

TECH LINE COATINGS, INC.



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MATERIAL SAFETY DATA SHEET

SECTION I

COMMON NAME(S): MCSsf.

CHEMICAL NAME (S) AND SYNONYM (S): METALLIC CERAMIC COATING

CHEMICAL FAMILY: Not Applicable

FORMULA: Complex Mixture

EMERGENCY PHONE: (Chemtrec) 1-800-424-9300

INFORMATION PHONE: 951-304-0498

DATE PREPARED: 8/13/2003 (update)

SECTION II

HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	CAS#	CONCENTRATIONS
PHOSPHATE/CHROMATE SOLUTION (Less than 3.% of total weight is CrO3) ACGIH TLV: 1mg/M3	92203-02-6	>15%
1,2 - Propanediol ACGIH TLV: 50 ppm	57-55-6	<1%
1-Methoxy-2propanol ACGIH TLV 100 ppm OSHA PEL: 100 ppm	107-98-2	<1%
1-Methoxy-2propanol acetate ACGIH TLV 100 ppm	108-65-6	<1%
Stainless Steel Flake: Composition and ingredients as follows;		<10%

Ingredient	CAS #	0%	ACHIG TLV-TWA	OSHA PEL-TWA	ECC Symbols	ECC R-phase	ECC S-phase
Iron	7439-89-6	66-71	N/A	N/A			
Chromium	7440-47-3	16-18	0.5 mg/m3	1 mg/m3	Ti,Xi	25,36/37/ 38, 43	24/25
Nickel	7440-47-0	10-14	1 mg.m3	1 mg.m3	Carc.Cat1 F,T,Xi	45.10,25, 42/43	53,22,24
Molybdenum	7439-98-7	2-3	10 mg/m3	10 mg/m3			
Manganese	7439-96-5	0-2	5 mg/m3	5 mg/m3	T, Xi	25, 36/37/38	24/25
Silicon	7440-21-3	<1	10 mg/m3	10:5 mg/m3	F	10	
Fatty Acid	57-11-4	<1	N/A	N/A	Xi	38	28/37

Note: "Total dust" and "Respirable Fraction" OSHA PEL values are listed for Silicon

NOTE: The National Toxicology program lists chromium and certain chromium compounds to be carcinogenic.

Pigment Black 26 (Manganese Ferrite Black Spinel) ACGIH: .20mg/m3 TWA (2) OSHA: 5.00mg/m3 Ceiling (as Mn) 3.00 mg/m3 STEL (1) 1.00 mg/m3 TWA (1)	68186-94-97	>5%
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This pigment contains the following potential hazardous ingredients, which have been chemically reacted at a high temperature and are homogeneously and ionically interdiffused to form an essentially insoluble pigment crystal with a crystalline matrix of spinel. Its composition may include a modifier. This means that they are not present in the form of a simple physical mixture.

MAGANESE OXIDE a component of Pigment Black 26

- (1) Manganese fume (as Mn)
- (2) Manganese, elemental and inorganic compounds (as Mn)

Crystalline silica (quartz) 14808-60-7 >25%
OSHA PEL: 10mg/m3
ACGIH TLV: 0.1mg/m3

SECTION III
PHYSICAL CHARACTERISTICS

BOILING POINT: N/A
VAPOR DENSITY (AIR = 1) : <1
% VOLATILE VOLUME: 59.7%
APPEARANCE AND ODOR: GOLD/ BROWN WITH NO ODOR
SOLUBILITY IN WATER: APPRECIABLE
VOC'S: 0
SHIPPING: not regulated

SECTION IV
FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: NONE
EXTINGUISHING MEDIA: USE SAND OR CARBON DIOXIDE
SPECIAL FIRE FIGHTING PROCEDURES: n/a
UNUSUAL FIRE AND EXPLOSION HAZARDS: N/A

SECTION V
REACTIVITY DATA

STABILITY: STABLE
INCOMPATIBILITY (MATERIALS TO AVOID) : CONTACT WITH OXIDIZING AGENTS, ALKALIS OR STRONG REDUCING AGENTS
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION VI
HEALTH HAZARD DATA

ROUTES OF ENTRY:
INHALATION? YES
SKIN? YES
INGESTION? YES
CARCINOGENICITY:
NTP, OSHA? CHROMIUM AND CERTAIN CHROMIUM COMPOUNDS ARE LISTED. Crystalline silica is listed as a probable human carcinogen.

The following information is for crystalline silica in its dry form, not as blended.

HEALTH HAZARDS: Crystalline silica does not cause burns or severe skin or eye irritation. A single exposure will not result in serious adverse health effects. Crystalline silica is not an environmental hazard.
Potential health effects:

INHALATION: Exposure to Crystalline silica can cause silicosis, a fibrous scarring of the lungs. Silicosis may be a progressive; it may lead to disability and death. There is evidence that exposure to respirable crystalline silica or the disease silicosis is associated with the increased incidence of scleroderma, an immune system disorder manifested by a fibrosis (scarring) of the lungs, skin and other internal organs. Individuals with silicosis are predisposed to develop tuberculosis, There are several studies that suggest that respirable crystalline silica or the disease silicosis is associated with the increased incidence of kidney lesions.

NOTE: When crystalline silica is heated to more than 850C/1560f it can change to a form known as trydimite. The PEL for trymidite is 1/2 that of crystalline silica.

HEALTH HAZARDS: CHROMIUM AND CERTAIN CHROMIUM COMPOUNDS
EYES: CAUSES SEVERE IRRITATION
SKIN: CAUSES MILD SKIN IRRITATION, DRYING OF SKIN
INHALATION: MAY CAUSE DRYING OF NASAL AND RESPIRATORY TISSUE
INGESTION: HARMFUL IF SWALLOWED, CAUSING VOMITING, NAUSEA, DIARRHEA

HEALTH HAZARDS: Black Pigment 26 On the basis of animal studies this material would be expected to be ono irritating to the eyes and skin and to be essentially non toxic by ingestion. Mechanical irritation to the material can occur to the eyes and skin. To date no adverse health effects to exposure to this material has been reported among workers using this pigment.

EMERGENCY AND FIRST AID:
EYES: IMMEDIATELY FLUSH WITH PLENTY OF WATER, CALL A PHYSICIAN
SKIN: WASH WITH WATER. REMOVE CONTAMINATED CLOTHING
INHALATION: REMOVE INDIVIDUAL TO FRESH AIR. ADMINISTER OXYGEN IF

BREATHING IS DIFFICULT. CALL A PHYSICIAN
INGESTION: GIVE LARGE AMOUNTS OF WATER FOLLOWED BY MILK OF MAGNESIA. CALL A PHYSICIAN IMMEDIATELY

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: RESPIRATORY, DERMAL AILMENTS

SECTION VII
SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: CLEAN SPILL WITH ABSORBENT MATERIAL. NEUTRALIZE WITH SODIUM BICARBONATE. DO NOT USE STRONG ALKALIS. FLUSH AREA WITH WATER
WASTE DISPOSAL METHOD: MATERIAL MAY BE BAKED AT CURE TEMPERATURE THEN DISCARDED AS SOLID WASTE, OR FILTER TO REMOVE SOLIDS AND DISCARD AS SOLID WASTE. TREAT REMAINING LIQUID WITH SODIUM METABISULFITE, THEN PRECIPITATE TRIVALENT CHROMIUM BY NEUTRALIZING WITH ALKALI, SUCH AS LIME. DISPOSAL SHOULD BE MADE IN ACCORD WITH FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION VIII
SPECIAL PROTECTION / CONTROL MEASURES:

RESPIRATORY PROTECTION: #9910 RESPIRATOR MANUFACTURED BY 3M OR EQUIVALENT

VENTILATION:

LOCAL EXHAUST: USE TO MAINTAIN BELOW TWA LIMITS

MECHINICAL: USE NON-SPARKING EQUIPMENT

PROTECTIVE GLOVES: RUBBER ACID PROOF

EYE PROTECTION: SAFETY GLASSES WITH SIDE SHIELDS OR GOGGLES

OTHER PROTECTIVE EQUIPMENT: WEAR PROTECTIVE CLOTHING, ACID PROOF

WORK / HYGIENIC PRACTICES: WASH THOROUGHLY AFTER HANDLING PRODUCT AND BEFORE EATING, DRINKING OR SMOKING

SECTION IX
SPECIAL PRECAUTIONS

HANDLING AND STORAGE: STORE IN AREAS THAT WILL NOT COME INCONTACT WITH STRONG ALKALIS OR OXIDIZING AGENTS.

NOTE: Since this compound contains aluminum powder, a clean spray area and duct system is important. It is hazardous to allow an accumulation of dried material to occur since this dried material in the form of duct could be ignited by sparks or other means and possibly cause a dust explosion as with any finely divided powdered material.

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