1. **Identification of the Substance/Mixture and of the Company/Undertaking**

1.1. **Product Identifier**

*Product Name:* Zenexo® Golden Shine

*Article No.:* 50730

*UFI:* --

1.2. **Relevant identified Uses of the Substance or Mixture and Uses advised against**

**Identified uses:** Metallic pigment for varnishes, printing inks and plastic applications.

**Uses advised against:**

1.3. **Details of the Supplier of the Safety Data Sheet (Producer/Importer)**

*Company:* Kremer Pigmente GmbH & Co. KG

*Address:* Hauptstr. 41-47, 88317 Aichstetten, Germany

*Tel./Fax.:* Tel +49 7565 914480, Fax +49 7565 1606

*Internet:* www.kremer-pigmente.com

*EMail:* info@kremer-pigmente.com

1.4. **Emergency No.**

*Emergency No.:* +49 7565 914480 (Mon-Fri 8:00 - 17:00)

1.4.2 **Poison Center:**

2. **Hazards Identification**

2.1. **Classification of the Substance or Mixture**

*Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)*

This product does not require classification and labelling as hazardous according to CLP/GHS.

2.2. **Label Elements**

*Classification according to Regulation (EC) No. 1272/2008 (CLP/GHS)*

No classification required according to the CLP/GHS guidelines.

*Hazard designation:* Not applicable.

*Signal word:* Not applicable.

*Hazard designation:* Not applicable.

*Safety designation:* Not applicable.

*Hazardous components for labelling:* Not applicable.

2.3. **Other Hazards**

3. **Composition/Information on Ingredients**
3.1. Substance

3.2. Mixture

Chemical Characterization: Aluminium laminated with iron oxide and silicium dioxide.

Information on Components / Hazardous Ingredients:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Concentration</th>
<th>CAS-Nr</th>
<th>EINECS-Nr</th>
<th>EC-Nr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diiron trioxide (Fe2O3); REACH Reg. No. 01-2119457614-35-0000</td>
<td>55 - 75 %</td>
<td>1309-37-1</td>
<td>215-168-1</td>
<td></td>
</tr>
<tr>
<td>Aluminium powder (H261-228); REACH Reg. No. 01-2119529243-45</td>
<td>2.5 - 10 %</td>
<td>7429-90-5</td>
<td>231-072-3</td>
<td>013-002-00-1</td>
</tr>
<tr>
<td>Silicium dioxide, SiO2 (amorphous); REACH Reg. No. 01-2119379499-16</td>
<td>15 - 35 %</td>
<td>7631-86-9</td>
<td>231-545-4</td>
<td></td>
</tr>
</tbody>
</table>

Additional information:

4. First Aid Measures

4.1. Description of the First Aid Measures

General information: Remove contaminated clothes immediately.

After inhalation: Supply fresh air. In case of complaints consult a physician.

After skin contact: No special measures required.

After eye contact: Rinse open eye for several minutes under running water. Should irritation continue, seek medical advice.

After ingestion: Consult a doctor.

4.2. Most important Symptoms and Effects, both Acute and Delayed

Symptoms: No further information available.

Effects: No further information available.

4.3. Indication of any Immediate Medical Attention and special Treatment needed

Treatment: No further information available.

5. Fire-Fighting Measures

5.1. Extinguishing Media

Suitable extinguishing media: Use extinguishing media for surrounding fire.
5.2. Special Hazards arising from the Substance or Mixture

Special hazards: None known.

5.3. Advice for Firefighters

Protective equipment: No special measures required.

Further information:

6. Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Personal precautions: No special measures required.

6.2. Environmental Precautions

Environmental precautions: No special measures required.

6.3. Methods and Material for Containment and Cleaning Up

Methods and material: Clean up mechanically. Avoid dust formation.

6.4. Reference to other Sections

Hazardous substances are not being released.

For information for safe handling see Section 7.

Protective clothing, see Section 8.

See Section 13 for information on disposal.

7. Handling and Storage

7.1. Precautions for Safe Handling

Instructions on safe handling: No special measures required.

Hygienic measures:

7.2. Conditions for Safe Storage, including any Incompatibilities

Storage conditions: Store in tightly sealed containers in a dry and cool room.

Requirements for storage areas and containers: No special measures necessary.

Information on fire and explosion protection: No special measures necessary.

Storage class: 11; Combustible solids (TRGS 510)

Further Information:
7.3. Specific End Use(s)

Further information:

8. Exposure Controls/Personal Protection

8.1. Parameters to be Controlled

Parameters to be controlled (DE):

- Iron(III) oxide (CAS 1309-37-1): TLV (TRGS 900): 1.25 mg/m$^3$ (airborne dust), 10 ml/m$^3$ (inhalable dust); 2(II)
- Silicon dioxide, CAS 112926-00-8 (7631-86-9), TWA-Value: 4 mg/m$^3$ (inhalable dust fraction)
- Aluminium powder (CAS 7429-90-5): TLV (TRGS 900; D) 10 mg/m$^3$ (inhalable fraction); 1.25 mg/m$^3$ (airborne fraction)

Parameters to be controlled:

Derived No-Effect Level (DNEL):

- Aluminium powder (7429-90-5):
  - 3.95 mg/kg bw/d (consumer, swallowing, long-term exposition - systemic effects)
  - 3.72 mg/m$^3$ (worker, inhalation, long-term exposition - systemic and local effects)

Predicted No-Effect Concentration (PNEC):

- Aluminium powder (7429-90-5):
  - Water: 48 - 17800 µg/l

Additional Information:

- Biological limit value:
  - BAT: Aluminium (7429-90-5): 60 µg/l (urine)
  - Biological limit value: Aluminium: 50 µg/g creatinine (end of exposure or shift; urine)

8.2. Exposure Controls

Technical protective measures:

Personal Protection

General protective measures:

- The usual precautionary measures are to be adhered to when handling chemicals.

Respiratory protection:

- Required in case of insufficient ventilation.
- Recommended filter device for short term use: filter P1, color code white

Hand protection:

- Protective gloves (EN 374)

Protective glove material:

- Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material and dexterity. Always seek advice from glove suppliers.

Eye protection:

- Safety glasses (EN 166)
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Body protection: Protective clothing.

Environmental precautions:

9. Physical and Chemical Properties

9.1. Information on Basic Physical and Chemical Properties

Form: powder
Color: gold colored
Odor: odorless
Odor threshold: not determined
pH-Value: not applicable
Melting temperature: not determined
Boiling temperature: not determined
Flash point: not applicable
Evaporation rate: not applicable
Flammability (solid, gas): not flammable
Upper explosion limit: not determined
Lower explosion limit: not determined
Vapor pressure: not applicable
Vapor density: not relevant
Density: 3 g/cm³
Solubility in water: not determined
Coefficient of variation (n-Octanol/Water): not determined
Auto-ignition temperature: Product is not auto-ignitable.
Decomposition temperature: not determined
Viscosity, dynamic:
Explosive properties: Product does not present an explosion hazard.

Oxidizing properties:

Bulk density: 0.2 g/cm³

9.2. Further Information

Solubility in solvents:

Viscosity, kinematic:

Burning class:

Solvent content:

Solid content: 100 %

Particle size:

Other information:

10. Stability and Reactivity

10.1. Reactivity

No information available.

10.2. Chemical Stability

No decomposition if used according to specifications.

10.3. Possibility of Hazardous Reactions

Unknown.

10.4. Conditions to Avoid

Conditions to avoid:

Thermal decomposition: No further information available.

10.5. Incompatible Materials

None known.

10.6. Hazardous Decomposition Products

None known.

10.7. Further Information

11. Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity

LD₅₀, oral:

Iron(III) oxide (CAS 1309-37-1): >5000 mg/kg (rat)
Silicium dioxide (7631-86-9): 10000 mg/kg (rat)
Aluminium powder (7429-90-5): 15900 mg/kg (rat)

LD₅₀, dermal: No information available.

LC₅₀, inhalation:
Primary effects

Irritant effect on skin: No irritant effect known.

Irritant effect on eyes: No irritant effect known.

Inhalation: No information available.

Ingestion: No information available.

Sensitization: No sensitizing effects known.

Mutagenicity: No mutagenic effects known.

Reproductive toxicity: No relevant data found.

Carcinogenicity: No relevant data found.

Teratogenicity: No relevant data found.


Additional toxicological information:

12. Ecological Information

12.1. Aquatic Toxicity

Fish toxicity: No information available.

Daphnia toxicity: No information available.

Bacteria toxicity: No information available.

Algae toxicity: No information available.

12.2. Persistency and Degradability

No information available.

12.3. Bioaccumulation

No information available.

12.4. Mobility

No information available.

12.5. Results of PBT- und vPvP Assessment

Not applicable.

12.6. Other Adverse Effects
Safety Data Sheet
According to regulation (EC) No. 1907/2006 (REACH)

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Water hazard class:  Not hazardous.

Behaviour in sewage systems:

Further ecological effects:  No special effects or hazards known.

AOX Value:

13. Disposal Considerations

13.1. Waste Treatment Methods

Product:  Smaller quantities can be disposed of with household waste.

European Waste Code (EWC):

Uncleaned packaging:  Dispose of according to official local regulations.

Waste Code No.:

14. Transport Information

14.1. UN Number

ADR, IMDG, IATA

14.2. UN Proper Shipping Name

ADR/RID:  No hazardous goods according to ADR / DOT (US) (land transportation).

IMDG/IATA:  Not hazardous goods

14.3. Transport Hazard Classes

ADR Class:  not applicable

Hazard no.:

Classification code:

Tunnel restriction code:

IMDG Class (sea):  not applicable

Hazard no.:

EmS No.:

IATA Class:  not applicable

Hazard no.:

14.4. Packaging Group

ADR/RID:  not applicable
Safety Data Sheet
According to regulation (EC) No. 1907/2006 (REACH)

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14. 5. Environmental Hazards

 None

14. 6. Special Precautions for User

 Not classified as a dangerous good under transport regulations.

14. 7. Transportation in Bulk according to Annex II of MARPOL 73/78 and IBC-Code

14. 8. Further Information

15. Regulatory Information

15. 1. Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

 Water hazard class:

 0, not hazardous (German Regulation)

 Local regulations on chemical accidents:

 Seveso III Directive: not applicable under Directive 2012/18/EC.

 Employment restrictions:

 Restriction and prohibition of application:

 Technical instructions on air quality:

15. 2. Chemical Safety Assessment

 A Chemical Safety Assessment has not been carried out for this product.

 This product is not listed as SVHC-compound and does not contain any hazardous substances.

15. 3. Further Information

 Regulation (EU) No. 2019/1148, Annex I - Restricted Explosives Precursors (upper limit value for the purpose of licensing under Article 5(3)): None of the ingredients is listed.


 Regulation (EC) 273/2004, On Drug Precursors, Category 3: None of the ingredients is listed.

 Regulation (EC) 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors: not forbidden and/or not restricted

 RoHS Directive 2011/65/EC on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHs): not listed.

16. Other Information

 This product should be stored, handled and used in accordance with good hygiene practices and in conformity with any legal regulations. This information contained herein is based on the present state of knowledge and is intended to describe our product from the point of view of safety requirements. It should be therefore not be construed as guaranteeing specific properties.