



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name Iron Sponge (Spent)
Version # 01
Revision date 06-02-2010
Product use Waste product.
Manufacturer/Supplier Devon US Operations
20 North Broadway
Oklahoma City, OK 73102-8260
Telephone: (405) 235-3611
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Devon Canadian Operations
Calgary, AB. T2P 4H2
2000, 400 – 3rd Avenue SW.
Telephone: (403) 232-7100

Emergency Emergency Chemtrec:
Within the USA (800) 424-9300
Outside the USA (703) 527-3887
Devon Canada Emergency Phone:
(403) 232-7100

2. Hazards Identification

Physical state Solid.
Emergency overview CAUTION
May cause eye, skin and respiratory tract irritation.

OSHA regulatory status This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects
Routes of exposure Eye contact. Skin contact. Inhalation.
Eyes Dust may irritate the eyes.
Skin Dust or powder may irritate the skin. Skin irritation occurs on contact with moist or wet skin.
Inhalation Dust may irritate throat and respiratory system and cause coughing.
Ingestion May cause discomfort if swallowed.

Target organs Eyes. Skin. Respiratory system. Lungs.
Chronic effects Chronic inhalation of high concentrations of iron oxide fumes or dust may lead to benign pneumoconiosis (siderosis).

Signs and symptoms Coughing. Irritation of eyes and mucous membranes. May cause irritation through mechanical abrasion.

Potential environmental effects The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Iron oxide	1309-37-1	> 80

Composition comments The full text for all R-phrases is displayed in Section 16 of the MSDS. All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First Aid Measures

First aid procedures
Eye contact Dust in the eyes: Do not rub eyes. Remove contact lenses, if present and easy to do. Flush eyes immediately with large amounts of water. Get medical attention if irritation develops or persists.
Skin contact Flush skin thoroughly with water. Get medical attention if irritation develops and persists.
Inhalation Move to fresh air. Get medical attention if any discomfort continues.

Ingestion

Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. Never give anything by mouth to an unconscious person. Get medical attention if any discomfort continues.

Notes to physician

Treat symptomatically. Symptoms may be delayed.

General advice

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures**Flammable properties**

The product is non-combustible. Under fire conditions, ferric oxide may release oxygen gas, which will speed up the development of the fire and make it burn more intensely.

Extinguishing media**Suitable extinguishing media**

Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media

None.

Protection of firefighters**Protective equipment and precautions for firefighters**

Firefighters should wear full protective clothing including self contained breathing apparatus. Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

Specific methods

Move container from fire area if it can be done without risk.

Hazardous combustion products

Ferric oxide and ferrous oxide fumes, and oxygen gas under fire conditions. Note: If spent materials is not aerated under wet conditions, iron sulphide and iron mercaptan may evolve.

6. Accidental Release Measures**Personal precautions**

Avoid inhalation of dust and contact with skin and eyes. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use Personal Protective Equipment recommended in Section 8 of the MSDS.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Methods for containment

Stop leak if you can do so without risk.

Methods for cleaning up

Avoid dust formation. Collect powder using special dust vacuum cleaner with particle filter or carefully sweep into closed container. For waste disposal, see Section 13 of the MSDS.

Other information

Clean up in accordance with all applicable regulations.

7. Handling and Storage**Handling**

Avoid dust formation. Avoid inhalation of dust and contact with skin and eyes. Use only with adequate ventilation. Use Personal Protective Equipment recommended in section 8 of the MSDS. Wash thoroughly after handling. Observe good industrial hygiene practices.

Storage

Store in tightly closed original container in a dry and cool place. Store away from incompatible materials.

8. Exposure Controls / Personal Protection**Occupational exposure limits****ACGIH****Components**

Iron oxide (1309-37-1)

Type

TWA

Value

5 mg/m3

Form

Respirable fraction.

U.S. - OSHA**Components**

Iron oxide (1309-37-1)

Type

PEL

Value

5 mg/m3
15 mg/m3

Form

Respirable fraction.
Total dust.
Respirable fraction.
Total dust.

TWA

5 mg/m3
10 mg/m3

Respirable fraction.
Total dust.

Canada - Alberta**Components**

Iron oxide (1309-37-1)

Type

TWA

Value

5 mg/m3

Form

Respirable.

Canada - British Columbia**Components**

Iron oxide (1309-37-1)

Type

STEL
TWA

Value

10 mg/m3
10 mg/m3

Form

Fume.
Total dust.

Components	Type	Value	Form
		3 mg/m ³	Respirable fraction.
Engineering controls	Ventilate as needed to control airborne dust. Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of dust.		
Personal protective equipment			
Eye / face protection	Wear dust-resistant safety goggles where there is danger of eye contact.		
Skin protection	Protective clothing is not required under normal conditions. Wear suitable gloves.		
Respiratory protection	Wear approved respiratory protection when working with this material unless ventilation or other engineering controls are adequate to keep airborne concentrations below recommended exposure standards. Follow respirator protection program requirements (OSHA 1910.134 or CSA-Z94.4-02(R2008), and ANSI / AIHA Z88.6) for all respirator use. Note: If any of the applicable hydrogen sulfide standards are likely to be exceeded, positive pressure supplied-air respiratory protection must be used.		
General hygiene considerations	Do not breathe dust. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.		

9. Physical & Chemical Properties

Color	Black through to grey-red, depending on the degree of oxidation.
Odor	Slight sulphide.
Odor threshold	Not available.
Physical state	Solid.
Form	Not available.
pH	Not applicable.
Melting point	Not available.
Freezing point	Not available.
Boiling point	Not available.
Flash point	Non-flammable unless water removed then exothermic reaction occurs.
Evaporation rate	Not available.
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not applicable.
Flammability limits in air, lower, % by volume	Not applicable.
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	Not available.
Solubility (water)	Insoluble in water.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not applicable.

10. Chemical Stability & Reactivity Information

Chemical stability	Stable.
Conditions to avoid	Dust generation. Contact with incompatible materials.
Incompatible materials	Peroxides. Strong acids. Chloroformates.
Hazardous decomposition products	Ferric oxide and ferrous oxide fumes.
Possibility of hazardous reactions	Mild oxidizing agent. May react to promote or initiate combustion of combustible materials. Reacts with carbon monoxide causing explosion hazard.

11. Toxicological Information

Acute effects	Dusts may irritate the respiratory tract, skin and eyes.
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Sensitization	Not a skin sensitizer.
Chronic effects	Prolonged and routine inhalation of iron oxide dust in concentrations exceeding the OEL may lead to the lung disease known as Siderosis. Siderosis does not produce lung fibrosis and generally does not produce symptoms but can be noted on X-rays.
Carcinogenicity	Not classified.
ACGIH Carcinogens	
Iron oxide (CAS 1309-37-1)	A4 Not classifiable as a human carcinogen.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Iron oxide (CAS 1309-37-1)	3 Not classifiable as to carcinogenicity to humans.
Mutagenicity	No data available.
Neurological effects	No data available.
Reproductive effects	No data available.
Teratogenicity	No data available.
Further information	No other specific acute or chronic health impact noted.

12. Ecological Information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Environmental effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Persistence and degradability	No data available.
Bioaccumulation / Accumulation	Bioaccumulation is unlikely to be significant because of the low water solubility of this product.
Partition coefficient (n-octanol/water)	Not available.
Mobility in environmental media	The product is insoluble in water and will sediment in water systems.

13. Disposal Considerations

Waste codes	Not regulated.
Disposal instructions	Dispose of this material and its container at hazardous or special waste collection point.
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

DOT

Basic shipping requirements:

UN number	UN1376
Proper shipping name	Iron oxide, spent
Hazard class	4.2
Packing group	III
Environmental hazards	
Marine pollutant	No
Labels required	4.2
Additional information:	
Special provisions	B18, IB8, IP3, T1, TP33
Packaging exceptions	None
Packaging non bulk	213
Packaging bulk	240
ERG number	135

DOT BULK

Basic shipping requirements:

UN number	UN1376
Proper shipping name	Iron oxide, spent
Hazard class	4.2
Packing group	III
Labels required	4.2

Additional information:

Special provisions B18, IB8, IP3, T1, TP33
Packaging exceptions None
Packaging non bulk 213
Packaging bulk 240
ERG number 135

IATA

Basic shipping requirements:

UN number 1376
Proper shipping name Iron oxide, spent
Hazard class 4.2

IMDG

Basic shipping requirements:

UN number 1376
Proper shipping name IRON SPONGE, SPENT
Hazard class 4.2
Packing group III
Environmental hazards
Marine pollutant No
EmS No. F-G, S-P

TDG

Basic shipping requirements:

Proper shipping name IRON SPONGE, SPENT
Hazard class 4.2
UN number UN1376
Packing group III
Marine pollutant No



DOT



DOT BULK



IATA



IMDG



TDG

15. Regulatory Information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
CERCLA/SARA Hazardous Substances - Not applicable.

CERCLA (Superfund) reportable quantity (lbs)

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
Section 302 extremely hazardous substance	No
Section 311 hazardous chemical	No
Drug Enforcement Agency (DEA)	Not controlled
WHMIS status	Controlled
WHMIS classification	B4 - Flammable/Combustible
WHMIS labeling	



State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - California Hazardous Substances (Director's): Listed substance

Iron oxide (CAS 1309-37-1) Listed.

US - Massachusetts RTK - Substance: Listed substance

Iron oxide (CAS 1309-37-1) Listed.

US - New Jersey RTK - Substances: Listed substance

Iron oxide (CAS 1309-37-1) Listed.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

Iron oxide (CAS 1309-37-1) Listed.

16. Other Information

Further information	HMIS® is a registered trade and service mark of the NPCA. X - Specialized Handling
HMIS® ratings	Health: 1* Flammability: 3 Physical hazard: 0 Personal protection: X
NFPA ratings	Health: 1 Flammability: 3 Instability: 0
Disclaimer	This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.
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