



MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1. IDENTIFICATION OF PRODUCT & COMPANY

- Name: Carbon Black
- Chemical Characterization: Carbon
- State: Solid pellet

Manufacturer: Baoji Xuan Tai Pigment Technology Co., Ltd.

Address: Chencang District Yang Ping Town Baoji City of Shaanxi Province, China.

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SECTION 2. HAZARDS IDENTIFICATION

2.1 Exposure Control (Inhalation Standards)

- U.S. OSHA PEL: 3.5mg/m³ TWA 8 hours/day, 40 hours/week
- ACGIH TLV: 3.5mg/m³ TWA 8 hours/day, 40 hours/week
- GERMANY: MAK=6mg/m³ TWA fine dust

2.2 Elements

Signal word:	WARNING
Hazard statements:	May form explosible dust-air mixture if dispersed.
Pictogram:	None. Not currently available for combustible dust hazard.
Precautionary statements:	Keep away from all ignition sources including heat, sparks & flame. Prevent dust accumulations to minimize explosion hazard Control dust exposures to below applicable occupational exposure limits.

2.3 Hazards Not Otherwise Classified (HNOC)

Carbon black may form an explosible dust-air mixture if dispersed. Carbon black can burn or smolder at temperatures greater than 400°C (>752°F) releasing hazardous products such as carbon monoxide (CO), carbon dioxide, and oxides of sulfur. Effective engineering practices, good housekeeping practices, and effective dust removal systems are necessary to minimize carbon black emissions and resultant build-up on horizontal and vertical surfaces. Fugitive carbon black emissions should be minimized and housekeeping practices should be instituted.



2.4. Other Hazards

- Eye: May cause reversible mechanical irritation.
- Skin: May cause mechanical irritation, soiling, and drying of skin. No cases of sensitization in humans have been reported.
- Inhalation: Dust may be irritating to the respiratory tract. Provide local exhaust ventilation.
- Ingestion: Adverse health effects are not expected.
- Carcinogenicity: Carbon black is listed by the International Agency for Research on Cancer (IARC) as a Group 2B substance (*possibly carcinogenic to humans*).

SECTION 3. COMPOSITION/ INFORMATION ON INGREDIENTS

Substance

Carbon Black (amorphous)100%

Common name(s), synonym(s) of the substance: furnace black CAS number and other unique identifiers for the substance

CAS number: 1333-86-4

EINECS-RN: 215-609-9

Structural formula: Substantially elemental carbon, C

SECTION 4. PERSONAL PEOTECTION & FIRST AID

■ Personal Protection

Protective Gloves: Chemical resistant gloves

Eye Protection: Appropriate goggles

Purifying respirator

In case of repeated or prolonged skin contact, protective clothing should be worn.

■ First Aid

● Skin-contact: Wash skin with soap and water. Call physician if symptoms occur.

● Eye-contact: Flush with water for at least 15 min. Call physician if symptoms occur.

● Inhalation: Remove to fresh air. Obtain medical attention in all cases.



SECTION 5. PHYSICAL & CHEMICAL PROPERTIES

Information on basic physical and chemical properties	
Appearance	powder or pellet
Color	black
Odor	odorless
Odor threshold	not applicable
Melting point/freezing point	not applicable
Boiling point/range	not applicable
Vapor pressure	not applicable
Vapor Density	not applicable
Pour density	380 40kg/m ³
Oxidizing properties	not applicable
Flash Point	not applicable
Flammability	not flammable
Inflammability	May not be obvious unless stirred & sparks are apparent.
	Non-explosive under normal handling/storage. Not self-ignition but may smolder above 315°C in air.
	In case of high energy ignition sources and concentration above 50 g/cm ³ , explosion may occur.
Explosive properties	Dust may form explosible mixture in air Explosion limits (air):
Explosion limits (air)	
Upper	not available
Lower	50 g/m ³ (dust)
Evaporation rate	not applicable
Density: (20°C)	1.7 – 1.9 g/cm ³
Bulk density	1.25-40 lb/ft ³ , 20-640 kg/m ³
Pellets	200-680 kg/m ³
Powder (fluffy)	20-380 kg/m ³
Solubility (in Water)	Insoluble, Highly dispersible
pH value: (ASTM 1512)	4-11 [50 g/l water, 68°F (20°C)]
Partition coefficient (n-octanol/water)	not applicable
Viscosity	not applicable
Decomposition temperature	not applicable
Auto-ignition temperature	>140°C
Minimum Ignition temperature	>500°C (BAM Furnace)(VDI 2263)

Minimum ignition energy	>315°C (Godberg-Greenwald Furnace)(VDI 2263)
	>10.000 mJ (VDI 2263)
Ignition energy	not available
Maximum absolute explosion pressure	10 bar (VDI 2263)
Maximum rate of pressure rise	30-400 bar/sec (VDI 2263 and ASTM E1226-88)
Burn Velocity	> 45 seconds (not classified as "highly flammable" or "easily ignitable")
Kst Value	not available
Dust explosion classification	ST1
Decomposition temperature	not applicable

SECTION 6. STABILITY & REACTIVITY

6.1 Reactivity

Reactivity: May react exothermically upon contact with strong oxidizers.

6.2 Chemical stability

Stability: Stable under normal ambient conditions.

Explosion data

Sensitivity to mechanical impact: Not sensitive to mechanical impact

Sensitivity to static discharge: Dust may form explosible mixture in air. Avoid dust formation. Do not create a dust cloud. Take precautionary measures against static discharges. Ensure all equipment is earthed/grounded before beginning transfer operation.

6.3 Possibility of hazardous reactions

Hazardous polymerization: Does not occur.

Possibility of hazardous reactions: None under normal conditions.

6.4 Conditions to avoid

Conditions to avoid: Avoid high temperatures >400°C (>752°F) and sources of ignition.

6.5 Incompatible materials

Incompatible materials: Strong oxidizers.

6.6 Hazardous decomposition products

Hazardous decomposition products: Carbon monoxide, carbon dioxide, organic products of combustion, oxides of sulfur.



SECTION 7. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute Toxicity:

Oral LD50: LD₅₀ (rat) > 8000 mg/kg. (Equivalent to OECD TG 401)

Ingestion: No adverse effects expected.

Inhalation LD50: Temporary discomfort or mechanical irritation to upper respiratory tract may occur due to inhalation of dust concentrations well above the recommended 8 hr TCL.

Dermal LD50: No data available

Skin corrosion/irritation: Rabbit: not irritating. (Equivalent to OECD TG 404)

Edema = 0 (max. attainable irritation score: 4) Erythema = 0 (max. attainable irritation score: 4)

Assessment: Not irritating to skin.

Serious eye damage/irritation: Rabbit: not irritating. (OECD TG 405)

Cornea: 0 (max. attainable irritation score: 4)
Iris: 0 (max. attainable irritation score: 2)

Conjunctivae: 0 (max. attainable irritation score: 3)
Chemosis: 0 (max. attainable irritation score: 4)

Assessment: Not irritating to the eyes.

Sensitization:

Guinea pig skin (Buehler Test): Not sensitizing (OECD TG 406)

Assessment: Not sensitizing in animals.

No cases of sensitization in humans have been reported.



SECTION 7. FIRE FIGHTING

- Suitable extinguishing agents use water mist formed with surfactant. To extinguish a fire in closed containers, use CO₂ otherwise use a fine water spray.
- Additional Information: Use appropriate respirator for protection against possible CO/CO₂ exposure.

SECTION 8. ACCIDENTAL RELEASE MEASURES

- Personal Protection: Wear protective appropriate respirator.
- Environmental Precautions: Remove spill by vacuuming/ spraying with water & spraying mixture into suitable container. Do not discharge carbon black into waterways and sewers.

SECTION 9. ECOLOGICAL INFORMATION

9.1 Toxicity

Aquatic toxicity:

Acute fish toxicity:

LC0 (96 h) 1000mg/l, Species:
Brachydanio rerio (zebrafish),
Method: OECD Guideline 203

Acute invertebrate toxicity:
magna (waterflea),

EC50 (24 h) > 5600 mg/l, Species: *Daphnia*
Method: OECD Guideline 202

Acute algae toxicity:
Species: *Scenedesmus*

EC50 (72 h) >10,000 mg/l, NOEC 10,000 mg/l,
subspicatus, Method: OECD Guideline 201

Activated sludge:
mg/l, Method: DEV L3 (TTC
test)

EC0 (3 h) > 400 mg/l, EC10 (3h): ca. 800

9.2 Persistence and degradability

Not soluble in water. Expected to remain on soil surface. Not expected to degrade.

9.3 Bioaccumulative potential

Not expected because of the physicochemical properties of the substance.

9.4 Mobility in soil

Not expected to migrate. Insoluble.

9.5 Results of PBT and vPvB assessment

Carbon black is not a PBT or a vPvB.

9.6 Other adverse effects

Not available



SECTION 10. HANDLING & STORAGE



10.1 Precautions for safe handling

Advice on safe handling: Avoid dust formation. Do not breathe dust. Provide appropriate local exhaust to minimize dust formation. Do not use compressed air.

Take precautionary measures against static discharges. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Grounding of equipment and conveying systems may be required under certain conditions. Safe work practices include the elimination of potential ignition sources in proximity to carbon black dust; good housekeeping to avoid accumulations of dust on all surfaces; appropriate exhaust ventilation design and maintenance to control airborne dust levels to below the applicable occupational exposure limit. If hot work is required, the immediate work area must be cleared of carbon black dust.

General hygiene considerations: Handle in accordance with good industrial hygiene and safety practices.

10.2 Conditions for safe storage, including any incompatibilities

Storage conditions: Keep in a dry, cool, and well-ventilated location. Store away from heat, ignition sources, and strong oxidizers.

Carbon black is not classifiable as a Division 4.2 self-heating substance under the UN test criteria. However, current UN criteria for determining if a substance is self-heating is volume dependent. This classification may not be appropriate for large volume storage container.

Before entering vessels and confined spaces containing carbon black, test for adequate oxygen, flammable gases and potential toxic air contaminants. Do not allow dust to accumulate on surfaces.

Incompatible materials: Strong oxidizers.

SECTION 11. OTHER INFORMATION

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