

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Ferric Oxide, Enriched Iron Oxide
Synonyms	Anchred standard, Anhydrous iron oxide, Anhydrous oxide of iron, Armenian bole, Bauxite residue, Black oxide of iron, Blended red oxides of iron, Burntisland Red, Burnt umber, Calcotone Red, Caput mortuum, Colcothar, Colloidal ferric oxide, C.I. 77491, C.I. Pigment Red 101, C.I. Pigment Red 102, C.I. Pigment Red 101 and 102, Crocus martis adstringens, Deanox, Deanox DNX Pigments, Eisenoxyd, English Red, Ferric oxide, Ferric oxide (colloidal), Ferrugo, Iron oxide (ACGIH), Iron Oxide Red, Iron oxide pigments, Iron Red, Iron sesquioxide, Jeweler's rouge, Levanox Red 130A, Light Red, Manufactured iron oxides, Mars Brown, Mars Red, Natural iron oxides, Natural Red Oxide, Ochre, Prussian Brown, Quick rouge, Raddle, 11554 Red, Red Iron Oxide, Red ochre, Red oxide, Red oxide D3452, Red oxide D6984, Red oxide of iron, Rouge (ACGIH:OSHA), Rubigo, Sienna, Specular iron, Stone Red, Supra, Synthetic iron oxide, Venetian Red, Vitriol Red, Vog
Chemical Formula	Fe ₂ O ₃
Molecular Weight	159.69 amu
CAS No.	1309-37-1
RTECS No.	NO7400000
EINECS No.	215-168-2
Supplier Address*	ISOFLEX USA PO Box 29475 San Francisco CA 94129 United States
Telephone	+1 415-440-4433
Fax	+1 415-563-4433
Emergency Phone Number (both supplier and manufacturer)	Infotrac/ +1 800-535-5053 *May include subsidiaries or affiliate companies/divisions
Email	iusa@isoflex.com
Website	www.isoflex.com
Preparation Information	ISOFLEX USA Product Safety +1 415-440-4433

2. HAZARDS IDENTIFICATION

Emergency Overview:

Irritant: Irritating to eyes, respiratory system and skin.

NFPA Ratings: (0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe)

Health Hazard = 2 Flammability = 0 Reactivity = 0



HMIS Ratings: (0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe)

Health Hazard = 2 Flammability = 0 Physical Hazard = 0

HEALTH HAZARD	2
FLAMMABILITY	0
PHYSICAL HAZARD	0

GHS Label Elements:

- 3.2/2** - Causes skin irritation
- 3.2/2A** - Causes serious eye irritation
- 3.8/3** - May cause respiratory irritation.

For additional information on toxicity, please refer to Section 10.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name: Ferric Oxide
CAS No.: 1309-37-1
Chemical Formula: Fe₂O₃
Molecular Weight: 159.69 amu

4. FIRST AID MEASURES

Oral Exposure If swallowed, wash out mouth with water, provided patient is conscious. Call a physician.

Inhalation Exposure If inhaled, remove to fresh air. If patient is not breathing give artificial respiration. If breathing is difficult, give oxygen.

Dermal Exposure In case of contact, wash skin immediately with soap and copious amounts of water.

Eye Exposure In case of contact, flush eyes immediately with copious amounts of water for at least 15 minutes. Call a physician.

5. FIREFIGHTING MEASURES

Flash Point N/A

Autoignition Temp N/A

Flammability Not flammable

Suitable Extinguishing Media

Product is not flammable. Use extinguishing media appropriate to surrounding fire conditions.

Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation.

Environmental Precautions

Do not allow material to be released to the environment without proper governmental permits.

Methods for Cleaning Up

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

7. HANDLING AND STORAGE

Handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Storage

Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace. Do not store together with acids.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Safety shower and eye bath; mechanical exhaust having an average velocity of 100 feet per minute

Personal Protective Equipment

Respiratory

Government-approved respirator

Hand

Compatible chemical-resistant gloves

Eye

Chemical safety goggles

General Hygiene Measures

Wash thoroughly after handling. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately.

Exposure Limits, RTECS

Country	Source	Type	Value
USA	ACGIH	TWA	5 mg/m ³ (E)
USA	NIOSH	TWA	5 mg/m ³
USA	MSHA	Standard	

Remarks: Nuisance Particulates

New Zealand OEL

Remarks: Check ACGIH TLV

Exposure Limits

Country	Source	Type	Value
Poland	NDS		5 mg/m ³
Poland	NDSCh		10 mg/m ³
Poland	NDSP		

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

<i>Form</i>	Solid powder
<i>Color</i>	Red-brown

Safety Data

Molecular Weight:	159.69 amu	pH:	N/A
BP/BP Range:	N/A	MP/MP Range:	1565 °C
Freezing Point:	N/A	Vapor Pressure:	N/A
Vapor Density:	N/A	Saturated Vapor Concentration:	N/A
SG/Density:	5.24 g/cm ³	Bulk Density:	N/A
Odor Threshold:	N/A	Volatile %:	N/A
VOC Content:	N/A	Water Content:	N/A
Solvent Content:	N/A	Evaporation Rate:	N/A
Viscosity:	N/A	Surface Tension:	N/A
Partition Coefficient:	N/A	Decomposition Temperature:	N/A
Flash Point:	N/A	Explosion Limits:	N/A
Flammability:	N/A	Autoignition Temperature:	N/A
Refractive Index:	3.01	Optical Rotation:	N/A
Miscellaneous Data:	N/A		
Solubility in Water:	Insoluble		
Other Solvents:	Hydrochloric Acid, Sulfuric Acid		

10. STABILITY AND REACTIVITY

<i>Stability</i>	Stable. Decomposition will not occur if used and according to specifications.
<i>Materials to Avoid</i>	Strong acids
<i>Hazardous Decomposition Products</i>	Nature of decomposition products not known
<i>Dangerous Reactions</i>	No sensitizing effects known

11. TOXICOLOGICAL INFORMATION

Route of Exposure

<i>Skin Contact</i>	Causes skin irritation
<i>Skin Absorption</i>	May be harmful if absorbed through the skin
<i>Eye Contact</i>	Causes eye irritation
<i>Inhalation</i>	Material is irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.
<i>Ingestion</i>	May be harmful if swallowed
<i>Signs and Symptoms of Exposure</i>	Long-term inhalation exposure to iron (oxide fume or dust) can cause siderosis. Siderosis is considered to be a benign pneumoconiosis and does not normally cause significant physiologic impairment. Siderosis can be observed on x-rays with the lungs having a mottled appearance.
<i>Chronic Exposure – Carcinogen</i>	Result: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP or EPA classification.
<i>Species</i>	Rat

<i>Route of Application</i>	Subcutaneous
<i>Dose</i>	135 mg/kg
<i>Result</i>	Tumorigenic: Equivocal tumorigenic agent by RTECS criteria Tumorigenic: Tumors at site or application
<i>IARC Carcinogen List</i>	Rating: Group 3
<i>ACGIH Carcinogen List</i>	Rating: A4

12. ECOLOGICAL INFORMATION

<i>Toxicity</i>	No data available
<i>Persistence and Degradability</i>	No data available
<i>Bioaccumulative Potential</i>	No data available
<i>Mobility in Soil</i>	No data available
<i>Results of PBT and vPvB Assessment</i>	PBT/vPvB assessment not available, as chemical safety assessment not required/not conducted
<i>Other Adverse Effects</i>	No data available

13. DISPOSAL CONSIDERATIONS

<i>Product</i>	Consult state, local or national regulations to ensure proper disposal.
<i>Contaminated Packaging</i>	Dispose of according to official regulations.

14. TRANSPORT INFORMATION

DOT:

<i>Proper Shipping Name</i>	None
<i>Non-Hazardous for Transport</i>	This substance is considered to be non-hazardous for transport.

IATA:

<i>Non-Hazardous for Air Transport</i>	Non-hazardous for air transport
--	---------------------------------

15. REGULATORY INFORMATION

REACH Number

A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (*De Minimis*) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right to Know Components

Diiron trioxide / CAS No. 1309-37-1 / Revision Date 2007-03-01

Pennsylvania Right to Know Components

Diiron trioxide / CAS No. 1309-37-1 / Revision Date 2007-03-01

New Jersey Right to Know Components

Diiron trioxide / CAS No. 1309-37-1 / Revision Date 2007-03-01

16. OTHER INFORMATION

<i>Prepared By</i>	ISOFLEX USA PO Box 29475 San Francisco CA 94129 United States
<i>Issuing Date</i>	January 19, 2015
<i>Revision Date</i>	August 1, 2021
<i>Revision Number</i>	3
<i>Revision Note</i>	Required review and update

ISOFLEX USA's Commonly Used Abbreviations and Acronyms*

ACGIH	American Conference of Governmental Industrial Hygienists
ADR	European Agreement Concerning the International Carriage of Dangerous Goods by Road
ALARA	As Low As Is Reasonably Achievable
AMU	Atomic Mass Unit
ANSI	American National Standards Institute
BLS	Basic Life Support
BOD5	Biochemical Oxygen Demand
CAM	Continuous Air Monitor
CAS	Chemical Abstracts Service (division of the American Chemical Society)
CEN	European Committee for Standardization
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CLP	Classification, Labelling and Packaging (European Union)
COD	Chemical Oxygen Demand
CPR	Controlled Products Regulations (Canada)
CWA	Clean Water Act (USA)
DAC	Derived Air Concentration (USA)
DOE	United States Department of Energy (USA)
DOT	United States Department of Transportation (USA)
DSL	Domestic Substances List (Canada)
EC50	Half Maximal Effective Concentration
EINECS	European Inventory of Existing Commercial Chemical Substances
EHS	Environmentally Hazardous Substance
ELINCS	European List of Notified Chemical Substances
EMS	Emergency Response Procedures for Ships Carrying Dangerous Goods
EPA	Environmental Protection Agency (USA)
EPCRA	Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986
GHS	Globally Harmonized System
HMS	Hazardous Materials Identification System (USA)
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	Intermediate Bulk Containers
ICAO	International Civil Aviation Organization
IDLH	Immediately Dangerous to Life or Health
IMDG	International Maritime Code for Dangerous Goods
LC50	Lethal concentration, 50 percent
LD50	Lethal dose, 50 percent
LDLO	Lethal Dose Low
LOEC	Lowest-Observed-Effective Concentration
MARPOL	International Convention for the Prevention of Pollution from Ships

MSHA	Mine Safety and Health Administration (USA)
NCRP	National Council on Radiation Protection & Measurements (USA)
NDSL	Non-Domestic Substances List (Canada)
NFPA	National Fire Protection Association (USA)
NIOSH	National Institute for Occupational Safety and Health (USA)
NOEC	No Observed Effect Concentration
N.O.S.	Not Otherwise Specified
NRC	Nuclear Regulatory Commission (USA)
NTP	National Toxicology Program (USA)
OSHA	Occupational Safety and Health Administration (USA)
PBT	Persistent Bioaccumulative and Toxic Chemical
PEL	Permissible Exposure Limit
PIH	Poisonous by Inhalation Hazard
RCRA	Resource Conservation and Recovery Act (USA)
RCT	Radiation Control Technician
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals (Europe)
RID	Regulations Concerning the International Transport of Dangerous Goods by Rail
RQ	Reportable Quantity
RTECS	Registry of Toxic Effects of Chemical Substances
SARA	Superfund Amendments and Reauthorization Act (USA)
SNUR	Significant New Use Rule (TSCA)
TDG	Transportation of Dangerous Goods (Canada)
TIH	Toxic by Inhalation Hazard
TLV	Threshold Limit Value
TPQ	Threshold Planning Quantity
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
UN	United Nations (Number)
VOC	Volatile Organic Compound
vPvB	Very Persistent Very Bioaccumulative Chemical
WGK	Wassergefährdungsklassen (Germany: Water Hazard Classes)
WHMIS	Workplace Hazardous Materials Information System

*One or more of the above-listed items may not appear in this document.

General Disclaimer

For terms and conditions, including limitation of liability, please refer to the purchase agreement in effect between ISOFLEX USA (or any of its affiliates and subsidiaries) and the purchaser.

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. ISOFLEX shall not be held liable for any damage resulting from handling or from contact with the above product.