

# MATERIAL SAFETY DATA SHEET

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## SECTION I: PRODUCT IDENTIFICATION

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**SUPPLIER'S NAME:** Pittsburgh Mineral & Environmental Technology, Inc.

**SUPPLIER'S ADDRESS:** 700 Fifth Avenue, New Brighton, PA 15066

**TELEPHONE NUMBER:** 724-843-5000

For Chemical Emergency Spill, Leak, Fire, Exposure or Accident call CHEMTREC Day or Night Domestic North American (800) 424-9300 International, Call (703) 527-3887 (collect calls accepted)

**PRODUCT NAME:** Synthetic Iron Oxide Black      **TRADE NAME:** Iron Oxide Black

**GRADES/CODES:** PIROX 200

**FORMULA:** Fe<sub>3</sub>O<sub>4</sub>

**SYNONYMS:** Magnetite

**HMS RATINGS:** H: 0 F: 0 R: 0 PP: SEE "SECTION VIII"

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## SECTION II – HAZARDOUS INGREDIENTS

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INGREDIENT (CAS#)	%	OSHA PEL	ACGIH TWA
Iron Oxide * 1309-38-2	90-94	10 MG/M3	5 MG/M3

**REGULATORY INFORMATION:** ACCOURDING TO OSHA 29 CFR I 1910.1200 IRON OXIDE IS NOT "EXTREMELY HAZARDOUS OR TOXIC". VALUES ARE GIVEN FOR PERMISSIBLE EXPOSURE LIMITES AND THRESHOLD VALUES FOR DUSTING AND FUMES. THERE ARE NO TOXIC CHEMICALS UNDER SARA TITLE III SECTION 313. THIS PRODUCT IS LISTED ON TSCA INVENTORY. THIS PRODUCT HAS NO REPORTABLE QUANTITIES (RQ) UNDER CERCLA. IT IS NOT CONSIDERED A HAZARDOUS WASTE UNDER CERCLA OR RCRA. THIS PRODUCT IS NOT LISTED ON THE HAZARDOUS MATERIALS HM 181.

IRON OXIDE DOES NOT APPEAR ON THE HAZARDOUS SUBSTANCES LIST FOR NJ, MA, OR PA.

**CARCINOGENICITY:** THIS PRODUCT IS NOT LISTED AS A CARCINOGEN BY NTP, IARC, OSHA OR ACGIH AS SYNTHETIC IRON OXIDE BLACK.

**OSHA:** OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION; **TSCA:** E.P.A. TOXIC SUBSTANCES CONTROL ACT; **CERCLA:** COMPREHENSIVE ENVIRONMENTAL RESPOSE COMPENSATION AND LIABILITY ACT; **NTP:** NATIONAL TOXICOLOGY PROGRAM; **IARC:** INTERNATION AGENCY FOR RESEARCH ON CANCER; **ACGIH:** AMERICAN CONFERENCE OF

GOVERNMENTAL INDUSTRIAL HYGIENISTS; RCRA: RESOURCE  
CONSERVATION AND RECOVERY ACT – R.E.P.A.

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### **SECTION III – PHYSICAL DATA**

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**APPEARANCE/ODOR**: Black Powder/Odorless  
**BOILING POINT**: Not Applicable  
**BULK DENSITY**: 600-800 KG/M3 @ 68 F (20 C)  
**EVAPORATION RATE**: Not Applicable  
**FREEZING POINT**: Not Applicable  
**MELTING POINT**: 1594 C  
**PH**: 4 – 8 @ 50 G/L Water In Aqueous Suspension  
**SPECIFIC GRAVITY**: Approx 5  
**SOLUBILITY IN WATER**: Slight  
**VAPOR DENSITY**: N/A  
**VAPOR PRESSURE**: N/A  
**MOLECULAR WEIGHT**: 231.53

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### **SECTION IV – FIRE & EXPLOSION HAZARD DATA**

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**NFPA HAZARD CLASSIFICATION**: Health Hazard: 0 Fire Hazard: 0 Reactivity: 0  
**FLASH POINT**: NOT APPLICABLE  
**FLAMMABILITY LIMITS IN AIR BY VOLUME**: NOT APPLICABLE  
**FLAMMABILITY CLASSIFICATION**: NOT APPLICABLE  
**D.O.T. CLASSIFICATION**: NOT REGULATED; NOT FLAMMABLE  
**EXTINGUISHING MEDIA**: USE APPROPRIATE EXTINGUISHING MEDIA FOR  
THE COMBUSTIBLE MATERIAL INVOLVED IN THE FIRE.  
**SPECIAL FIREFIGHTING PROCEDURES**: FIREFIGHTERS SHOULD WEAR  
SELF-CONTAINED BREATHING APPARATUS.  
**UNUSAL FIRE & EXPLOSION HAZARDS**: NONE.

\*SEE SECTION VII REGARDING STORAGE OF MATERIAL

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### **SECTION V – REACTIVITY DATA**

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**STABILITY**: STABLE  
**CONDITIONS TO AVOID**: EXCESSIVE TEMPERATURES GREATER THAN 176  
F (80 C)  
**INSTABILITY CONDITIONS**: EXCESSIVE TEMPERATURES. AT  
TEMPERATURES GREATER THAN 176 F (80 C), PRODUCT MAY BECOME  
UNSTABLE AND AUTO OXIDIZE INTO Fe<sub>2</sub>O<sub>3</sub>.  
**INCOMPATIBILITY (MATERIALS TO AVOID)**: NOT KNOWN  
**HAZARDOUS DECOMPOSITION OR BY PRODUCTS**: NONE

**HAZARDOUS POLYMERIZATION:** WILL NOT OCCUR

\*TEMPERATURES GREATER THAN 176 F (80 C) MAY CAUSE THIS PRODUCT TO BECOME UNSTABLE (SLOWLY AUTO OXIDIZE) WHICH GENERATES SOME ADDITIONAL HEAT. UNDER CERTAIN CIRCUMSTANCES THIS HEAT MAY BE SUFFICIENT TO CAUSE COMBUSTABLE MATERIAL TO IGNITE. DO NOT STORE NEAR SOURCES OF HEAT, OR NEAR FLAMMABLE OR COMBUSTABLE MATERIALS.

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**SECTION VI – HEALTH HAZARD DATA: EFFECTS OF OVEREXPOSURE**

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**INHALATION HEALTH RISKS & SYMPTOMS OF EXPOSURE:** SNEEZING, COUGHING, RUNNY NOSE IF EXPOSED TO EXTREME DUST CLOUDS.

**SKIN & EYE CONTACT HEALTH RISKS & SYMPTOMS OF EXPOSURE:** IRON OXIDE IS ESSENTIALLY NON-IRRITATING TO THE SKIN AND EYES. (SEE ACUTE/CHRONIC). SILICA AMORPHOUS IN LARGER QUANTITIES IS A SLIGHT EYE IRRITANT IN LABORATORY ANIMALS; MILD RASH MAY DEVELOP ON SKIN.

**INGESTION HEALTH RISKS & SYMPTOMS OF EXPOSURE:** IRON OXIDE IS ESSENTIALLY NON-TOXIC.

**HEALTH HAZARDS (ACUTE / CHRONIC):** PROLONGED INHALATION OF IRON OXIDE DUST (6 TO 10 YEARS) IS KNOWN TO PRODUCE A CONDITION CALLED “SIDEROSIS”. ON X-RAYS IT APPEARS TO BE A BENIGN PNEUMOCONIOSIS AND IS NOT ASSOCIATED WITH PULMONARY FIBROSIS OR DISABILITY UNLESS THERE IS CONCURRENT EXPOSURE TO OTHER FIBROSIS-PRODUCING MATERIALS SUCH AS SILICA.

**CARCINOGENICITY:** NTP, IRAC, OSHA, ACGIH; NOT LISTED. SEE NOTIFICATION “SECTION II”, UNDER “CARCINOGENICITY”.

**TERATOGENICITY:** NONE KNOWN. LCO; GREATER THAN 1000 MG/1 GOLDEN ORFE (LEUCISCUS IDUS)

**MUTAGENICITY:** NONE KNOWN

**TOXICOLOGICALLY SYNERGISTIC PRODUCTS:** NONE KNOWN

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** INDIVIDUALS WITH PRE-EXISTING LUNG DISEASES MAY HAVE INCREASED SUSCEPTIBILITY IF TLV ARE EXCEEDED.

**EMERGENCY & FIRST AID PROCEDURES**

**INHALATION:** IRON OXIDE IS NOT KNOWN TO PRODUCE ANY HARMFUL EFFECTS IF INHALED, HOWEVER, IF VICTIM COMPLAINS OF DIZZINESS MOVE TO FRESH AIR IMMEDIATELY.

**SKIN CONTACT:** WASH WITH WATER AND A MILD SOAP.

**EYES:** FLUSH EYES WITH LARGE AMOUNTS OF WATER FOR ABOUT FIFTEEN MINUTES, SHOULD AN IRRITATION DEVELOP CONTACT A PHYSICIAN.

**INGESTION:** IRON OXIDE IS NOT KNOWN TO BE FATAL. GIVE PERSON WATER TO DRINK AND INDUCE VOMITING. CHECK WITH A PHYSICIAN.

**\*\*\*NOTIFICATION:** NEVER GIVE ANYTHING –NOT EVEN WATER TO AN UNCONCIOUS PERSON –GET MEDICAL ATTENTION IMMEDIATELY.

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**SECTION VII: PRECAUTIONS FOR SHIPPING/STORAGE/HANDLING USE  
SPILL OR LEAK PROCEDURES**

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**SPILL PROCEDURES:** VACUUM OR USE WET CLEAN-UP PROCEDURES AND PLACE WASTE MATERIAL IN CLOSED CONTAINERS. AVOID EXCESSIVE DUSTING.

**WASTE DISPOSAL METHOD:** MATERIAL WHICH CAN NOT BE RECYCLED INTO WORK PROCESS SHOULD BE LANDFILLED IN ACCOURDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS.

**HANDLING/STORAGE PRECAUTIONS:** SHELF LIFE OF IRON OXIDE IS UNLIMITED. STORE IN A COOL, DRY PLACE. KEEP AWAY FROM FOOD AND BEVERAGES. DO NOT STORE NEAR STRONG OXIDIZERS.

\*TEMPERATURES GREATER THAN 176 F (80 C) MAY CAUSE THIS PRODUCT TO BECOME UNSTABLE (SLOWLY AUTO OXIDIZE) WHICH GENERATES SOME ADDITITONAL HEAT. UNDER CERTAIN CIRCUMSTANCES THIS HEAT MAY BE SUFFICIENT TO CAUSE COMBUSTABLE MATERIAL TO IGNITE. DO NOT STORE NEAR SOURCES OF HEAT, OR NEAR FLAMMABLE OR COMBUSTABLE MATERIALS.

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**SECTION VIII: SPECIAL PROTECTION INFORMATION/CONTROL  
MEASURES**

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**RESPIRATORY PROTECTION:** AMBIENT CONCENTRATIONS IN THE WORK AREA SHOULD BE MONITORED AND IF THE RECOMMENDED EXPOSURE LIMIT IS EXCEEDED, OR CONCENTRATIONS UP TO 10 TIMES THE EXPOSURE LIMIT FOR NIOSH/MSHA, USE APPROVED RESPIRATORS.

**VENTILATION:** USE LOCAL VENTILATION TO MAINTAIN AIR LEVELS BELOW THE RECOMMENDED EXPOSURE LIMITS IF DUSTING IS A PROBLEM.

**PROTECTIVE GLOVES:** RUBBER, CLOTH OR PLASTIC GLOVES ARE RECOMMENDED TO REDUCE SKIN CONTACT WHERE APPROPRIATE FOR WORK CONDITIONS.

**EYE PROTECTION:** SAFETY GLASES ARE RECOMMENDED.

**WORK/HYGENIC PRACTICES:** EYE WASH STATIONS AND WASHING FACILITIES ARE RECOMMENDED FOR EMPLOYEES USING PRODUCT. EMPLOYEES SHOULD WASH THEIR HANDS/FACE BEFORE EATING, DRINKING OR USING TOBACCO PRODUCTS.

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## **SECTION IX: TRANSPORTATION DATA**

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**D.O.T. SHIPPING NAME:** NOT REGULATED

**HAZARD CLASS:** NOT APPLICABLE

**IDENTIFICATION NUMBER:** NOT APPLICABLE

**PACKING GROUP:** NOT APPLICABLE

**LABEL:** SYNTHETIC IRON OXIDE BLACK

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## **SECTION X: DISCLAIMER**

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ALL INFORMATION PRESENTED IN THIS MATERIAL SAFETY DATA SHEET IS GIVEN IN GOOD FAITH AND IS BASED UPON SOURCED AND TESTS CONSIDERED TO BE RELIABLE BUT THEY CAN NOT BE GUARANTEED. IT IS THE USER'S FULL RESPONSIBILITY TO ACCEPT RISK FOR THE SAFETY, HANDLING, STORAGE, USE AND TOXICITY OF THIS PRODUCT, AS WELL AS TO DETERMINE THE SUITABILITY OF THE PRODUCT FOR A SPECIFIC PURPOSE. THEREFORE ALL RISKS MUST BE ASSUMED BY THE USER. NO WARRANTIES ARE EXPRESSED OR IMPLIED ON THE ACCURACY OF THE INFORMATION. PMET INC. ASSUMES NO LEGAL RESPONSIBILITY FOR USE OR RELIANCE UPON THIS DATA.

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