



MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product & Company Information

Chemical Product: C.I. Pigment Black 28 (Copper Chromite Black Spinel)

Company Information : HUNAN JUFA TECHNOLOGY CO.,LTD

Room 104, Unit 2, No. 6 building

Long Feng Jia Yuan, Shaziling, Xiangtan,

Hunan, China.

Emergency telephone no: 0086-731-52345997

Section 2. Composition/Information on Ingredients

<u>Ingredients:</u>	<u>CAS No:</u>	<u>EINECS</u>	<u>% Weight(Typical)</u>
Copper Chromite Black Spinel	68186-91-4*	269-053-7	99-100
Sodium chromate (impurity)	7775-11-3		0-1

Synonyms: C.I. Pigment Black 28; C.I. Constitution #77428; CPMA #13-38-9

This product is the result of high temperature calcination of the component substances. Due to its unique crystalline structure the properties of this finished pigment do not necessarily reflect the properties of the component metals or oxides. **

Section 3. Hazards Identification

EEC Risk Phrases: TOXIC!
R49 May cause cancer by inhalation.
R46 May cause heritable genetic damage.

EEC Safety Phrases: S22 Do not breathe dust.
S38 In case of insufficient ventilation, wear suitable respiratory equipment.

Methods for Cleanup: See Section XI for Toxicological Information.

Section 4. First Aid Measures

If inhaled:	If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician.
On ingestion:	If conscious, drink large quantities of water. Do Not induce vomiting. Get immediate medical attention. NEVER give anything by mouth to an unconscious person.
On contact with eyes:	On contact with eyes flush eyes with plenty of water for at least fifteen (15) minutes. Call a physician.
On skin contact:	On skin contact, wash thoroughly with soap and water.

Section 5. Fire Fighting Measures

Suitable extinguishing media:	This product will not burn. Use suitable extinguishing media for fighting surrounding fire.
Unsuitable extinguishing media:	Not applicable
Emitted when burned:	Not applicable
Special protective equipment:	This product will not burn. Use appropriate techniques for fighting surrounding fire.
Further information:	None

Section 6. Accidental Release Measures

Personal precautions:	Maintain appropriate dust control.
Environmental precautions:	Prevent contamination of soils, drains and surface water.
Methods for cleanup:	Transfer material into closed container for re-use or disposal.

Section 7. Handling and Storage

Handling:	Good housekeeping procedures should be followed to prevent dust during processing. Do not eat, drink or smoke in work areas. Wash thoroughly with soap and water after handling. Provide eye wash stations in areas of handling.
Storage:	Store material in a closed container. Normal warehousing.

Section 8. Exposure Controls/Personal Protection

Engineering controls/measures:	Use mechanical ventilation to keep dust below regulatory
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standards (see Section II). Design criteria usually cannot be specified in an MSDS because of its complexity.

Personal Protective Equipment:

Respiratory protection: MSHA/NIOSH respirators approved for dusts TC-21C or NIOSH approved cartridges for Non-oil aerosols, N95, N99, N100 (42 CFR 84).

Hand protection: Rubber, PVC coated gloves, impermeable.

Eye protection: Safety Glasses with side shields, mono goggles.

Body protection: No special precautions (see hand protection).

General safety and hygiene measures: Good housekeeping procedures should be followed to prevent dust during processing.

As Regulated (Related Exposure Limits)	OSHA PEL (mg/m ³)	ACGIH TLV (mg/m ³)	%Metal (Typical)	Sara 313
Chromium (III) compounds (as Cr)	0.5	0.5	27	Yes
Chromium (VI) -Sodium Chromate (as Cr VI) Impurity	0.005 (See 1910.1026) Action Limit 0.0025 mg/m ³	0.05 A1 as CrVI	0.3	Yes
Copper dusts and mists (as Cu)	1	1	17	Yes
Manganese compounds (as Mn)	5 Ceiling	0.2	29	Yes

Section 9. Physical and Chemical Properties

Appearance:	Black Powder
Odor:	No Odor
Melting point/melting range:	Not applicable
Boiling point/boiling range:	Not applicable
Flash point:	Not applicable
Combustibility:	Not applicable
Explosion limits:	
Lower Vol. %:	Not applicable
Upper Vol. %:	Not applicable
Ignition temperature:	Not applicable
Self-ignition:	Not applicable
Self-ignition temperature:	Not applicable
Explosion hazard:	Not applicable
Fire promoting properties:	Not applicable



Vapor pressure:	Not applicable
Specific gravity:	5.1 SCTM312
Bulk density:	No data available
Packing density:	No data available
Solubility in Water:	Negligible
Solubility in other solvents:	Negligible
pH value:	7.2 SCTM101 (8)
Octanol/water partition coefficient (log POW):	Not applicable
Viscosity:	Not applicable
Other information:	Not applicable

Section 10. Stability and Reactivity

Conditions to avoid:	None known
Materials to avoid:	None known
Hazardous reactions:	None known
Hazardous decomposition products:	None known

Section 11. Toxicological Information

Acute Toxicity

LD50/oral/rat:	> 10, 000 mg/kg (6)
LD50/inhal/rat:	> 11.1 mg/L (5)
Sensitizing:	None expected
Primary skin irritation/rabbit:	No data available
Primary mucous membrane irritation/rabbit' eyes:	No data available

ADDITIONAL INFORMATION:

Repeated overexposure to this compound may cause eye, skin and respiratory tract irritation. Some compounds of the metals used in the manufacturing of this pigment Chromium, Copper and Manganese, have demonstrated various toxic properties (1,2,3,4). However, there is no evidence that this pigment has these toxic characteristics.

Routes of Entry:



Eyes: No Skin: No Inhalation: Yes Ingestion: Yes
CARCINOGENICITY: NTP: Yes IARC Monographs: Yes
OSHA Regulated: No

IARC has classified Chromium (VI) as carcinogenic to humans. Chromium and certain forms of chromium compounds are listed as carcinogenic by NTP. NTP and IARC have determined that there is sufficient evidence for the carcinogenicity of hexavalent chromium compounds both in humans and experimental animals. However, the hexavalent chromium compounds responsible (for human carcinogenicity) cannot be specified. Warning: This product contains a chemical known to the State of California to cause cancer.

Signs and Symptoms of Exposure: Irritation of the eyes, skin and respiratory tract.
Medical Conditions Generally Aggravated by Exposure: Respiratory and skin disorders aggravated by dust.

Section 12. Ecological Information

Mobility: No data available
Degradability: No data available
Accumulation: No data available
Short and long term effects on:
Ecotoxicity: No data available
Other adverse effects: No data available

Section 13. Disposal Considerations

Substance: Dispose of at an approved landfill in accordance with local, state, federal and national regulations.
Contaminated packaging: Dispose of at an approved landfill in accordance with local, state, federal and national regulations.

Section 14. Transport Information

INTERNATIONAL

Land transport:	ADR/RID/GGVS/GGVE:	Not Regulated
Sea transport:	IMDG/GGVSee UN-No.:	Not Regulated
Air transport:	ICAO/IATA UN/ID-No.:	Not Regulated
<u>U.S.</u>	D.O.T. Classification:	Not Regulated
<u>CANADA</u>	Transport of dangerous goods:	Not Regulated



Section 15. Regulatory Information

Labeling according to EEC Directives: T

R49 May cause cancer by inhalation.

R46 May cause heritable genetic damage.

S22 Do not breathe dust.

S38 In case of insufficient ventilation, wear suitable respiratory equipment.

SARA

SARA 312:

Health:	Immediate (Acute):	No*	Fire:	None
	Delayed (Chronic):	Yes**	Reactivity:	None
			Sudden release of pressure:	None

*Not an acute hazard, however may cause irritation due to abrasiveness.

** See Section 11

SARA 313:

THIS PRODUCT CONTAINS A CHEMICAL OR CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372. THIS INFORMATION MUST BE INCLUDED IN ALL MSDS THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

99-100% Chromium Compound

0-1% Chromium (VI) Compound

99-100% Copper Compound

99-100% Manganese Compound

Inventories

The ingredients of this product have been listed in the following inventories:

Australia AICS:	Listed	
Canada DSL:	Listed	
Europe EINECS:	Listed	269-053-7
Japan MITI:	Listed	
Korean:	Listed	KE-07834
Philippine Draft:	Listed	



U.S.A. TSCA:

Listed

HMIS Code: 1*00

Section 16. Other Information

1. Occupational Health Guidelines for Chemical Hazards, Vol. I., OSHA, Sept., 1978.
2. Occupational Diseases "A Guide to Their Recognition", U.S. DHEW (NIOSH), June 1977.
3. Documentation of the Threshold Limit Values, 6th Edition, ACGIH, 1991.
4. Pocket Guide to Chemical Hazards, NIOSH/OSHA, June, 1997.
5. Federal Register/Vol. 60, No. 114 /Wednesday, June 14, 1995.

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