

## SAFETY DATA SHEET

Creation Date 19-May-2010

Revision Date 22-May-2017

Revision Number 3

### 1. Identification

**Product Name** Acetophenone  
**Cat No. :** A22-500  
**Synonyms** Methyl Phenyl Ketone; 1-Phenylethanone; Hypnone (Certified)  
**Recommended Use** Laboratory chemicals.  
**Uses advised against** Not for 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

##### Emergency Telephone Number

CHEMTREC®, Inside the USA: 800-424-9300  
CHEMTREC®, Outside the USA: 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 4 |
| Acute oral toxicity               | Category 4 |
| Serious Eye Damage/Eye Irritation | Category 2 |

#### Label Elements

##### **Signal Word**

Warning

##### **Hazard Statements**

Combustible liquid  
Harmful if swallowed  
Causes serious eye irritation



#### **Precautionary Statements**

**Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
 Do not eat, drink or smoke when using this product  
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
 Wear protective gloves/protective clothing/eye protection/face protection

**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

**Ingestion**

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
 Rinse mouth

**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 % |
|--------------|---------|----------|
| Acetophenone | 98-86-2 | >95      |

### 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. Obtain medical attention.                         |
| <b>Skin Contact</b>                    | Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.   |
| <b>Inhalation</b>                      | Move to fresh air. If breathing is difficult, give oxygen. Obtain medical attention.   |
| <b>Ingestion</b>                       | Clean mouth with water and drink afterwards plenty of water.   |
| <b>Most important symptoms/effects</b> | None reasonably foreseeable. . Breathing difficulties. 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>   | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Cool closed containers exposed to fire with water spray. |
| <b>Unsuitable Extinguishing Media</b> | No information available  |
| <b>Flash Point</b>                    | 77 °C / 170.6 °F  |
| <b>Method -</b>                       | No information available  |
| <b>Autoignition Temperature</b>       | 535 °C / 995 °F   |
| <b>Explosion Limits</b>               |   |
| <b>Upper</b>                          | 6.7 vol %   |
| <b>Lower</b>                          | 1.1 vol %   |

**Sensitivity to Mechanical Impact** No information available  
**Sensitivity to Static Discharge** No information available

#### Specific Hazards Arising from the Chemical

Combustible material. Containers may explode when heated. Keep product and empty container away from heat and sources of ignition. Risk of ignition.

#### 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

|                    |                          |                         |                                |
|--------------------|--------------------------|-------------------------|--------------------------------|
| <b>Health</b><br>2 | <b>Flammability</b><br>2 | <b>Instability</b><br>0 | <b>Physical hazards</b><br>N/A |
|--------------------|--------------------------|-------------------------|--------------------------------|

### 6. Accidental release measures

**Personal Precautions** Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.

**Environmental Precautions** Should not be released into the environment. See Section 12 for additional ecological information.

**Methods for Containment and Clean Up** Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition.

### 7. Handling and storage

**Handling** Wear personal protective equipment. Ensure adequate ventilation. 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.

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition.

### 8. Exposure controls / personal protection

#### Exposure Guidelines

| Component    | ACGIH TLV   | OSHA PEL | NIOSH IDLH | Mexico OEL (TWA) |
|--------------|-------------|----------|------------|------------------|
| Acetophenone | TWA: 10 ppm |          |            |                  |

#### Legend

ACGIH - American Conference of Governmental Industrial Hygienists

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

#### Personal Protective Equipment

**Eye/face Protection** Tightly fitting safety goggles. Face-shield.

**Skin and body protection** Long sleeved clothing.

**Respiratory Protection** 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.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

|   |                              |
|---|------------------------------|
| <b>Physical State</b>                         | Liquid                       |
| <b>Appearance</b>                             | Light yellow                 |
| <b>Odor</b>                                   | aromatic                     |
| <b>Odor Threshold</b>                         | No information available     |
| <b>pH</b>                                     | No information available     |
| <b>Melting Point/Range</b>                    | 19.6 °C / 67.3 °F            |
| <b>Boiling Point/Range</b>                    | 202 °C / 395.6 °F @ 760 mmHg |
| <b>Flash Point</b>                            | 77 °C / 170.6 °F             |
| <b>Evaporation Rate</b>                       | No information available     |
| <b>Flammability (solid,gas)</b>               | Not applicable               |
| <b>Flammability or explosive limits</b>       |                              |
| Upper   | 6.7 vol %                    |
| Lower   | 1.1 vol %                    |
| <b>Vapor Pressure</b>                         | 1.3 mbar @ 20°C              |
| <b>Vapor Density</b>                          | No information available     |
| <b>Specific Gravity</b>                       | 1.028                        |
| <b>Solubility</b>                             | Soluble in water             |
| <b>Partition coefficient; n-octanol/water</b> | No data available            |
| <b>Autoignition Temperature</b>               | 535 °C / 995 °F              |
| <b>Decomposition Temperature</b>              | No information available     |
| <b>Viscosity</b>                              | 1.8 mPa.s at 20 °C           |
| <b>Molecular Formula</b>                      | C8 H8 O                      |
| <b>Molecular Weight</b>                       | 120.15                       |

## 10. Stability and reactivity

|   |   |
|---|---|
| <b>Reactive Hazard</b>                  | None known, based on information available  |
| <b>Stability</b>                        | Stable under normal conditions.   |
| <b>Conditions to Avoid</b>              | Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition. |
| <b>Incompatible Materials</b>           | Strong oxidizing agents   |
| <b>Hazardous Decomposition Products</b> | Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> )   |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.  |
| <b>Hazardous Reactions</b>              | None under normal processing.   |

## 11. Toxicological information

### Acute Toxicity

#### Product Information

#### Component Information

| Component    | LD50 Oral                              | LD50 Dermal        | LC50 Inhalation |
|--------------|--|--------------------|-----------------|
| Acetophenone | 900 mg/kg ( Rat )<br>815 mg/kg ( Rat ) | 3300 mg/kg ( Rat ) | Not listed      |

**Toxicologically Synergistic Products** No information available

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

|                      |                          |
|----------------------|--------------------------|
| <b>Irritation</b>    | Irritating to eyes       |
| <b>Sensitization</b> | 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     |
|--------------|---------|------------|------------|------------|------------|------------|
| Acetophenone | 98-86-2 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** Not mutagenic in AMES Test

**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** See actual entry in RTECS for complete information.

## 12. Ecological information

### Ecotoxicity

| Component    | Freshwater Algae | Freshwater Fish                        | Microtox                | Water Flea          |
|--------------|------------------|--|-------------------------|---------------------|
| Acetophenone | Not listed       | Brachydanio rerio: LC50 = 155 mg/L 96h | EC50 = 15.5 mg/L 15 min | EC50 = 162 mg/L 48h |

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

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

| Component    | log Pow |
|--------------|---------|
| Acetophenone | 1.7     |

## 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.

| Component              | RCRA - U Series Wastes | RCRA - P Series Wastes |
|------------------------|------------------------|------------------------|
| Acetophenone - 98-86-2 | U004                   | -                      |

## 14. Transport information

**DOT** Not regulated

**TDG** Not regulated

**IATA** Not regulated

**IMDG/IMO** Not regulated

## 15. Regulatory information

All of the components in the product are on the following Inventory lists: X = listed

### International Inventories

| Component    | TSCA | DSL | NDSL | EINECS    | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|--------------|------|-----|------|-----------|--------|-----|-------|------|------|-------|------|
| Acetophenone | X    | X   | -    | 202-708-7 | -      |     | X     | X    | X    | X     | X    |

## Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

## SARA 313

| Component    | CAS-No  | Weight % | SARA 313 - Threshold Values % |
|--------------|---------|----------|-------------------------------|
| Acetophenone | 98-86-2 | >95      | 1.0                           |

## SARA 311/312 Hazard Categories

|                                   |     |
|-----------------------------------|-----|
| Acute Health Hazard               | Yes |
| Chronic Health Hazard             | No  |
| Fire Hazard                       | Yes |
| Sudden Release of Pressure Hazard | No  |
| Reactive Hazard                   | No  |

CWA (Clean Water Act) Not applicable

## Clean Air Act

| Component    | HAPS Data | Class 1 Ozone Depletors | Class 2 Ozone Depletors |
|--------------|-----------|-------------------------|-------------------------|
| Acetophenone | X         |                         | -                       |

OSHA Occupational Safety and Health Administration

Not applicable

## CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Component    | Hazardous Substances RQs | CERCLA EHS RQs |
|--------------|--------------------------|----------------|
| Acetophenone | 5000 lb                  | -              |

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 |
|--------------|---------------|------------|--------------|----------|--------------|
| Acetophenone | X             | X          | 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** Moderate risk, Grade 2

**16. Other information**

|                         |   |
|-------------------------|---|
| <b>Prepared By</b>      | Regulatory Affairs<br>Thermo Fisher Scientific<br>Email: EMSDS.RA@thermofisher.com  |
| <b>Creation Date</b>    | 19-May-2010   |
| <b>Revision Date</b>    | 22-May-2017   |
| <b>Print Date</b>       | 22-May-2017   |
| <b>Revision Summary</b> | 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**