



WHITTAKER CLARK & DANIELS, INC

MINERALS, COLORS, CHEMICALS

MATERIAL SAFETY DATA SHEET

PRODUCT/MATERIAL RED IRON OXIDE
 MANUFACTURER/DISTRIBUTOR WHITTAKER, CLARK & DANIELS, INC
 ADDRESS 1000 COOLIDGE STREET
 SOUTH PLAINFIELD, NJ 07080
 EMERGENCY TELEPHONE NO. (908) 561-6100

SECTION I - PRODUCT IDENTIFICATION

TRADE NAME RED IRON OXIDE
 SYNONYM IRON OXIDE, FERRIC OXIDE
 CHEMICAL FAMILY METAL OXIDE
 FORMULA Fe₂O₃ and Fe₃O₄
 C.I. PIGMENT RED, 101, C.I. NO. 77491
 CAS NUMBER 1309-37-1
 EINECS NUMBER 2151682
 HMIS HEALTH 0
 FLAMMABILITY 0
 REACTIVITY 0

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT NAME	CAS NUMBER	PERCENT	EXPOSURE LIMITS
IRON OXIDE RED	1309-37-1	>92	ACGIH TLV: 5 mg/M ³ TWA (Iron Oxide Fume) OSHA STEL: 10 ppm (Iron Oxide Fume as Fe)
IRON OXIDE BLACK	1317-61-9	<8	ACGIH TLV: 5 mg/M ³ TWA (Iron Oxide Fume) OSHA STEL: 10 ppm (Iron Oxide Fume as Fe)

THERE ARE EXTREMELY SMALL, BUT DETECTABLE AMOUNTS OF SUBSTANCES REGULATED UNDER CALIFORNIA'S SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65).

ARSENIC	LESS THAN 2 ppm
BERYLLIUM	LESS THAN 2 ppm
CADIUM	LESS THAN 2 ppm
CHROMIUM (VI)	LESS THAN 0.1 ppm
LEAD	LESS THAN 10 ppm

THESE LEVELS ARE "TYPICAL" QUANTITIES AND MAY CHANGE SLIGHTLY WITH DIFFERENT LOTS. THE TERM "LESS THAN" INDICATES THAT THE SUBSTANCE WAS DETECTED, BUT THE AMOUNT WAS LESS THAN THE QUANTIFIABLE LIMIT.

SECTION III - PHYSICAL DATA

BOILING POINT (F) NOT APPLICABLE
 VAPOR PRESSURE (mmHg) NOT APPLICABLE
 VAPOR DENSITY NOT APPLICABLE
 SOLUBILITY IN WATER INSOLUBLE
 SPECIFIC GRAVITY 4.8 - 5.2
 PERCENT VOLATILE BY WEIGHT 0
 EVAPORATION RATE 0
 APPEARANCE AND ODOR RED TO REDDISH BROWN POWDER NO ODOR.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA



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FLASH POINT NOT FLAMMABLE
EXTINGUISHING MEDIA NOT FLAMMABLE. USE APPROPRIATE EXTINGUISHING MEDIA FOR THE COMBUSTIBLE MATERIAL INVOLVED IN THE FIRE.
UNUSUAL FIRE OR EXPLOSION HAZARDS NONE
SPECIAL FIRE FIGHTING PROCEDURES FIRE FIGHTERS SHOULD USE SELF-CONTAINED BREATHING APPARATUS.

SECTION V - HEALTH HAZARD DATA

CARCINOGENICITY THIS PRODUCT IS NOT CONSIDERED A CARCINOGEN BY IARC, NTP, ACGIH OR OSHA.
SUMMARY OF RISKS MAY CAUSE MECHANICAL SKIN AND EYE IRRITATION. REPEATED AND PROLONGED EXPOSURES TO IRON OXIDE DUST MAY CAUSE A BENIGN PNEUMOCONIOSIS CALLED SIDEROSIS.
PRIMARY ENTRY ROUTE(S) INHALATION, INGESTION, SKIN AND EYE IRRITATION.
ACUTE EFFECTS CAUSES MECHANICAL SKIN AND EYE IRRITATION.
CHRONIC EFFECT(S) PROLONGED INHALATION OF IRON OXIDE DUST IS KNOWN TO PRODUCE A CONDITION KNOWN AS 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. THE TLV IS SET TO PROTECT AGAINST SIDEROSIS.

FIRST AID:

EYE CONTACT FLUSH EYES WITH GENEROUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. CALL A PHYSICIAN IF IRRITATION PERSISTS.
SKIN CONTACT WASH SKIN WITH MILD SOAP AND WATER.
INHALATION REMOVE TO FRESH AIR. CALL A PHYSICIAN.
INGESTION IF CONSCIOUS, GIVE LARGE QUANTITIES OF WATER TO INDUCE VOMITING. GET MEDICAL ATTENTION.

SECTION VI - REACTIVITY DATA

INCOMPATIBILITY PRODUCT IS STABLE
IRON OXIDES ARE INCOMPATIBLE WITH HYDRAZINE, CALCIUM HYPOCHLORITE, PERFORMIC ACID, AND BROMINE PENTAFLUORIDE.
HAZARDOUS DECOMPOSITION PRODUCTS NONE
HAZARDOUS POLYMERIZATION WILL NOT OCCUR.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO TAKE IN CASE MATERIAL IS RELEASED OR SPILLED NORMAL CLEAN-UP PROCEDURES. CARE SHOULD BE TAKEN TO AVOID CAUSING DUST TO BECOME AIRBORNE. VACUUM CLEANING SYSTEMS ARE RECOMMENDED.
WASTE DISPOSAL METHOD DISPOSE OF IN APPROVED LANDFILL. DISPOSAL MUST BE MADE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. PURSUANT TO 40 CFR PART 261 OF THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) REGULATIONS CURRENTLY IN EFFECT, DISCARDED MATERIAL WOULD NOT BE CLASSIFIED A HAZARDOUS WASTE.

SECTION VIII - SPECIAL PROTECTION INFORMATION

EYE PROTECTION (USE MOST APPROPRIATE) SAFETY GLASSES, GOGGLES, FACE SHIELD.
SKIN PROTECTION LEATHER OR RUBBER GLOVES.
RESPIRATORY PROTECTION USE OF A NIOSH APPROVED DUST RESPIRATOR IS RECOMMENDED WHEN EXPOSURE LIMITS MAY BE EXCEEDED.

WORKPLACE CONSIDERATIONS



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VENTILATION

LOCAL EXHAUST VENTILATION TO COLLECTOR OR CONTAINMENT RECOMMENDED TO CONTROL DUST TO BELOW EXPOSURE LIMITS.

SAFETY STATIONS

AN EYE WASH STATION SHOULD BE AVAILABLE TO THE AREA OF USE.

SECTION IX - HANDLING AND STORAGE

HANDLING:

GOOD INDUSTRIAL HYGIENE PRACTICE REQUIRES THAT EMPLOYEE EXPOSURE BE MAINTAINED BELOW THE RECOMMENDED TLV. THIS IS PREFERABLY ACHIEVED THROUGH THE PROVISION OF ADEQUATE VENTILATION WHERE NECESSARY. WHERE DUST CANNOT BE CONTROLLED IN THIS WAY, PERSONAL RESPIRATORY PROTECTION SHOULD BE EMPLOYED.

STORAGE:

STORE IN A DRY AREA AT AMBIENT TEMPERATURE.

SECTION X - TOXICOLOGICAL INFORMATION

THERE ARE NO KNOWN DANGEROUS ACUTE OR CHRONIC EFFECTS ASSOCIATED WITH THE USE OF THIS MATERIAL. THE ACUTE ORAL TOXICITY (LD₅₀) FOR Fe₂O₃ IS GREATER THAN 10 g./kg. (RAT).

SECTION XI - ECOLOGICAL INFORMATION

IRON OXIDE PIGMENTS ARE INERT, INSOLUBLE, AND BIOLOGICALLY INACTIVE. THEY DO NOT PRESENT AN ENVIRONMENTAL HAZARD.

SECTION XII - TRANSPORTATION

IRON OXIDE PIGMENTS ARE CONSIDERED TO BE NON-HAZARDOUS ACCORDING TO U.S. DEPARTMENT OF TRANSPORTATION AND INTERNATIONAL SHIPPING REGULATIONS.

SECTION XIII - REGULATORY

IRON OXIDE PIGMENTS ARE NOT SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW ACT AND OF 40 CFR 372 (U.S.). THEY ARE NOT INCLUDED ON THE EEC LIST OF HARMFUL PRODUCTS (DMN 555 DATED 25/07/87).

ISSUED: 10/93

SUPERCEDES: 7/93