

MATERIAL SAFETY DATA SHEET

MAGNETITE-MSDS

Section 1: Identification of the substance /mixture of the company undertaking

1.1 Product Identifier

Product name:	Magnetite
Product type:	Iron ore concentrated
Chemical composition:	Iron oxide, black powder (dust), odorless
Chemical formula:	FE3 O4
Weight of the formulation:	231,53
Mol:	1309-38-2. MOL-PF: 1538 C (lit)
Density:	4.8-5.1 G/ML A 25° C (lit)
CAS Number:	1309-38-2
Percentage:	92,46 %

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product use:	Coal Washing
Area of application:	Industrial applications
Date of revision:	November 2012

1.3 Details of the supplier of the safety data sheet

UNIVERSAL MINERALS, INC.

6319 Brookhill Drive

Houston, TX 77087

Email address or person:

www.universalminerals.com
sales@universalminerals.com

1.4 Emergency telephone number of supplier

Telephone number: (001) 713-797-0054

Section 2: Hazards identification

- 1.1 **Effects of by overexposure:** Prolonged exposure irritates airways, with lung involvement.
- 1.2 **First aid:** flush with water, in contact with eyes and skin. Consult your doctor immediately.
- 1.3 **Firefighting measures:** not applicable, Non flammable product.
- 1.4 **Accidental Release Measures Section:**
 - Of leakage treatment procedures: Normal cleansing.
 - Manipulation and storage: Do not store near oxidizing.

Section 3: EXPOSURE CONTROL / Personal Protective

- 1.1 **Respiratory Protection:** Adult Filter protection in dusty environments. May be used as a mask approved by the National Institute of Occupational Safety and Health, with P100 and P95 in circumstances where they are expected to particulate concentrations in air exceed exposure limits, or when symptoms are observed with evidence of overexposure. Must use a half mask face piece by air-purifying in concentrations up to 10 times the acceptable level of exposure, and a full mask face piece air-purifying in concentrations up to 50 times the acceptable level of exposure.
Air must be provided when the level is expected to be found 50 times over acceptable level, or where there is a possibility of an uncontrolled release.
Protection gloves: Use gloves resistant and impervious.
Eyes protective: Safety eyewear adjusted.

Section 12: Ecological Information

1. **Possible effects on environment:** black material, cause visual impact on the environment. No harmful effects on humans, and is not toxic to fauna and flora. Non-harmful to the marine environment.
2. **First Aid:**
Inhalation: In case of emergency, take the intoxicated to a decontaminated area. If necessary give artificial respiration or give oxygen by professional. If no breath or no pulse, a qualified professional should give first aid. (Cardiopulmonary resuscitation and automated external defibrillator). **Call emergency service immediately.**
3. **Contact with skin:**
 Immediately wash contaminated areas with water. Remove clothing, jewelry and shoes contaminated. Wash affected areas with soap and water. wash and dry clothes and shoes before reuse.
4. **Eye contact:**
 Immediately flush her eyes with a directed stream of water at least 15 minutes, keep eyelids opened to secure clarification of all eye and lid tissues. Flush eyes quickly for maximum effectiveness. Consult a physician immediately.
5. **Ingestion:**
 Forbidden to eat or give by mouth to an unconscious or convulsive person. If swallowed, do not induce vomiting.
6. **Measures in case of fire:** Not flammable.

Section 13: DISPOSAL CONSIDERATIONS

7. **Measures in case of accidental:**
 Leakage of operation: remove material to a appropriate container.
 Do not allow material to flow into watercourses and Drainpipe systems. Report spills or leaks to city agencies or local government.
8. **Manipulation and storage:**
 Store and handle in accordance with all current regulations and standards.
9. **Methods of disposal:**
 Dangerous decomposition products: None .
 Can be collected for reuse if it pollutes the environment. May also be shipped to the processing Plant or final disposition authorized.

O	Nº	OXM										
		Al ₂ O ₃	CaO	Cr ₂ O ₃	Fe ₂ O ₃	K ₂ O	MgO	MnO	Na ₂ O	P ₂ O ₅	SiO ₂	TiO ₂
		%	%	%	%	%	%	%	%	%	%	%
		0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,01
Mineral 1		1,82	0,91	<0,01	>50,00	0,06	0,07	0,05	0,03	1,04	2,28	0,05

<i>Identificación</i>	<i>As</i>	<i>Bi</i>	<i>Cd</i>	<i>Co</i>	<i>Cr</i>	<i>Cu</i>	<i>Fe</i>	<i>Ga</i>	<i>Hg</i>	<i>La</i>	<i>Li</i>	<i>Mn</i>	<i>Mo</i>	<i>Nb</i>	
	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	
LDL	5	5	1	1	1	1	0,01	2	2	1	2	1	1	1	
UDL	10000	2000	2000	10000	10000	10000	50,00	2000	500	2000	10000	20000	10000	10000	
Mineral 2	<5	<5	<1	17	45	21	>20	16	<2	17	14	308	4	<1	
<i>Identificación</i>	<i>Ni</i>	<i>P</i>	<i>Pb</i>	<i>S</i>	<i>Sb</i>	<i>Sc</i>	<i>Se</i>	<i>Sn</i>	<i>Sr</i>	<i>Ta</i>	<i>Te</i>	<i>Ti</i>	<i>V</i>	<i>Y</i>	<i>Zn</i>
	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
LDL	1	10	2	0,01	5	5	10	20	1	10	10	5	1	1	1
UDL	10000	10000	10000	10,00	2000	2000	2000	2000	2000	1000	2000	1000	10000	2000	10000
Mineral 2	41	3691	51	0,09	<5	10	<10	<20	321	<10	<10	<5	822	26	39

Moisture content of the mineral- 6-8 %
 Absolute specific weight of mineral: 4800 kg/m³
 Granulometric distribution (% pass mesh)
 Nº 100 (149 micron) in conformity to Tyler-98 %~100 %
 Nº 140 (105 micron) in conformity Tyler-98 % 100%
 Nº 200 (74 micron) in conformity to Tyler -98 % 100 %
 Nº 270 (53 micron) in conformity Tyler-92 % 98 %
 Nº 325 (44 micron) in conformity Tyler-88 % 95 %
 Nº 400 (37 micron) in conformity Tyler- 86 % 90 %.