
| <b>Exposure Guidelines</b>           | This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.   |
| <b>Engineering Measures</b>          | Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment.                                  |
| <b>Personal Protective Equipment</b> |   |
| <b>Eye/face Protection</b>           | Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.   |
| <b>Skin and body protection</b>      | Wear appropriate protective gloves and clothing to prevent skin exposure.   |
| <b>Respiratory Protection</b>        | 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. |
| <b>Hygiene Measures</b>              | Handle in accordance with good industrial hygiene and safety practice.  |

## 9. Physical and chemical properties

|   |  |
|---|--|
| <b>Physical State</b>                         | Liquid                                   |
| <b>Appearance</b>                             | Clear                                    |
| <b>Odor</b>                                   | pungent                                  |
| <b>Odor Threshold</b>                         | No information available                 |
| <b>pH</b>                                     | 4-5 4.8 g/l aq. sol                      |
| <b>Melting Point/Range</b>                    | -56 °C / -68.8 °F                        |
| <b>Boiling Point/Range</b>                    | 130 - 131 °C / 266 - 267.8 °F @ 760 mmHg |
| <b>Flash Point</b>                            | 32 °C / 89.6 °F                          |
| <b>Evaporation Rate</b>                       | No information available                 |
| <b>Flammability (solid,gas)</b>               | Not applicable                           |
| <b>Flammability or explosive limits</b>       |  |
| <b>Upper</b>                                  | No data available                        |
| <b>Lower</b>                                  | No data available                        |
| <b>Vapor Pressure</b>                         | 10.5 mmHg @ 20 °C                        |
| <b>Vapor Density</b>                          | 3.45 (Air = 1.0)                         |
| <b>Specific Gravity</b>                       | 0.815                                    |
| <b>Solubility</b>                             | No information available                 |
| <b>Partition coefficient; n-octanol/water</b> | No data available                        |
| <b>Autoignition Temperature</b>               | 220 °C / 428 °F                          |
| <b>Decomposition Temperature</b>              | No information available                 |
| <b>Viscosity</b>                              | 0.69 mPa s at 20 °C                      |
| <b>Molecular Formula</b>                      | C6 H12 O                                 |
| <b>Molecular Weight</b>                       | 100.16                                   |

## 10. Stability and reactivity

|                               |   |
|-------------------------------|---|
| <b>Reactive Hazard</b>        | None known, based on information available  |
| <b>Stability</b>              | Stable under normal conditions. May form explosive peroxides on prolonged storage.                        |
| <b>Conditions to Avoid</b>    | Keep away from open flames, hot surfaces and sources of ignition. Exposure to air. Incompatible products. |
| <b>Incompatible Materials</b> | Strong bases, Strong oxidizing agents, Ammonia, Amines  |

**Hazardous Decomposition Products** Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

### Acute Toxicity

#### Product Information

The toxicological properties have not been fully investigated

#### Oral LD50

Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

#### Dermal LD50

Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

#### Vapor LC50

Based on ATE data, the classification criteria are not met. ATE > 20 mg/l.

#### Component Information

| Component   | LD50 Oral                 | LD50 Dermal | LC50 Inhalation |
|---|---------------------------|-------------|-----------------|
| Hexaldehyde   | LD50 = 4890 mg/kg ( Rat ) | Not listed  | Not listed      |
| 2H-1-Benzopyran-6-ol, 3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-, [2R-[2R*(4R*,8R*)]]- | LD50 > 7000 mg/kg ( Rat ) | Not listed  | Not listed      |

**Toxicologically Synergistic Products** No information available

#### Products

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Irritation** Irritating to eyes and skin

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component   | CAS-No  | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|---|---------|------------|------------|------------|------------|------------|
| Hexaldehyde   | 66-25-1 | Not listed | Not listed | Not listed | Not listed | Not listed |
| 2H-1-Benzopyran-6-ol, 3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-, [2R-[2R*(4R*,8R*)]]- | 59-02-9 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** None known

**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

Contains a substance which is: Harmful to aquatic organisms. Do not empty into drains. Do not flush into surface water or sanitary

sewer system. Do not allow material to contaminate ground water system. The product contains following substances which are hazardous for the environment.

| Component   | Freshwater Algae | Freshwater Fish  | Microtox   | Water Flea |
|-------------|------------------|--|------------|------------|
| Hexaldehyde | Not listed       | LC50: 12 - 16.5 mg/L, 96h flow-through (Pimephales promelas) | Not listed | Not listed |

**Persistence and Degradability** Persistence is unlikely

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

| Component   | log Pow |
|-------------|---------|
| Hexaldehyde | 1.78    |

### 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

#### DOT

UN-No UN1207  
 Proper Shipping Name HEXALDEHYDE  
 Hazard Class 3  
 Packing Group III

#### TDG

UN-No UN1207  
 Proper Shipping Name HEXALDEHYDE  
 Hazard Class 3  
 Packing Group III

#### IATA

UN-No UN1207  
 Proper Shipping Name HEXALDEHYDE  
 Hazard Class 3  
 Packing Group III

#### IMDG/IMO

UN-No UN1207  
 Proper Shipping Name HEXALDEHYDE  
 Hazard Class 3  
 Packing Group III

### 15. Regulatory information

#### United States of America Inventory

| Component   | CAS-No  | TSCA | TSCA Inventory notification - Active/Inactive | TSCA - EPA Regulatory Flags |
|---|---------|------|---|-----------------------------|
| Hexaldehyde   | 66-25-1 | X    | ACTIVE  | -                           |
| 2H-1-Benzopyran-6-ol, 3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-, [2R-[2R*(4R*,8R*)]]- | 59-02-9 | X    | ACTIVE  | -                           |

#### Legend:

**TSCA** - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

**International Inventories**

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

| Component   | CAS-No  | DSL | NDSL | EINECS    | PICCS | ENCS | AICS | IECSC | KECL     |
|---|---------|-----|------|-----------|-------|------|------|-------|----------|
| Hexaldehyde   | 66-25-1 | X   | -    | 200-624-5 | X     | X    | X    | X     | KE-18623 |
| 2H-1-Benzopyran-6-ol,<br>3,4-dihydro-2,5,7,8-tetramethyl-2-(<br>4,8,12-trimethyltridecyl)-,<br>[2R-[2R*(4R*,8R*)]]- | 59-02-9 | X   | -    | 200-412-2 | X     | X    | X    | X     | KE-10750 |

**U.S. Federal Regulations**

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

| Component   | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|-------------|---------------|------------|--------------|----------|--------------|
| Hexaldehyde | X             | X          | X            | -        | -            |

**U.S. Department of Transportation**Reportable Quantity (RQ): N  
DOT Marine Pollutant N  
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security This product does not contain any DHS chemicals.

**Other International Regulations**

Mexico - Grade No information available

**16. Other information**Prepared By Regulatory Affairs  
Thermo Fisher Scientific  
Email: EMSDS.RA@thermofisher.com

Creation Date 10-May-2010

Revision Date 19-Nov-2019

Print Date 19-Nov-2019

Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**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 SDS**