

## SAFETY DATA SHEET

Creation Date 01-May-2012

Revision Date 16-Jan-2019

Revision Number 4

### 1. Identification

**Product Name** Phenanthrene

**Cat No. :** AC130090000; AC130090050; AC130090500; AC130095000

**CAS-No** 85-01-8  
**Synonyms** No information available

**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)

Acute oral toxicity

Category 4

#### Label Elements

##### **Signal Word**

Warning

##### **Hazard Statements**

Harmful if swallowed



**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

**Ingestion**

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

Rinse mouth

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Very toxic to aquatic life with long lasting effects

### 3. Composition/Information on Ingredients

| Component    | CAS-No  | Weight % |
|--------------|---------|----------|
| Phenanthrene | 85-01-8 | >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. Get medical attention. |
| <b>Skin Contact</b>                        | Obtain medical attention. Wash off immediately with plenty of water for at least 15 minutes.                    |
| <b>Inhalation</b>                          | Move to fresh air. Obtain medical attention. If not breathing, give artificial respiration.                     |
| <b>Ingestion</b>                           | Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.           |
| <b>Most important symptoms and effects</b> | None reasonably foreseeable.  |
| <b>Notes to Physician</b>                  | Treat symptomatically   |

### 5. Fire-fighting measures

**Suitable Extinguishing Media** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Unsuitable Extinguishing Media** No information available

**Flash Point** No information available

**Method -** No information available

**Autoignition Temperature****Explosion Limits**

**Upper** No data available

**Lower** No data available

**Sensitivity to Mechanical Impact** No information available

**Sensitivity to Static Discharge** No information available

**Specific Hazards Arising from the Chemical**

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>)

**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>1 | <b>Flammability</b><br>1 | <b>Instability</b><br>0 | <b>Physical hazards</b><br>N/A |
|--------------------|--------------------------|-------------------------|--------------------------------|

**6. Accidental release measures**

**Personal Precautions** Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation.  
**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.

**Methods for Containment and Clean Up** Sweep up or vacuum up spillage and collect in suitable container for disposal. Keep in suitable, closed containers for disposal.

**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. Avoid dust formation.

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

**8. Exposure controls / personal protection**

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

| Component    | ACGIH TLV | OSHA PEL                   | NIOSH IDLH | Mexico OEL (TWA) |
|--------------|-----------|----------------------------|------------|------------------|
| Phenanthrene |           | TWA: 0.2 mg/m <sup>3</sup> |            |                  |

**Engineering Measures** Ensure adequate ventilation, especially in confined areas.

**Personal Protective Equipment**

**Eye/face Protection** 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.

**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>           | Solid                        |
| <b>Appearance</b>               | Beige                        |
| <b>Odor</b>                     | Odorless                     |
| <b>Odor Threshold</b>           | No information available     |
| <b>pH</b>                       | No information available     |
| <b>Melting Point/Range</b>      | 95 - 101 °C / 203 - 213.8 °F |
| <b>Boiling Point/Range</b>      | 336 °C / 636.8 °F            |
| <b>Flash Point</b>              | No information available     |
| <b>Evaporation Rate</b>         | Not applicable               |
| <b>Flammability (solid,gas)</b> | No information available     |

**Flammability or explosive limits**

|  |                          |
|--|--------------------------|
| Upper                                  | No data available        |
| Lower                                  | No data available        |
| Vapor Pressure                         | 1 mmHg @ 116 °C          |
| Vapor Density                          | Not applicable           |
| Specific Gravity                       | 1.063                    |
| Solubility                             | Insoluble in water       |
| Partition coefficient; n-octanol/water | No data available        |
| Autoignition Temperature               |                          |
| Decomposition Temperature              | No information available |
| Viscosity                              | Not applicable           |
| Molecular Formula                      | C14 H10                  |
| Molecular Weight                       | 178.23                   |

## 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. Avoid dust formation. |
| <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 |
|--------------|------------------|-------------|-----------------|
| Phenanthrene | 1.8 g/kg ( Rat ) | Not listed  | 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>      | No information available   |
| <b>Sensitization</b>   | No information available   |
| <b>Carcinogenicity</b> | The table below indicates whether each agency has listed any ingredient as a carcinogen. |

| Component    | CAS-No  | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|--------------|---------|------------|------------|------------|------------|------------|
| Phenanthrene | 85-01-8 | 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.

|                                 |            |
|---------------------------------|------------|
| <b>STOT - single exposure</b>   | None known |
| <b>STOT - repeated exposure</b> | None known |

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** No information available

**Endocrine Disruptor Information** No information available

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

## 12. Ecological information

### Ecotoxicity

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.

| Component    | Freshwater Algae | Freshwater Fish     | Microtox   | Water Flea           |
|--------------|------------------|---------------------|------------|----------------------|
| Phenanthrene | Not listed       | LC50 = 3.2 mg/L 96h | Not listed | LC50 = 0.35 mg/L 48h |

**Persistence and Degradability** May persist

**Bioaccumulation/ Accumulation** No information available.

**Mobility** . Is not likely mobile in the environment due its low water solubility.

| Component    | log Pow |
|--------------|---------|
| Phenanthrene | 4.5     |

## 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 UN3077  
 Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
 Hazard Class 9  
 Packing Group III

### TDG

UN-No UN3077  
 Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
 Hazard Class 9  
 Packing Group III

### IATA

UN-No UN3077  
 Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.\*  
 Hazard Class 9  
 Packing Group III

### IMDG/IMO

UN-No UN3077  
 Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
 Hazard Class 9  
 Packing Group III

## 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 |
|-----------|------|-----|------|--------|--------|-----|-------|------|------|-------|------|
|           |      |     |      |        |        |     |       |      |      |       |      |

|              |   |   |   |           |   |  |   |   |   |   |              |
|--------------|---|---|---|-----------|---|--|---|---|---|---|--------------|
| Phenanthrene | X | X | - | 201-581-5 | - |  | X | X | X | X | KE-2820<br>2 |
|--------------|---|---|---|-----------|---|--|---|---|---|---|--------------|

**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 % |
|--------------|---------|----------|-------------------------------|
| Phenanthrene | 85-01-8 | >95      | 1.0                           |

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

**CWA (Clean Water Act)**

| Component    | CWA - Hazardous Substances | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants |
|--------------|----------------------------|-----------------------------|------------------------|---------------------------|
| Phenanthrene | -                          | -                           | -                      | X                         |

Clean Air Act Not applicable

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 |
|--------------|--------------------------|----------------|
| Phenanthrene | 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 |
|--------------|---------------|------------|--------------|----------|--------------|
| Phenanthrene | 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** 01-May-2012  
**Revision Date** 16-Jan-2019  
**Print Date** 16-Jan-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**