SECTION 1: Identification

1.1. Identification
Product name: GELEST CHROMIUM OXIDE HS
Product code: GIA-HSA
Product form: Substance
Physical state: Solid
Synonyms: C.I. PIGMENT GREEN 17, C.I.No. 77288, CHROMIUM OXIDE GREEN CARBOXYETHYL SILANTRIOL, SODIUM SALT
Other means of identification: INCI NAME: CHROMIUM OXIDE GREENS (&) DISODIUM CARBOXYETHYL SILICONATE

1.2. Recommended use and restrictions on use
Recommended use: Pigment
Cosmetics, personal care products

1.3. Supplier
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

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

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture
GHS-US classification
Not classified

2.2. GHS Label elements, including precautionary statements
GHS US labeling
No labeling applicable

2.3. Hazards not otherwise classified (HNOC)
No additional information available

2.4. Unknown acute toxicity (GHS US)
Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances
Substance type: Pigment
Name: GELEST CHROMIUM OXIDE HS
CAS-No.: 1308-38-9 (&) 18191-40-7

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium Oxide Greens</td>
<td>(CAS-No.) 1308-38-9</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. 2A, H319</td>
</tr>
</tbody>
</table>

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 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 victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact: Wash with plenty of soap and 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 (acute and delayed)**

<table>
<thead>
<tr>
<th>Effect/Condition</th>
<th>Symptoms/effects after inhalation</th>
<th>Symptoms/effects after skin contact</th>
<th>Symptoms/effects after eye contact</th>
<th>Symptoms/effects after ingestion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation of dust or particulates may irritate the respiratory tract.</td>
<td>No significant signs or symptoms indicative of any adverse health hazard are expected to occur as a result of skin exposure.</td>
<td>Direct contact with eyes is likely to be irritating.</td>
<td>No information available.</td>
<td></td>
</tr>
</tbody>
</table>

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

No additional information available

**SECTION 5: Fire-fighting measures**

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


Unsuitable extinguishing media: None known.

**5.2. Specific hazards arising from the chemical**

Fire hazard: Non-combustible.

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

Firefighting instructions: Exercise caution when fighting any chemical fire.

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. Notify authorities if product enters sewers or public waters.

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

Methods for cleaning up: Minimize 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.

Incompatible materials: Strong oxidizers. Chromium (III) oxide is incompatible with lithium, glycerol, oxygen difluoride, chlorine trifluoride, and rubidium acetylide.

Storage area: Store away from heat.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

<table>
<thead>
<tr>
<th>Method</th>
<th>TWA (mg/m³)</th>
<th>Control parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>0.5 Cr (III)</td>
<td>1308-38-9</td>
</tr>
<tr>
<td>OSHA</td>
<td>0.5 Cr (III)</td>
<td>Chromium Oxide Greens</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Method</th>
<th>TWA (mg/m³)</th>
<th>Control parameter</th>
</tr>
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<tr>
<td>ACGIH</td>
<td>0.5 Cr (III)</td>
<td>1308-38-9</td>
</tr>
<tr>
<td>OSHA</td>
<td>0.5 Cr (III)</td>
<td>Chromium Oxide Greens</td>
</tr>
</tbody>
</table>
8.2. Appropriate engineering controls
Appropriate engineering controls : Provide local exhaust or general room ventilation.

8.3. Individual protection measures/Personal protective equipment

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>Color</td>
<td>Green.</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight. Characteristic.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=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>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific gravity / density</td>
<td>5.2</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble 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>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

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
Strong oxidizers. Chromium (III) oxide is incompatible with lithium, glycerol, oxygen difluoride, chlorine trifluoride, and rubidium acetylide.

10.6. Hazardous decomposition products
A small amount (<0.1% as Cr) of reversion to hexavalent chromium may occur if dry chromium (III) oxide powder is exposed to elevated temperatures greater than 200°C.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Acute toxicity</th>
<th>Not classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromium Oxide Greens (1308-38-9)</td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 5000 mg/kg (untreated pigment)</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</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>

This product is a trivalent compound that contains less than 100 ppm hexavalent chromium. Trivalent chromium is not specifically listed as a carcinogen by NTP or IARC.

12.1. Toxicity
No additional information available

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
Effect on the ozone layer | No additional information available

SECTION 13: Disposal considerations

13.1. Disposal 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
Not regulated for transport.
GELEST CHROMIUM OXIDE HS
Safety Data Sheet

14.2. UN proper shipping name
Not applicable

14.3. Additional information
Other information : No supplementary information available.

Transport by sea
No additional information available

Air transport
No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Chromium Oxide Greens (1308-38-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Carboxyethylsilanetriol, disodium salt (18191-40-7)
Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Chromium Oxide Greens (1308-38-9)
Listed on the Canadian DSL (Domestic Substances List)

Carboxyethylsilanetriol, disodium salt (18191-40-7)
Not listed on the Canadian DSL (Domestic Substances List)

EU-Regulations
No additional information available

Carboxyethylsilanetriol, disodium salt (18191-40-7)
Not listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Chromium Oxide Greens (1308-38-9)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)

Carboxyethylsilanetriol, disodium salt (18191-40-7)
Not listed on the AICS (Australian Inventory of Chemical Substances)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

Full text of H-phrases:

H315 Causes skin irritation
H319 Causes serious eye irritation

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.
Hazard Rating

Health: 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability: 0 Minimal Hazard - Materials that will not burn

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.

Prepared by safety and environmental affairs.

Date of issue: 08/17/2016 Version: 1.0

SDS US (GHS HazCom 2012) - Custom

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

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