## 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 RED IRON OXIDE HS
- **Product code**: RIA-HSA
- **Synonyms**: C.I. PIGMENT RED 101, CARBOXYETHYLSILANETRIOL, 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 RED IRON OXIDE HS
- **CAS-No.**: 1309-37-1 (&) 18191-40-7
- **EC-No.**: 215-168-2 (&) NA
GELEST RED 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 (Fe2O3)</td>
<td>(CAS-No.) 1309-37-1 (EC-No.) 215-168-2</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/....

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 of dust or particulates may irritate the respiratory tract. Overexposure may cause: Cough.

Symptoms/effects after skin contact
No significant signs or symptoms indicative of any adverse health hazard are expected to occur as a result of skin exposure.

Symptoms/effects after eye contact
May cause eye irritation.

Symptoms/effects after ingestion
No information available.

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. Use any suitable mechanical means (vacuum, sweeping etc.). Provide ventilation system and use necessary personal protective equipment as described in "8. EXPOSURE CONTROLS AND PERSONAL PROTECTION". Keep in suitable, closed containers for disposal.
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. Do not breathe dust. Avoid contact with skin and eyes.

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

<table>
<thead>
<tr>
<th>Iron oxide (Fe2O3) (1309-37-1)</th>
<th>Austria</th>
<th>MAK (mg/m³)</th>
<th>5 mg/m³ (respirable fraction) 10 mg/m³ (inhalable fraction)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>MAK Short time value (mg/m³)</td>
<td>10 mg/m³ (respirable fraction)</td>
<td></td>
</tr>
<tr>
<td>Belgium</td>
<td>Limit value (mg/m³)</td>
<td>5 mg/m³ (fume)</td>
<td></td>
</tr>
<tr>
<td>Bulgaria</td>
<td>OEL TWA (mg/m³)</td>
<td>5 mg/m³</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>VME (mg/m³)</td>
<td>5 mg/m³ (fume)</td>
<td></td>
</tr>
<tr>
<td>Greece</td>
<td>OEL TWA (mg/m³)</td>
<td>10 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Greece</td>
<td>OEL STEL (mg/m³)</td>
<td>10 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Italy - Portugal - USA ACGIH</td>
<td>ACGIH TWA (mg/m³)</td>
<td>5 mg/m³ (respirable fraction)</td>
<td></td>
</tr>
<tr>
<td>USA IDLH</td>
<td>US IDLH (mg/m³)</td>
<td>2500 mg/m³ (dust and fume)</td>
<td></td>
</tr>
<tr>
<td>USA NIOSH</td>
<td>NIOSH REL (TWA) (mg/m³)</td>
<td>5 mg/m³ (dust and fume)</td>
<td></td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>10 mg/m³ (fume) 15 mg/m³ (total dust) 5 mg/m³ (respirable fraction)</td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>VLA-ED (mg/m³)</td>
<td>5 mg/m³ (dust and fume)</td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>MAK (mg/m³)</td>
<td>3 mg/m³ (respirable dust)</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>WEL TWA (mg/m³)</td>
<td>5 mg/m³ (fume) 10 mg/m³ (total inhalable) 4 mg/m³ (respirable)</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>WEL STEL (mg/m³)</td>
<td>10 mg/m³ (fume) 30 mg/m³ (calculated-total inhalable) 12 mg/m³ (calculated-respirable)</td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
<td>Grænseværdie (langvarig) (mg/m³)</td>
<td>3.5 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td>HTP-arvo (8h) (mg/m³)</td>
<td>5 mg/m³ (fume)</td>
<td></td>
</tr>
<tr>
<td>Hungary</td>
<td>AK-érték</td>
<td>6 mg/m³ (respirable dust)</td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>OEL (8 hours ref) (mg/m³)</td>
<td>5 mg/m³ (fume) 10 mg/m³ (total inhalable dust) 4 mg/m³ (respirable dust)</td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>OEL (15 min ref) (mg/m3)</td>
<td>30 mg/m³ (calculated-total inhalable dust) 10 mg/m³ (fume) 12 mg/m³ (calculated-respirable dust)</td>
<td></td>
</tr>
<tr>
<td>Lithuania</td>
<td>IPRV (mg/m³)</td>
<td>3.5 mg/m³ (inhalable fraction)</td>
<td></td>
</tr>
<tr>
<td>Norway</td>
<td>Grenseverdier (AN) (mg/m³)</td>
<td>3 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Norway</td>
<td>Grenseverdier (Korttidsverdi) (mg/m3)</td>
<td>3 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>NDS (mg/m³)</td>
<td>5 mg/m³ (respirable fraction)</td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>NDScH (mg/m³)</td>
<td>10 mg/m³ (respirable fraction)</td>
<td></td>
</tr>
<tr>
<td>Romania</td>
<td>OEL TWA (mg/m³)</td>
<td>5 mg/m³ (dust and fume)</td>
<td></td>
</tr>
<tr>
<td>Romania</td>
<td>OEL STEL (mg/m³)</td>
<td>10 mg/m³ (dust and fume)</td>
<td></td>
</tr>
<tr>
<td>Slovakia</td>
<td>NPHV (prieemerná) (mg/m³)</td>
<td>1.5 mg/m³</td>
<td></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**

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Powder</td>
</tr>
<tr>
<td>Colour</td>
<td>Red to Reddish Brown.</td>
</tr>
<tr>
<td>Odour</td>
<td>Slight, characteristic.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>No additional information available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>4.8 - 5.2</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in water.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>
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
No additional information available

10.3. Possibility of hazardous reactions
No additional information available

10.4. Conditions to avoid
No additional information available

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

<table>
<thead>
<tr>
<th>Acute toxicity</th>
<th>Not classified</th>
</tr>
</thead>
</table>

**Iron oxide (Fe2O3) (1309-37-1)**

<table>
<thead>
<tr>
<th>LD50 oral rat</th>
<th>&gt; 5000 mg/kg</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Skin corrosion/irritation</th>
<th>Not classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

**IARC group** 3 - Not classifiable

<table>
<thead>
<tr>
<th>Reproductive toxicity</th>
<th>Not classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>STOT-single exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
<tr>
<td>Symptoms/effects after inhalation</td>
<td>Inhalation of dust or particulates may irritate the respiratory tract. Overexposure may cause: Cough.</td>
</tr>
<tr>
<td>Symptoms/effects after skin contact</td>
<td>No significant signs or symptoms indicative of any adverse health hazard are expected to occur as a result of skin exposure.</td>
</tr>
<tr>
<td>Symptoms/effects after eye contact</td>
<td>May cause eye irritation.</td>
</tr>
<tr>
<td>Symptoms/effects after ingestion</td>
<td>No information available.</td>
</tr>
<tr>
<td>Chronic symptoms</td>
<td>Prolonged inhalation of iron oxide dust is known to produce a condition known as siderosis, a benign pneumoconiosis.</td>
</tr>
</tbody>
</table>

**SECTION 12: Ecological information**

12.1. Toxicity

<table>
<thead>
<tr>
<th>Acute aquatic toxicity</th>
<th>Not classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic aquatic toxicity</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

**Iron oxide (Fe2O3) (1309-37-1)**

<table>
<thead>
<tr>
<th>LC50 fish 1</th>
<th>&gt; 1000 mg/l 48 hours: Leuciscus idus (Golden orfe)</th>
</tr>
</thead>
</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
Product/Packaging disposal recommendations: Dispose of contents/container to licensed waste disposal facility.
Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

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

14.1. UN number
UN-No. (ADR): Not applicable
UN-No. (IMDG): Not applicable
UN-No. (IATA): Not applicable
UN-No. (ADN): Not applicable
UN-No. (RID): Not applicable

14.2. UN proper shipping name
Proper Shipping Name (ADR): Not applicable
Proper Shipping Name (IMDG): Not applicable
Proper Shipping Name (IATA): Not applicable
Proper Shipping Name (ADN): Not applicable
Proper Shipping Name (RID): Not applicable

14.3. Transport hazard class(es)
ADR
Transport hazard class(es) (ADR): Not applicable

IMDG
Transport hazard class(es) (IMDG): Not applicable

IATA
Transport hazard class(es) (IATA): Not applicable

ADN
Transport hazard class(es) (ADN): Not applicable

RID
Transport hazard class(es) (RID): Not applicable

14.4. Packing group
Packing group (ADR): Not applicable
Packing group (IMDG): Not applicable
Packing group (IATA): Not applicable
Packing group (ADN): Not applicable
Packing group (RID): Not applicable

14.5. Environmental hazards
Dangerous for the environment: No
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 RED IRON OXIDE HS is not on the REACH Candidate List

GELEST RED IRON OXIDE HS is not on the REACH Annex XIV List

GELEST RED 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**

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-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding:

The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid:

The substance is not listed

NIET-limitatieve 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.

**Full text of H- and EUH-statements:**

| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| EUH210 | Safety data sheet available on request. |