

**SECTION 1: Identification****1.1. Identification**

|                |                           |
|----------------|---------------------------|
| Product form   | : Substance               |
| Substance name | : 3,5,5-Trimethyl hexenal |
| CAS-No.        | : 5435-64-3               |
| Product code   | : (US) W0239              |
| Formula        | : C9H18O                  |
| Synonyms       | : 3,5,5-Trimethylhexanal  |

**1.2. Recommended use and restrictions on use**

No additional information available

**1.3. Supplier**

Synerzine  
5340 Hwy 42 S  
Ellenwood, Georgia 30294 - USA  
T 404-524-6744 - F 404-577-1651  
[info@synerzine.com](mailto:info@synerzine.com) - [www.synerzine.com](http://www.synerzine.com)

**1.4. Emergency telephone number**

Emergency number : Infotrac 1-800-535-5053 (Contract# 102471) Dial +1-352-323-3500 when outside the US

**SECTION 2: Hazard(s) identification****2.1. Classification of the substance or mixture****GHS-US classification**

|  |      |   |
|--|------|---|
| Flammable liquids Category 3                                     | H226 | Flammable liquid and vapour                       |
| Skin corrosion/irritation Category 2                             | H315 | Causes skin irritation                            |
| Skin sensitization, Category 1                                   | H317 | May cause an allergic skin reaction               |
| Hazardous to the aquatic environment - Acute Hazard Category 3   | H402 | Harmful to aquatic life                           |
| Hazardous to the aquatic environment - Chronic Hazard Category 3 | H412 | Harmful to aquatic life with long lasting effects |

Full text of H statements : see section 16

**2.2. GHS Label elements, including precautionary statements****GHS-US labeling**

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Warning

Hazard statements (GHS-US) :

H226 - Flammable liquid and vapour  
H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H402 - Harmful to aquatic life  
H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (GHS-US) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking, heat, hot surfaces, open flames, sparks  
P233 - Keep container tightly closed.  
P240 - Ground/Bond container and receiving equipment  
P241 - Use explosion-proof ventilating, lighting, electrical equipment  
P242 - Use only non-sparking tools.  
P243 - Take precautionary measures against static discharge.

# 3,5,5-Trimethyl hexenal

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P261 - Avoid breathing fume, gas, mist, spray, vapors.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P272 - Contaminated work clothing must not be allowed out of the workplace  
P273 - Avoid release to the environment.  
P280 - Wear eye protection, face protection, protective clothing, protective gloves.  
P302+P352 - If on skin: Wash with plenty of soap and water  
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
P321 - Specific treatment (see supplemental first aid instructions on this label)  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.  
P362 - Take off contaminated clothing and wash before reuse.  
P362+P364 - Take off contaminated clothing and wash it before reuse.  
P370+P378 - In case of fire: Use alcohol resistant foam, carbon dioxide (CO<sub>2</sub>), dry sand to extinguish.  
P403+P235 - Store in a well-ventilated place. Keep cool.  
P501 - Dispose of contents/container to an approved waste disposal plant

### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

| Name  | Product identifier  | %        | GHS-US classification   |
|---|---------------------|----------|---|
| 3,5,5-Trimethyl hexenal<br>(Main constituent) | (CAS-No.) 5435-64-3 | 90 - 100 | Flam. Liq. 3, H226<br>Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Aquatic Acute 3, H402<br>Aquatic Chronic 3, H412 |

Full text of hazard classes and H-statements : see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.  
First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.  
First-aid measures after eye contact : Rinse eyes with water as a precaution.  
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

### 5.2. Specific hazards arising from the chemical

Fire hazard : Flammable liquid and vapour.  
Reactivity : Flammable liquid and vapour.

### 5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

# 3,5,5-Trimethyl hexenal

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 6: Accidental release measures

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

##### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Avoid breathing fume, gas, mist, spray, vapors.

##### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

#### 6.2. Environmental precautions

Avoid release to the environment.

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

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing fume, gas, mist, spray, vapors.

Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

#### 8.3. Individual protection measures/Personal protective equipment

##### Hand protection:

Protective gloves

##### Eye protection:

Safety glasses

##### Skin and body protection:

Wear suitable protective clothing

##### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

# 3,5,5-Trimethyl hexenal

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 9: Physical and chemical properties

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

|   |  |
|---|--|
| Physical state                              | : Liquid                                     |
| Appearance                                  | : A clear liquid.                            |
| Color                                       | : clear                                      |
| Odor  | : grassy                                     |
| Odor threshold                              | : No data available                          |
| pH  | : No data available                          |
| Melting point                               | : Not applicable                             |
| Freezing point                              | : No data available                          |
| Boiling point                               | : 167 °C                                     |
| Flash point                                 | : 93 °F TCC                                  |
| Relative evaporation rate (butyl acetate=1) | : No data available                          |
| Flammability (solid, gas)                   | : Not applicable.                            |
| Vapor pressure                              | : No data available                          |
| Relative vapor density at 20 °C             | : No data available                          |
| Relative density                            | : No data available                          |
| Specific gravity / density                  | : 0.818 - 0.822 g/cm <sup>3</sup> (at 20 °C) |
| Molecular mass                              | : 142.24 g/mol                               |
| Solubility                                  | : Water: < 0.1 g/l (at 20 °C)                |
| Log Pow                                     | : No data available                          |
| Auto-ignition temperature                   | : 245 °C                                     |
| Decomposition temperature                   | : No data available                          |
| Viscosity, kinematic                        | : No data available                          |
| Viscosity, dynamic                          | : No data available                          |
| Explosion limits                            | : No data available                          |
| Explosive properties                        | : No data available                          |
| Oxidizing properties                        | : No data available                          |

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Flammable liquid and vapour.

#### 10.2. Chemical stability

Stable under normal conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

#### 10.5. Incompatible materials

No additional information available

#### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

#### 3,5,5-Trimethyl hexenal (5435-64-3)

|               |              |
|---------------|--------------|
| LD50 oral rat | > 2000 mg/kg |
|---------------|--------------|

# 3,5,5-Trimethyl hexenal

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 3,5,5-Trimethyl hexenal (5435-64-3)

|  |  |
|--|--|
| ATE US (oral)                                      | 3240 mg/kg body weight                             |
| Skin corrosion/irritation                          | : Causes skin irritation.                          |
| Serious eye damage/irritation                      | : Not classified                                   |
| Respiratory or skin sensitization                  | : May cause an allergic skin reaction.             |
| Germ cell mutagenicity                             | : Not classified                                   |
| Carcinogenicity                                    | : Not classified                                   |
| Reproductive toxicity                              | : Not classified                                   |
| Specific target organ toxicity – single exposure   | : Not classified                                   |
| Specific target organ toxicity – repeated exposure | : Not classified                                   |
| Aspiration hazard                                  | : Not classified                                   |
| Symptoms/effects after skin contact                | : Irritation. May cause an allergic skin reaction. |

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Harmful to aquatic life with long lasting effects. Harmful to aquatic life.

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Additional information : Flammable vapors may accumulate in the container.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

|                                |   |
|--------------------------------|---|
| Transport document description | : UN1989 Aldehydes, n.o.s., 3, III                              |
| UN-No.(DOT)                    | : UN1989  |
| Proper Shipping Name (DOT)     | : Aldehydes, n.o.s.   |
| Class (DOT)                    | : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120 |
| Packing group (DOT)            | : III - Minor Danger  |
| Hazard labels (DOT)            | : 3 - Flammable liquid  |



|   |       |
|---|-------|
| DOT Packaging Non Bulk (49 CFR 173.xxx) | : 203 |
| DOT Packaging Bulk (49 CFR 173.xxx)     | : 242 |

# 3,5,5-Trimethyl hexenal

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

|  |   |
|--|---|
| DOT Special Provisions (49 CFR 172.102)                          | : B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.<br>IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).<br>T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)<br>TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.<br>TP29 - A portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the MAWP of the hazardous materials, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP. |
| DOT Packaging Exceptions (49 CFR 173.xxx)                        | : 150   |
| DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) | : 60 L  |
| DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)     | : 220 L   |
| DOT Vessel Stowage Location                                      | : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.   |
| Other information  | : No supplementary information available.   |

### Transportation of Dangerous Goods

#### Transport by sea

|                                       |  |
|---------------------------------------|--|
| Transport document description (IMDG) | : UN 1989 ALDEHYDES, N.O.S., 3, III      |
| UN-No. (IMDG)                         | : 1989                                   |
| Proper Shipping Name (IMDG)           | : ALDEHYDES, N.O.S.                      |
| Class (IMDG)                          | : 3 - Flammable liquids                  |
| Packing group (IMDG)                  | : III - substances presenting low danger |
| Limited quantities (IMDG)             | : 5 L                                    |

#### Air transport

|                                       |                                     |
|---------------------------------------|-------------------------------------|
| Transport document description (IATA) | : UN 1989 Aldehydes, n.o.s., 3, III |
| UN-No. (IATA)                         | : 1989                              |
| Proper Shipping Name (IATA)           | : Aldehydes, n.o.s.                 |
| Class (IATA)                          | : 3 - Flammable Liquids             |
| Packing group (IATA)                  | : III - Minor Danger                |

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### 3,5,5-Trimethyl hexenal (5435-64-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

#### CANADA

#### 3,5,5-Trimethyl hexenal (5435-64-3)

Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

#### 3,5,5-Trimethyl hexenal (5435-64-3)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

#### National regulations

# 3,5,5-Trimethyl hexenal

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 3,5,5-Trimethyl hexenal (5435-64-3)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Japanese ISHL (Industrial Safety and Health Law)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on the TCSI (Taiwan Chemical Substance Inventory)

### 15.3. US State regulations

No additional information available

## SECTION 16: Other information

Full text of H-phrases:

|      |   |
|------|---|
| H226 | Flammable liquid and vapour                       |
| H315 | Causes skin irritation                            |
| H317 | May cause an allergic skin reaction               |
| H402 | Harmful to aquatic life                           |
| H412 | Harmful to aquatic life with long lasting effects |

NFPA health hazard

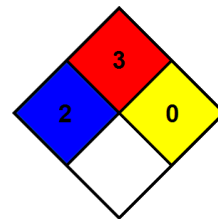
: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard

: 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

NFPA reactivity

: 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health

: 2 Moderate Hazard - Temporary or minor injury may occur

Flammability

: 3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 F and boiling points above 100 F. as well as liquids with flash points between 73 F and 100 F. (Classes IB & IC)

Physical

: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection

: C

C - Safety glasses, Gloves, Synthetic apron

Synergize US

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*