

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

- Product Name: FerroSorp® SD
- Synonym: Iron hydroxide oxide
- EINECS/ELNICS: 243-746-4
- CAS: 20344-49-4
- Relevant identified uses of the substance or mixture and uses advised against
 - Relevant uses: Binding of hydrogen sulfide from gases
 - Uses advised against: None known.
- Producer: Interra Global, 800 Busse Highway, Suite 101, Park Ridge, IL 60068, USA
- Telephone: +1 (847)292-8600
- **Emergency telephone number: +1(847)292-8600**

2. HAZARD(S) IDENTIFICATION

- Classification of the substance or mixture: No classification.
- Label elements
 - Hazard pictograms: None
 - Hazard statements: None
- Other hazards
 - Environmental hazards Does not contain any PBT or vPvB substances.
 - Other hazards: None

3. COMPOSITION / INFORMATION ON INGREDIENTS

- Chemical Identity: Iron hydroxide oxide
- Numbers of Identity: CAS: 20344-49-4, EINECS/ELINCS: 243-746-4
- Comment on component parts:
 - No dangerous components.
 - Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
 - Substance(s) exempted from the registration requirement (Title II) according to the REACH- Regulation 1907/2006/EC (e) (Art. 2 paragraph 7 sub-section d, or Art. 2 paragraph 7 sub- section b, as they accord with Appendix V Point 7 or Point 8).

4. FIRST AID MEASURES

- Description of first aid measures

- General information: Change powdered clothing.
- Inhalation: Ensure supply of fresh air.
- Skin contact: When in contact with the skin, clean with soap and water. Consult a doctor if skin irritation persists.
- Eye contact: Rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- Ingestion: Seek medical advice immediately.
- Most important symptoms and effects, both acute and delayed: none known.
- Indication of any immediate medical attention and special treatment needed: Treat symptomatically.

5. FIREFIGHTING MEASURES

- Extinguishing media
 - Suitable extinguishing media: Product itself is non-combustible. Fire extinguishing method of surrounding areas must be considered.
 - Extinguishing media that must not be used: None
- Special hazards arising from the substance or mixture: None
- Advice for firefighters: Use self-contained breathing apparatus. Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures: No special measures necessary.
- Environmental precautions: Do not discharge into the drains/surface waters/groundwater.
- Methods and material for containment and cleaning up: Take up mechanically. Avoid raising dust. Dispose of absorbed material in accordance within the regulations.
- Reference to other sections: See Sections 8 & 13.

7. HANDLING AND STORAGE

- Precautions for safe handling:
 - Avoid the formation and deposition of dust.
 - Provide vacuuming if dust is raised.
 - The product is not combustible.

- Wash hands before breaks and after work.
- Use barrier skin cream.
- Conditions for safe storage, including any incompatibilities:
 - Prevent penetration into the ground.
 - Do not store together with food and animal food.
 - Store in a dry place.
 - Do not store outdoors.
- Specific end use(s): See product use, Section 1.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Control Parameters:
 - Ingredients with occupational exposure limits to be monitored (GB): not applicable
- Exposure controls:
 - Additional advice on system design:
 - Ensure adequate ventilation at workstation.
 - Pay attention to dust limit value (ACGHI-2011: 10 mg/m³ particle inhalable; 3 mg/m³ particle respirable).
 - Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.
 - Eye protection: Safety glasses. (EN 166:2001)
 - Hand protection: 0.4 mm butyl rubber, > 120 min (EN 374).
 - The details concerned are recommendations. Please contact the glove supplier for further information.
 - Skin protection: Protective clothing.
 - Other:
 - Avoid contact with eyes and skin.
 - Do not inhale dust.
 - Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.

- Respiratory protection: Respiratory protection in the case of dust formation. short term: filter apparatus, filter P1 (DIN EN 143)
- Thermal Hazards: No
- Delimitation and monitoring of the environmental exposition: Protect the environment by applying appropriate control measures to prevent or limit emissions.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Form: Granules
- Color: Red brown
- Odor: Odorless
- Odor Threshold: Not Applicable
- pH-value: not Applicable
- pH-value [1%]: 7-8
- Boiling point [°C]: Not Applicable
- Flash point [°C]: Not Applicable
- Flammability (solid, gas) [°C]: Not Applicable
- Lower Explosion Limit: Not Applicable
- Upper Explosion Limit: Not Applicable
- Oxidizing Properties: No
- Vapor pressure/gas pressure [kPa]: Not Applicable
- Density [g/ml]: Not Determined
- Bulk density [kg/m³]: 550-700 (90% TS)
- Solubility in Water: Virtually Insoluble
- Partition Coefficient [n-octanol/water]: Not Determined
- Viscosity: Not Applicable
- Relative Vapor Density Determined in Air: Not Applicable
- Evaporation speed: Not Applicable
- Melting Point [°C]: Not Determined
- Autoignition Temperature [°C]: Not self-igniting
- Decomposition Temperature [°C]: Not Applicable

10. STABILITY AND REACTIVITY

- Reactivity: No dangerous reactions known, if used as directed.
- Chemical Stability: The product is stable under standard conditions.

- Possibility of Hazardous Reactions: No hazardous reactions known.
- Conditions to Avoid: See Section 7.
- Incompatible Materials: Not Applicable
- Hazardous Decomposition Products: No hazardous decomposition products known.

11. TOXICOLOGICAL INFORMATION

- Acute Toxicity
 - LD50, oral, Rat: > 10000 mg/kg (IUCLID)
- Serious Eye Damage/Irritation: Non-Irritant
- Skin Corrosion/Irritation: Non-Irritant
- Respiratory or Skin Sensitization: Non-Sensitizing
- Specific Target Organ Toxicity — Single Exposure: Does not contain a relevant substance that meets the classification criteria.
- Specific Target Organ Toxicity — Repeated Exposure: Does not contain a relevant substance that meets the classification criteria.
- Mutagenicity: There is no evidence of any mutagenic effects.
- Reproduction Toxicity: There is no evidence of any reproductive toxicity effects.
- Carcinogenicity: There is no evidence of any carcinogenic effects.
- Aspiration Hazard: Does not contain a relevant substance that meets the classification criteria.
- General Remarks: None

12. ECOLOGICAL INFORMATION

- Toxicity
 - LC0, (48h), *Leuciscus idus*: > 1000 mg/l (IUCLID).
 - EC0, *Pseudomonas fluorescens*: > 10000 mg/l (IUCLID).
- Persistence and Degradability:
 - Behavior in Environment Compartments: Not Applicable
 - Behavior in Sewage Plant: Iron hydroxide oxide to adsorb nutrient, especially phosphate.
 - Biological Degradability: Not Applicable
- Bioaccumulative Potential: Not Applicable
- Mobility in Soil: Not Applicable
- Results of PBT and vPvB Assessment: Not Applicable
- Other Adverse Effects: None known

13. DISPOSAL CONSIDERATIONS

- Waste Treatment Methods:
 - Dispose of in accordance with federal, state, and local environmental control regulations.
 - Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.
- Product: For recycling, consult manufacturer.
 - Waste no. (recommended): 060316
 - Contaminated Packaging: Uncontaminated packaging may be taken for recycling.
 - Waste no. (recommended): 150102

14. TRANSPORT INFORMATION

- UN Number
 - Transport by Land According to ADR/RID: Not Applicable
 - Inland Navigation (ADN): Not Applicable
 - Marine Transport in Accordance with IMDG: Not Applicable
 - Air Transport in Accordance with IATA: Not Applicable
- UN Proper Shipping Name:
 - Transport by Land According to ADR/RID: NO DANGEROUS GOODS
 - Inland Navigation (ADN): NO DANGEROUS GOODS
 - Marine Transport in Accordance with IMDG: NOT CLASSIFIED AS "DANGEROUS GOODS"
 - Air Transport in Accordance with IATA: NOT CLASSIFIED AS "DANGEROUS GOODS"
- Transport Hazard Class(es)
 - Transport by Land According to ADR/RID: Not Applicable
 - Inland Navigation (ADN): Not Applicable
 - Marine Transport in Accordance with IMDG: Not Applicable
 - Air Transport in Accordance with IATA: Not Applicable

- Packing Group
 - Transport by Land According to ADR/RID: Not Applicable
 - Inland Navigation (ADN): Not Applicable
 - Marine Transport in Accordance with IMDG: Not Applicable
 - Air Transport in Accordance with IATA: Not Applicable
- Environmental Hazards:
 - Transported by Land According to ADR/RID: No
 - Inland Navigation (AND): No
 - Marine Transport in Accordance with IMDG: No
 - Air Transport in Accordance with IATA: No
- Special Precautions for User: Relevant information under Sections 6 to 8.
- Transport in Bulk According to Annex II of MARPOL and the IBC Code: Not Applicable

15. REGULATORY INFORMATION

- Safety, health, and environmental regulations/legislation specific for the substance or mixture:
 - EEC-REGULATIONS: 1991/689 (2001/118); 2010/75; 2004/42; 648/2004; 1907/2006 (REACH); 1272/2008; 75/324/EEC (2008/47/EC); (EU) 2015/830; (EU) 2016/131; (EU) 517/2014
 - TRANSPORT-REGULATIONS: DOT-Classification, ADR (2017); IMDG-Code (2017, 38. Amdt.); IATA-DGR (2018).
 - NATIONAL REGULATIONS (GB): EH40/2005 Workplace exposure limits (Second edition, published December 2011).
 - Observe Employment Restrictions for People: No
 - VOC (2010/75/CE): 0%
- Chemical Safety Assessment: For this substance a chemical safety assessment is not required.

16. OTHER INFORMATION

- Abbreviations and Acronyms:
 - ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
 - RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses

- ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
- ATE = Acute Toxicity Estimate
- CAS = Chemical Abstracts Service
- CLP = Classification, Labelling and Packaging
- DMEL = Derived Minimum Effect Level
- DNEL = Derived No Effect Level
- EC50 = Median Effective Concentration
- ECB = European Chemicals Bureau
- EEC = European Economic Community
- EINECS = European Inventory of Existing Commercial Chemical Substances
- ELINCS = European List of Notified Chemical Substances
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
- IC50 = Inhibition concentration, 50%
- IMDG = International Maritime Code for Dangerous Goods
- IUCLID = International Uniform Chemical Information Database
- LC50 = Lethal concentration, 50%
- LD50 = Median lethal dose
- LC0 = lethal concentration, 0%
- LOAEL = lowest-observed-adverse-effect level
- MARPOL = International Convention for the Prevention of Marine Pollution from Ships
- Ships NOAEL = No Observed Adverse Effect Level
- NOEC = No Observed Effect Concentration
- PBT = Persistent, Bioaccumulative and Toxic substance
- PNEC = Predicted No-Effect Concentration
- REACH = Registration, Evaluation, Authorization and Restriction of Chemicals
- STP = Sewage Treatment Plant
- TLV®/TWA = Threshold limit value – time-weighted average
- TLV®STEL = Threshold limit value – short-time exposure limit
- VOC = Volatile Organic Compounds
- vPvB = very Persistent and very Bioaccumulative



- Other Information:
 - Modified Position:
 - Section 8 been added: Protect the environment by applying appropriate control measures to prevent or limit emissions.
 - Preparation Date: September 10, 2020
 - Revision Number: 1
 - Revised By: KT
 - Approved By: JS
- Warranty:
 - The information contained herein is based upon data considered true and accurate. However, Interra Global makes no warranties, express or implied, as to the accuracy or adequacy of the information contained herein or the results to be obtained from the use thereof. This information is offered solely for the user's consideration, investigation and verification. Since the use and conditions of this information and the material described herein are not within the control of Interra Global, it assumes no responsibility for injury to the user or third persons. The material described herein is sold only pursuant to Interra Global's Terms and Conditions of Sale, including those limiting warranties and remedies contained therein. It is the responsibility of the user to determine whether any use of this data and information is in accordance with applicable federal, state or local laws and regulations.