SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form: Substance
Physical state: Solid
Substance name: GELEST BLACK IRON OXIDE HS
Product code: BIA-HSA
Synonyms: C.I. PIGMENT BLACK 11, CARBOXYETHYL SILANETRIOL, SODIUM SALT
Other means of identification: INCI NAME: IRON OXIDES, DISODIUM CARBOXYETHYL SILICONATE

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture: Pigment
Cosmetics, personal care products

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

GELEST, INC.
11 East Steel Road
Morrisville, PA 19067
USA
T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST
info@gelest.com - www.gelest.com

GELEST INC.
Fritz-Klatte-Strasse 8
65933 Frankfurt
Germany
T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM
info@gelestde.com - www.gelestde.com

1.4. Emergency telephone number

Emergency number: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Not classified

Adverse physicochemical, human health and environmental effects
No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]
EUH-statements: EUH210 - Safety data sheet available on request.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type: Multi-constituent
Name: GELEST BLACK IRON OXIDE HS
CAS-No.: 1317-61-9
EC-No.: 215-277-5
**GELEST BLACK IRON OXIDE HS**

Safety Data Sheet

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron oxide (Fe3O4)</td>
<td>[CAS-No.] 1317-61-9 [EC-No.] 215-277-5</td>
<td>98 - 99</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carboxyethylsilanetriol, disodium salt</td>
<td>[CAS-No.] 18191-40-7</td>
<td>1 - 2</td>
<td>Skin Irrit. 2, H315 Eye Irrit. 2, H319</td>
</tr>
</tbody>
</table>

Full text of 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 general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Wash with plenty of water/…. Get medical advice/attention.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Get medical advice/attention.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get medical advice/attention.

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

Symptoms/effects after inhalation : Inhalation causes coughing, sneezing and respiratory problems.

Symptoms/effects after skin contact : Skin contact may cause irritation due to mechanical action on sensitive skin.

Symptoms/effects after eye contact : Eye contact causes irritation due to mechanical action and secretion of tears.

Symptoms/effects after ingestion : Ingestion may cause stomach ache, vomiting and diarrhoea.

Chronic symptoms : Prolonged inhalation of iron oxide dust is known to produce a condition known as siderosis, a benign pneumoconiosis.

4.3. **Indication of any immediate medical attention and special treatment needed**

No additional information available

**SECTION 5: Firefighting measures**

5.1. **Extinguishing media**

Suitable extinguishing media : Non-combustible. Use an extinguishing agent suitable for the surrounding fire.

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

No additional information available

5.3. **Advice for firefighters**

Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

**SECTION 6: Accidental release measures**

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

6.1.1. **For non-emergency personnel**

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. **For emergency responders**

Protective equipment : Equip cleanup crew with proper protection.

6.2. **Environmental precautions**

Prevent entry to sewers and public waters.

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

Methods for cleaning up : Minimise generation of dust. Sweep or shovel spills into appropriate container for disposal. Provide ventilation system and use necessary personal protective equipment as described in "8. EXPOSURE CONTROLS AND PERSONAL PROTECTION".

6.4. **Reference to other sections**

See Heading 8. Exposure controls and personal protection.
SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Provide local exhaust or general room ventilation to minimize exposure to dust. Avoid contact with skin and eyes. Do not breathe dust.

Hygiene measures: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Keep container tightly closed. Keep in a clean and dry area in original unopened containers.


Storage area: Store away from heat.

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Iron oxide (Fe3O4) (1317-61-9)

<table>
<thead>
<tr>
<th>Country</th>
<th>ACGIH TWA (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy</td>
<td>10 mg/m³ Total Inhalable Dust</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls:
Provide local exhaust or general room ventilation.

Personal protective equipment:
Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection:
Neoprene or nitrile rubber gloves

Eye protection:
Chemical goggles or safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified dust and mist (orange cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state: Solid
Appearance: Powder
Colour: Black
Odour: Slight, characteristic
Odour threshold: No data available
Refractive index: No additional information available
pH: No data available
Relative evaporation rate (butylacetate=1): No data available
Melting point: No data available
Freezing point: No data available
Boiling point: No data available
Flash point: No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Flammability (solid, gas): No data available
Vapour pressure: No data available
Relative vapour density at 20 °C: No data available
Relative density: No data available
## Density
- 4.8 - 5.1

## Solubility
- Insoluble in water.

## Log Pow
- No data available

## Log Kow
- No data available

## Viscosity, kinematic
- No data available

## Viscosity, dynamic
- No data available

## Explosive properties
- No data available

## Oxidising properties
- No data available

## Explosive limits
- No data available

### 9.2. Other information
No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity
No additional information available

### 10.2. Chemical stability
This product is not stable if stored at temperatures above 140° F (60° C). Storage temperatures above 140° F (60° C) may cause the black iron oxide to oxidize, generating heat which could cause surrounding combustibles to burn.

### 10.3. Possibility of hazardous reactions
No additional information available

### 10.4. Conditions to avoid
- Excessive heat.

### 10.5. Incompatible materials
- Oxidizing agent. Iron oxides react violently with aluminum, ethylene oxide, hydrazine, and calcium hypochlorite.

### 10.6. Hazardous decomposition products
No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity
- Not classified

#### Skin corrosion/irritation
- Not classified

#### Serious eye damage/irritation
- Not classified

#### Respiratory or skin sensitisation
- Not classified

#### Germ cell mutagenicity
- Not classified

#### Carcinogenicity
- Not classified

**This product contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.**

#### Reproductive toxicity
- Not classified

#### STOT-single exposure
- Not classified

#### STOT-repeated exposure
- Not classified

#### Aspiration hazard
- Not classified

#### Symptoms/effects after inhalation
- Inhalation causes coughing, sneezing and respiratory problems.

#### Symptoms/effects after skin contact
- Skin contact may cause irritation due to mechanical action on sensitive skin.

#### Symptoms/effects after eye contact
- Eye contact causes irritation due to mechanical action and secretion of tears.

#### Symptoms/effects after ingestion
- Ingestion may cause stomach ache, vomiting and diarrhoea.

#### Chronic symptoms
- Prolonged inhalation of iron oxide dust is known to produce a condition known as siderosis, a benign pneumoconiosis.

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Acute aquatic toxicity
- Not classified

#### Chronic aquatic toxicity
- Not classified

**Iron oxide (Fe3O4) (1317-61-9)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>&gt; 1000 mg/l (48 h) Idus Idus dorata, Fish</td>
</tr>
</tbody>
</table>
### 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. Results of PBT and vPvB assessment
No additional information available

### 12.6. Other adverse effects
No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

<table>
<thead>
<tr>
<th>Description</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sewage disposal recommendations</td>
<td>Do not dispose of waste into sewer.</td>
</tr>
<tr>
<td>Product/Packaging disposal recommendations</td>
<td>Dispose of contents/container to licensed waste disposal facility.</td>
</tr>
<tr>
<td>Ecology - waste materials</td>
<td>Avoid release to the environment.</td>
</tr>
</tbody>
</table>

### SECTION 14: Transport information

#### 14.1. UN number
In accordance with ADR / RID / IMDG / IATA / ADN

<table>
<thead>
<tr>
<th>Description</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN-No. (ADR)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>UN-No. (IMDG)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>UN-No. (IATA)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>UN-No. (ADN)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>UN-No. (RID)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

#### 14.2. UN proper shipping name

<table>
<thead>
<tr>
<th>Description</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper Shipping Name (ADR)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Proper Shipping Name (IMDG)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Proper Shipping Name (IATA)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Proper Shipping Name (ADN)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Proper Shipping Name (RID)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADR Transport hazard class(es) (ADR)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>IMDG Transport hazard class(es) (IMDG)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>IATA Transport hazard class(es) (IATA)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>ADN Transport hazard class(es) (ADN)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>RID Transport hazard class(es) (RID)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

#### 14.4. Packing group

<table>
<thead>
<tr>
<th>Description</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packing group (ADR)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Packing group (IMDG)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Packing group (IATA)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Packing group (ADN)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Packing group (RID)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

#### 14.5. Environmental hazards

<table>
<thead>
<tr>
<th>Description</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dangerous for the environment</td>
<td>No</td>
</tr>
</tbody>
</table>
GELEST BLACK IRON OXIDE HS
Safety Data Sheet

Marine pollutant: No
Other information: No supplementary information available

14.6. Special precautions for user
- Overland transport
  Not applicable
- Transport by sea
  Not applicable
- Air transport
  Not applicable
- Inland waterway transport
  Not applicable
- Rail transport
  Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations
No REACH Annex XVII restrictions
GELEST BLACK IRON OXIDE HS is not on the REACH Candidate List
GELEST BLACK IRON OXIDE HS is not on the REACH Annex XIV List
GELEST BLACK IRON OXIDE HS is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

15.1.2. National regulations

Germany
Reference to AwSV: Water hazard class (WGK) nwg, Non-hazardous to water (Classification according to VwVwS, Annex 1 or 2; ID No. 751)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV: Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance)

Netherlands
SZW-lijst van kankerverwekkende stoffen: The substance is not listed
SZW-lijst van mutagene stoffen: The substance is not listed
NIET-eliminatie lijst van voor de voortplanting giftige stoffen – Borstvoeding: The substance is not listed
NIET-eliminatie lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid: The substance is not listed
NIET-eliminatie lijst van voor de voortplanting giftige stoffen – Ontwikkeling: The substance is not listed

15.2. Chemical safety assessment
No additional information available

SECTION 16: Other information

Abbreviations and acronyms:
Abbreviations: ND: Not Determined; No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor
Other information: Prepared by safety and environmental affairs.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye Irrit. 2</strong></td>
<td>Serious eye damage/eye irritation, Category 2</td>
</tr>
<tr>
<td><strong>Skin Irrit. 2</strong></td>
<td>Skin corrosion/irritation, Category 2</td>
</tr>
<tr>
<td><strong>H315</strong></td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td><strong>H319</strong></td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td><strong>EUH210</strong></td>
<td>Safety data sheet available on request.</td>
</tr>
</tbody>
</table>

SDS EU (REACH Annex II) - Custom

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

© 2019 Gelest Inc. Morrisville, PA 19067