



510 Bering Drive
Suite 455
Houston, Texas 77057

Phone: 832-530-4545
Fax: 832-530-4542

<http://www.universalminerals.com>

MATERIAL SAFETY DATA SHEET

GENERAL INFORMATION

Manufacturer: Universal Minerals, Inc
510 Bering Drive Suite 455
Houston, Texas 77057

Creation Date: 11/2/15

For Additional Information, Contact:

MSDS Code: A.G.M.

Universal Minerals, Inc
Phone: (832)-530-4545
Fax: (832)-530-4542

PRODUCT IDENTIFICATION

Product Name: Iron Ore Fines

Formula: Fe₃O₄

Synonym (s) NA

Chemical Family
Oxide of (1) Iron
(Magnetite)

TYPICAL CHEMICAL COMPOSITION

General Chemical Analysis

Fe	62.36%
SiO ₂	5.8%
P	.032%
S	.051%

Permissible Air Level

<u>OSHA PEL</u>	<u>ACGIH TLV</u>
NE	NE

Footnotes:

- (1) See last page for additional terms & conditions, including disclaimer of warranties.
- (2) Chemical Composition shown is typical. Elemental concentrations will vary between batches or lots.
- (3) Common names, if applicable, appear in parenthesis following the chemical names.

PHYSICAL DATA

<u>Physical State:</u>	Fine Powder	<u>Bulk Density:</u>	170 lbs/ft ³
<u>Appearance and Odor:</u>	Black, Odorless	<u>Vapor Pressure:</u>	NA
<u>Boiling Point (Method):</u>	NA	<u>Vapor Density:</u>	NA
<u>Melting Point:</u>	Over 1200° F	<u>Evaporation Rate:</u>	NA
<u>PH:</u>	NA	<u>Particle Size Distribution:</u>	+3/8" - 200 mesh

FIRE AND EXPLOSION HAZARD DATA

<u>Flash Point (Method):</u>	NA	<u>Lower Explosive Limit:</u>	NA
<u>Auto Ignition Temperature:</u>	NA	<u>Upper Explosion Limit:</u>	NA
<u>Fire Hazard:</u>	Non Flammable	<u>Explosion Hazard:</u>	NA
<u>Extinguishing Media:</u>	NA	<u>Special Fire Fighting Procedures:</u>	NA
<u>Unusual Fire and Explosion Hazards:</u>	NA		

REACTIVITY DATA

<u>Stability:</u>	Stable	<u>Incompatibilities (Materials to Avoid):</u>	Strong mineral acids Eg. HCl, H ₂ SO ₄ , HNO ₃ .
<u>Hazardous Thermal Decomposition Products:</u>	None Expected		
<u>Polymerization:</u>	Will not occur		

HEALTH HAZARD DATA

Health Effects/Signs and Symptoms: Long-term exposure to iron oxide fumes or dusts has been associated with a benign lung condition known as siderosis which is observable as an X-ray change. No physical impairment of lung function has been linked to siderosis.

Usual Route (s) of Entry: Inhalation

Medical Conditions Possibly Aggravated: Chronic diseases or disorders of the respiratory system.

Carcinogen Information: Not considered to be a Carcinogen.

FIRST AID AND MEDICAL EMERGENCY PROCEDURES

Eye Contact: Not anticipated to pose an acute or significant eye contact hazard.

Skin Contact: Not anticipated to pose an acute or significant skin contact hazard.

Inhalation: Not anticipated to pose an acute or significant inhalation hazard.

Ingestion: Not considered to be an ingestion hazard.

OCCUPATIONAL EXPOSURE CONTROL MEASURES

Engineering Controls (Ventilation, etc.): Ventilation should be sufficient to maintain dust levels below applicable exposure limit.

Work Practices (Handling and Storage, etc.): Avoid creating airborne dust by dust suppression methods.

Eye Protection: Safety glasses or goggles are recommended when dust levels are excessive.

Skin Protection: Gloves and long-sleeved clothing are recommended when dust levels are excessive.

Respiratory Protection: When engineering controls are not sufficient to lower dust levels below the applicable exposure limit, use a NIOSH-approved respirator for dusts and mists within the use limits of the respirator.

SPILL, LEAK AND DISPOSAL INFORMATION

Procedures to Follow if Material is Released or Spilled: Material should be swept or vacuumed into appropriate containers.

Waste Disposal Method(s): Dispose of waste material in accordance with local, state and federal regulations. Wastes may be reclaimed or salvaged for further use.

ADDITIONAL MISCELLANEOUS INFORMATION

NONE

Abbreviations: NA Not Applicable
 NE Not Established

This Heavy Media product does not meet the criteria of hazardous chemicals as defined by the Federal Occupational Safety and Health Hazard Communication Standard 29 CFR 1910.1200 ©. This form is being provided solely as General Information and should not be constructed as a determination that the product is a hazardous chemical. All sales of this product are subject to Universal Minerals, Inc standard terms and conditions of sale. Universal Minerals, Inc makes no warranties, express or implied, including the Implied Warranty of Merchantability. Any implied warranty of fitness for a particular purpose or any implied warranties otherwise arising from course of dealing or trade.