



Safety Data Sheet

Section 1. Identification

Product identifier: Iron Oxide Red Pigment

Chemical Class: **Synthetic iron oxide Fe₂O₃ · n H₂O**

Application: Colorants (pigments and dyestuffs), inorganic

Manufacturer/Supplier:

Chemik Co.,Ltd.

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Section 2. Hazards identification

HAZCOM Standard Status: While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), the SDS contains valuable information critical to the safe handling and proper use of the product. The SDS should be retained and available for employees and other users of this product.

Physical state: Powder.

Color: Red.

Classification of the substance or mixture: Not classified.

Signal word: No signal word.

Hazard statements: No known significant effects or critical hazards.

Hazard Not Otherwise Classified (HNOC) Precautionary statements: None known.

Prevention: Not applicable.

Response: Not applicable.

Storage: Not applicable.

Disposal: Not applicable.

Supplemental label elements: Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink.

Section 3. Composition/information on ingredients

| | | |
|--|------------------------|-----|
| CAS No.: 1309-37-1 EINECS No.: 215-168-2 | Iron Oxide Red Pigment | 96% |
|--|------------------------|-----|

Chemical characterization: Synthetic iron oxide $\text{Fe}_2\text{O}_3 \cdot \alpha \text{H}_2\text{O}$, C. I. Pigment RED 101

Registration Number in REACH: 01-2119457614-35-0039

Substance/mixture: Substance

Section 4. First aid measure

Description of first aid measures

Eye contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion: Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Potential acute health effects

Eye contact: May cause mechanical irritation (abrasion).

Inhalation: No known significant effects or critical hazards.

Skin contact: May cause mechanical irritation (abrasion).

Ingestion: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact: No specific data.

Inhalation: No specific data.

Skin contact: No specific data.

Ingestion: No specific data.

Potential chronic health effects

Long-term exposure to high concentrations of dust containing iron oxide can cause a benign condition termed "pulmonary siderosis." This condition is not associated with any physical impairment of lung function.

Notes to physician: Treat symptomatically. No specific treatment.

Protection of first-aiders: No special measures required.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media: Use an extinguishing agent suitable for the surrounding fire. In case of fire, use water spray(fog),foam or dry chemical.

Unsuitable extinguishing media: None known.

Special hazards arising from the chemical: No specific fire or explosion hazard.

Hazardous thermal decomposition products: No specific data.

Special protective actions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing dust. Put on appropriate personal protective equipment.

Environmental precautions:

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up:

Move containers from spill area. Approach release from upwind. Vacuum or sweep up material and place in a designated, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor.

Reference to other sections:

See Section 1 for emergency contact information.

See Section 13 for waste disposal.

Prevent entry into sewers, water courses, basements or confined areas.

Section 7. Handling and storage

Handling:

Precautions for safe handling

Avoid breathing dust. Remove contaminated clothing and protective equipment before entering eating areas. Workers should wash hands and face before eating, drinking and smoking. Put on appropriate personal protection equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

Storage:

Conditions for safe storage

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Empty containers or liners may retain some product residues.

Section 8. Exposure controls/personal protection

Occupational exposure limits: No exposure limit value known.

Appropriate engineering controls:

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal protection:

Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection: Dust-protection mask.

Skin protection: Wear suitable protective clothing and gloves. Suitable protective footwear.

Eye/face protection: If contact with product is possible, wear safety glasses with side shields.

Medical Surveillance: Not available.

Section 9. Physical and chemical properties

Physical state: Solid. (powder)
Color: Red.
Odor: Odorless
Odor threshold: Not available.
PH: 3-7
Boiling point: Not available.
Melting point: 1565°C (2849°F)
Flash point: Not available.
Evaporation rate: Not available.
Explosion limits: Not available.
Vapor pressure: Not available.
Density: 5.25 g/cm³ (20°C(68°F))
Specific gravity (Relative density): 4-5.
Bulk density: 300 to 1000 kg/m³
Solubility: insoluble in the following materials :cold water
Partition coefficient: noctanol/water: Not available.
Vapor density: Not available.
Viscosity: Not available.
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.

Section 10. Stability and reactivity

Reactivity: No specific test data related to reactivity available for this product or its ingredients.
Chemical Stability: This product is stable.
Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid: No specific data.
Incompatible materials: No specific data.
Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on the likely routes of exposure: Dermal contact. Eye contact. Inhalation Ingestion.

Potential acute health effects

Eye contact: May cause mechanical irritation(abrasion).

Inhalation: No known significant effects or critical hazards.

Skin contact: May cause mechanical irritation(abrasion).

Ingestion: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics:

Eye contact: No specific data.

Inhalation: No specific data.

Skin contact: No specific data.

Ingestion: No specific data.

Potential chronic health effects:

Short term exposure/Potential immediate effects: Not available.

Long term exposure:

Potential delayed effects: No specific data.

General: Long-term exposure to high concentration of dust containing iron oxide can cause a benign condition termed "pulmonary siderosis". This condition is not associated with any physical impairment If lung function.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Information on toxicological effects

Acute toxicity:

| Product/ingredient name | Result | Species | Dose | Exposure | Test |
|-------------------------|--|---------|-------------|----------|------|
| Iron(III)Oxide | LD50 Oral | Rat | >5000 mg/kg | - | - |
| Iron(III)Oxide | LC50 Inhalation Dusts and mists | Rat | >210 g/m3 | 2 weeks | - |

Irritation/Corrosion

| Product/Ingredient name | Result | Species | Score | Exposure | Observation | Reversibility |
|-------------------------|-----------------------|---------|-------|---------------------|-------------|------------------------------------|
| Iron(III)Oxide | Eyes-Draise | Rabbit | 0 | 192 hours 0.1 ml | 8 days | Fully reversible in 7 days or less |
| | Skin-Erythemia/Eschar | Rabbit | 0 | 4 hours 500mg | 7 days | - |

Conclusion/Summary

Skin: Iron(III)Oxide: Non-irritating.

Eyes: Iron(III)Oxide: Non-irritating.

Sensitization:

| Product/Ingredient name | Route of exposure | Species | Result |
|-------------------------|-------------------|------------|------------|
| Iron(III)Oxide | Skin | Guinea pig | Ambiguous. |

Chronic toxicity:

| Product/Ingredient name | Result | Species | Dose | Exposure |
|-------------------------|--|----------|------------|---|
| Iron(III)Oxide | Sub-acute NOAEC inhalation Dusts and mists | Rat-Male | 10.1 mg/m3 | 4 weeks:6 hours per day 5 days per week |

Mutagenicity:

| Product/Ingredient name | Test | Experiment | Result |
|-------------------------|---|---|----------|
| Iron(III)Oxide | OECD 476 IN VITRO MAMMALIAN CELL GENE MUTATION TEST | Experiment: In vitro Subject:BACTERIA METABOLIC ACTIVATION:WITH/WITHOUT S9 MIX Experiment: In vitro | Negative |
| | OECD 473 IN VITRO MAMMALIAN CHROMOSOMAL ABERRATION TEST | Subject:MAMMALIAN-ANIMAL CELL:SOMATIC METABOLIC ACTIVATION: WITH/WITHOUT Experiment: In vitro | Negative |
| | | Subject:MAMMALIAN-ANIMAL CELL:SOMATIC METABOLIC ACTIVATION:WITH/WITHOUT S9 MIX | Negative |

Carcinogenicity:

| Product/Ingredient name | Result | Species | Dose | Exposure |
|-------------------------|---------------------------|------------------|-----------------------|--------------------------------|
| Iron(III)Oxide | Negative-Intraperitoneal- | Rat-Male, Female | 600 mg/kg 3X 200mg/kg | 914 days; 3 injection/8 weeks. |

| Product/Ingredient name | CAS# | IARC | NTP | OSHA |
|-------------------------|-----------|----------------|----------------|----------------|
| Iron(III)Oxide | 1309-37-1 | Not classified | Not classified | Not classified |

Section 12. Ecological information

Toxicity:

| Product/Ingredient name | Test | Result | Species | Exposure |
|-------------------------|--|--|--|-------------------------------------|
| Iron(III)Oxide | OECD 202 Daphnia sp.Acute Immobilization Test | Acute EC50>100mg/l Acute EC50>10000mg/l Acute LC0>50000mg/l | Daphnia-Daphnia magna Micro-organism-Activated Sludge Fish-Danio rerio | 48 hours 3 hours 96 hours |

Conclusion/Summary: Not available.

Persistence and degradability Conclusion/Summary: Not applicable.

Bioaccumulative potential: Not available.

Mobility in soil soil water partition: Not available.

Other adverse effects: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods: The generation of waste should be avoided or minimized wherever possible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Waste disposal should be in accordance with existing federal state, provincial and or local environment controls laws.

RCRA classification: If discarded in its purchased form, this product would not be a hazardous waster either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.(40 CFR 261.20-24)

Section 14. Transport information

| Regulatory information | UN Number | Proper shipping name | Classes | Packing Group | Label | Additional informaton |
|---------------------------|-----------|----------------------|---------|---------------|-------|-----------------------|
| DOT Classification | - | - | - | - | | Not regulated. |
| IMDG Class | - | - | - | - | | Not regulated. |
| IATA-DGR Class | - | - | - | - | | Not regulated. |

Section 15. Regulatory information

SARA311/312: None.

SARA title III Section 302 Extremely Hazardous Substances: None.

SARA Title III Section 313 Toxic Chemicals: None.

US EPA CERCLA Hazardous Substances (40 CFR 302): None.

State regulations:

The following chemicals are specifically listed by individual states: other product specific health and safety data in other sections on the SDS may also be applicable for state requirement. For details on your regulator requirements you should contact the appropriate agency in your state.

Ingredient Name: Iron(III)Oxide

CAS Number: 1309-37-1

State Code: MA-S,NJ-HS,PA-RTK HS

Concentration(%): 95-100%

Massachusetts Substances: MA-S

Massachusetts Extraordinary Hazardous Substances: MA-Extra HS

New Jersey Hazardous Substances: NJ- HS

Pennsylvania RTK Hazardous Substances: PA- RTK HS

Pennsylvania Special Hazardous Substances: PA- Special HS

California Prop.65

Potential exposure to some or all of the California Prop 65 chemicals in this product have been determined to be below the No Significant Risk Level (NSRL)

To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

U.S.Toxic Substances Control Act: Listed on the TSCA Inventory.

Status of Registration:

The components of this product are listed on the following inventories:

Europe: EINECS

Philippines: PICCS

Japan: ENCS+ ISHL

Canada: DSL

Korea: ECL

Australia: AICS

China: IECSC

New Zealand: NZIOC

Section 16. Other information**Hazardous Material Information System:**

Health: 0, Flammability: 0, Physical hazards: 0

(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)

National Fire Protection Association (U.S.A.)

Health: 0, Flammability: 0, Instability/Reactivity: 0 Special:

(0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe)

Water hazard class:

Substance non-hazardous to water.

(WGK 1=low hazardous to water WGK 2=hazardous to water WGK 3=severly hazardous to water)

Revision Date: 26-Jul-2019

Revision Summary: 2

Reason for revision: Not applicable

Department issuing this data sheet: Product safety department

Disclaimer

The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet

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TECHNICAL DATA SHEET

1. Product Name: Iron oxide red 1150EZ

2. CAS Number: 1309-37-1

3. Formula: Fe₂O₃

4. Molecular weight: 159.69

5. Chemical-Physical Properties:

Appearance: red crystal powder

Tamped apparent Density/Bulk Density: 0.7-1.7g/cm³

Melting point: 1565°C (decomposed)

Solubility: Insoluble in water, soluble in hydrochloric acid and sulphuric acid, slightly soluble in nitric acid and alcohols.

Stability: Reduced to Fe by hydrogen or carbon monoxide, set off oxygen when ignition.

6. Usage: Inorganic pigment. Widely used in concrete coloring, paintings, printing inks.

7. Specification:

Fe₂O₃: 96.0% min.

Volatiles at 105°C: 1.0% max.

Water solubles: 0.5% max.

Residue of 320 mesh: 0.008% max.

Oil absorption: 15-25 ml/100g

PH value: 4.5-7.5

Tinting strength: 95-105 %

Dispersibility: 40%

Hegman: 4+

Shade: similar with standard sample

8. Packaging:

25kgs PP woven bag or kraft bags, 40bags per pallet, shrink-wrapped.

1000kgs PP woven jumbo bag, palletized.