

SAFETY DATA SHEET

CARBON BLACK

Product name: Carbon Black**Revised / Version:** 22 November 2025 · Version 2.0**Format:** EU CLP – Reg.(EC) No 1272/2008

SECTION 1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name	Carbon Black
Synonyms	Pigment Carbon Black; Acetylene Black; Channel Black; Furnace Black; Gas Black; Pigment Black 7
CAS No	1333-86-4
EC No	215-609-9
Index No (Annex VI)	Not assigned – no harmonised classification
REACH Registration No	Registration in progress

This Safety Data Sheet is valid for the following item numbers (grades)

AROVANCE 990 P1, 990 W1, 990 T1, 991 W1, 991 T1 · **NOBLEX** 117, 119, 143, 149, 197, 199, 217, 219, 235, 237, 239 · **VOLTIX** 137, 139, 157, 158, 159, 165, 169, 175, 179, 189 · **EMPIREX** 11, 17, 19, 21, 25, 27, 37, 91, 97, 99, 109, 119, 139, 165, 179 · **PLASTEXA** 57, 59, 97, 117, 139, 176, 179, 193, 195, 197, 259, 595, 951 · **SPHEREXA** 67, 97, 149, 197, 297, 319, 329, 339, 349, 359, 365, 369 · **ONYX GEMS** 65, 69, 79 · **VULCROX** 51, 53, 57, 59, 69, 79, 89, 99 · **PROPELON®** X19, X29, X39, X49, X59, X65, X69, X75

1.2 Relevant identified uses of the substance and uses advised against

Identified uses: Additive for plastics and rubber; pigment; chemical reagent; batteries; refractories; inks; fibres; paints and coatings.

Uses advised against: None known.

1.3 Details of the supplier of the safety data sheet

Supplier	Starseal India Private Limited (iStar Materials)
Address	Ground Floor, Plot 1/3, Priyadarshini Parisar West (Yellow Building), Opp. Hotel Grand Dhillon, Behind IDBI Bank, Bhilai, Chhattisgarh 490020, India
Telephone	+91 96305 20016 +91 93019 88995
E-mail / Web	info@istarmaterials.com www.istarmaterials.com

1.4 Emergency telephone number

+91 93019 88995 (business hours)

SECTION 2 Hazards identification

2.1 Classification of the substance (Regulation (EC) No 1272/2008, CLP)

Not classified. The substance does not meet the criteria for classification in any physical, health or environmental hazard class according to Regulation (EC) No 1272/2008.

2.2 Label elements (CLP)

Hazard pictograms	None
Signal word	None
Hazard statements	None
Precautionary statements	None
Supplemental EU statements	None

As the substance is not classified, no hazard label elements are required under CLP.

2.3 Other hazards

PBT / vPvB: The substance does not meet the criteria for PBT or vPvB (see Section 12).

Endocrine disrupting properties: The substance does not contain constituents identified as having endocrine-disrupting properties at or above 0.1%.

Carcinogenicity (informational): Carbon black is classified by IARC as Group 2B (possibly carcinogenic to humans). This is an IARC classification and not a harmonised CLP classification (see Section 11).

Physical: Wet carbon black produces slippery walking surfaces. Airborne dust may present a nuisance dust; observe occupational exposure limits (Section 8).

SECTION 3 Composition / information on ingredients

3.1 Substances

Chemical name	EC No	CAS No	Index No	Conc. (w/w %)	CLP classification
Carbon Black	215-609-9	1333-86-4	Not assigned	100	Not classified

This product is a substance, not a mixture.

SECTION 4 First aid measures

4.1 Description of first aid measures

General advice: Remove contaminated clothing and shoes. If symptoms persist, call a physician.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if you feel unwell.

Skin contact: Carefully wash off skin with soap and water. Consult a physician if symptoms occur.

Eye contact: Rinse thoroughly with plenty of water, keeping eyelids open. Discomfort is generally due to a foreign-body effect. If irritation persists, consult an ophthalmologist.

Ingestion: Do not induce vomiting. Rinse mouth with water. If conscious, drink plenty of water. Never give anything by mouth to an unconscious person. Obtain medical care if discomfort occurs.

Self-protection of first aider: Use the personal protection recommended in Section 8.

4.2 Most important symptoms and effects, both acute and delayed

Mechanical irritation of eyes, skin or the respiratory tract may occur from dust exposure. No other significant effects are expected.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Firefighting measures

5.1 Extinguishing media

Suitable: Dry chemical, CO₂, alcohol-resistant foam, nitrogen (N₂) or water spray.

Unsuitable: Do not use a full-force water jet – this may disperse and spread the fire.

5.2 Special hazards arising from the substance

Hazardous combustion products may include carbon monoxide, carbon dioxide (CO₂) and oxides of sulfur.

5.3 Advice for firefighters

Wear self-contained breathing apparatus and full firefighting turnout gear. Wet carbon black produces very slippery surfaces.

SECTION 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Remove all sources of ignition. Do not walk through spilled material. Avoid contact with skin, eyes or clothing and avoid breathing dust. Use the personal protection recommended in Section 8.

6.2 Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas. Advise local authorities if significant spillage cannot be contained.

6.3 Methods and material for containment and cleaning up

Small spills: Do not dry-sweep. Wet dust with water before sweeping, or use a vacuum to collect dust.

Large spills: Sweep up and shovel into suitable containers for disposal.

6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

SECTION 7 Handling and storage

7.1 Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing and do not breathe dust. Take precautionary measures against static discharge. Do not eat, drink or smoke when using this product. Wash thoroughly after handling and wash contaminated clothing before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool, well-ventilated place, away from heat. Keep out of reach of children. Store in accordance with local regulations. Incompatible with strong oxidisers (see Section 10).

7.3 Specific end use(s)

Apart from the uses mentioned in Section 1.2, no other specific uses are stipulated.

SECTION 8 Exposure controls / personal protection

8.1 Control parameters – Occupational exposure limits (selected jurisdictions)

Argentina: 3.5 mg/m³ TWA

Australia: 3.0 mg/m³ TWA (inhalable)

Belgium: 3.6 mg/m³ TWA

Brazil: 3.5 mg/m³ TWA

Canada (Ontario): 3.0 mg/m³ TWA (inhalable)

China: 4.0 mg/m³ TWA; 8.0 mg/m³ STEL

Colombia: 3.0 mg/m³ TWA (inhalable)

Czech Republic: 2.0 mg/m³ TWA

Finland: 3.5 mg/m³ TWA; 7.0 STEL

France (INRS): 3.5 mg/m³ TWA/VME (inhalable)

Germany (TRGS 900): 3.0 mg/m³ resp.; 10.0 inhalable

Germany (AGW): 1.5 mg/m³ resp.; 4.0 inhalable

Hong Kong: 3.5 mg/m³ TWA

Indonesia: 3.5 mg/m³ TWA

Ireland: 3.5 mg/m³ TWA; 7.0 STEL

Italy: 3.0 mg/m³ TWA (inhalable)

Japan (MHLW): 3.0 mg/m³

Japan (SOH): 4.0 mg/m³ TWA; 1.0 resp.

Korea: 3.5 mg/m³ TWA

Malaysia: 3.5 mg/m³ TWA

Netherlands (MAC): 3.5 mg/m³ TWA (inhalable)

Norway: 3.5 mg/m³ TWA

Spain (VLA-ED): 3.5 mg/m³ TWA

Sweden: 3.0 mg/m³ TWA

United Kingdom (WEL): 3.5 mg/m³ TWA; 7.0 STEL (inhalable)

US ACGIH (TLV): 3.0 mg/m³ TWA (inhalable)

US OSHA (PEL): 3.5 mg/m³ TWA

Derived No-Effect Level (DNEL) – Worker

Inhalation, long-term, systemic 2 mg/m³

Inhalation, long-term, local 2 mg/m³

Predicted No-Effect Concentration (PNEC)

Freshwater 5 mg/L

Marine water 5 mg/L

8.2 Exposure controls

Engineering controls: Ensure adequate ventilation to maintain airborne concentrations below the occupational exposure limits. Provide local exhaust ventilation where dust is generated.

Respiratory protection: Where airborne concentrations may exceed the OEL, use an approved air-purifying respirator for particulates. Use a positive-pressure, air-supplied respirator where exposure levels are unknown or uncontrolled release is possible, within a complete respiratory protection programme.

Eye/face protection: Safety glasses with side shields, or goggles.

Hand protection: Protective gloves; barrier cream may be used. Wash hands with mild soap and water.

Skin/body protection: Suitable protective clothing; launder daily and do not remove from the workplace.

Thermal hazards: None under normal processing.

Environmental exposure controls: Avoid release to the environment.

SECTION 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Solid (powder or pellets)
Colour	Black
Odour	Odourless
Melting / freezing point	~3550 °C (sublimes)
Boiling point / range	Not applicable; sublimes at ~4200 °C
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid)	Not flammable
Explosive limits	Not determined
Vapour pressure	Not applicable
Vapour density	Not applicable
Relative density	1.8 – 2.1 g/cm ³ (20 °C)
Water solubility	Insoluble
Partition coefficient (log Pow)	Not applicable
Auto-ignition temperature	> 140 °C
Decomposition temperature	Not determined
Viscosity	Not applicable
Explosive properties	Not explosive
Oxidising properties	Not oxidising
pH	Not applicable (insoluble)

PARTICLE CHARACTERISTICS (REG. (EU) 2020/878)

Carbon black is a **nanostuctured material**. Primary (constituent) particle size is typically in the range ~10–500 nm. The substance is manufactured and supplied as **aggregates** (primary particles fused during formation, typically > 100 nm) and larger **agglomerates**, in powder or pellet form – not as free primary nanoparticles. Carbon black may fall within the definition of a nanomaterial under Commission Recommendation 2022/C 229/01.

9.2 Other information

No additional data available.

SECTION 10 Stability and reactivity

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Strong oxidisers such as chlorates, bromates and nitrates.

10.6 Hazardous decomposition products

Carbon monoxide, carbon dioxide (CO₂), oxides of sulfur and organic products of decomposition.

SECTION 11 Toxicological information

11.1 Information on toxicological effects

Endpoint	Result	Species / basis
Acute oral toxicity	LD ₅₀ > 8000 mg/kg bw	Rat
Acute dermal toxicity	LD ₅₀ > 3000 mg/kg bw	Rabbit
Acute inhalation toxicity	LC ₅₀ > 4.6 mg/L (4 h)	Rat, dust/mist

Skin corrosion/irritation: Non-irritating to the skin.

Serious eye damage/irritation: Not irritating to the eyes.

Respiratory or skin sensitisation: Not classified; no sensitisation responses observed.

Germ cell mutagenicity: Not classified; negative in available genotoxicity studies.

Carcinogenicity: Not classified under CLP (no harmonised classification). Carbon black is listed by IARC as **Group 2B** (possibly carcinogenic to humans), based on sufficient evidence in experimental animals from inhalation of respirable carbon black and inadequate evidence in humans; the effect is associated with lung overload by poorly-soluble particles at high airborne concentrations.

Reproductive toxicity: Not classified.

STOT – single exposure: Not classified.

STOT – repeated exposure: Not classified. Prolonged inhalation of high dust concentrations may cause reversible lung effects (overload); control to the OEL (Section 8).

Aspiration hazard: Not classified.

SECTION 12 Ecological information

12.1 Toxicity

Organism	Result	Method
Fish (Brachydanio rerio)	LC ₅₀ (96 h) > 1000 mg/L	OECD 203
Daphnia magna	EC ₅₀ (24 h) > 5600 mg/L	OECD 202
Algae (Scenedesmus subspicatus)	EC ₅₀ (72 h) > 10000 mg/L; NOEC ≥ 10000 mg/L	—
Activated sludge	EC ₀ (3 h) ≥ 800 mg/L	DEV L3 (TTC)

12.2 Persistence and degradability

No data available; carbon black is inert and insoluble.

12.3 Bioaccumulative potential

The material does not bioaccumulate.

12.4 Mobility in soil

No data available; the substance is insoluble and immobile.

12.5 Results of PBT and vPvB assessment

The substance is not considered persistent, bioaccumulative and toxic (PBT) nor very persistent and very bioaccumulative (vPvB).

12.6 Endocrine disrupting properties

The substance is not identified as having endocrine-disrupting properties for the environment.

12.7 Other adverse effects

No information available.

SECTION 13 Disposal considerations

13.1 Waste treatment methods

Dispose of in accordance with Directive 2008/98/EC on waste and applicable national and local regulations. Carbon black as supplied is not classified as hazardous waste (RCRA 40 CFR 261: not a hazardous waste; Canada: not a hazardous waste under

provincial regulations). An appropriate European Waste Catalogue (EWC) code should be assigned at the point of disposal according to the use and source of the waste. Contamination or processing may change waste characteristics. The same considerations apply to empty containers, liners and packaging.

SECTION 14 Transport information

Carbon black (non-activated, mineral origin) is not classified as dangerous goods by ADR/RID, IMDG, ICAO-TI/IATA, US DOT or the UN Recommendations. No UN number is assigned.

14.1 UN number	None / not regulated
14.2 UN proper shipping name	Not classified (Carbon black, non-activated, mineral origin)
14.3 Transport hazard class(es)	None
14.4 Packing group	None
14.5 Environmental hazards	Not a marine pollutant
14.6 Special precautions for user	None
14.7 Maritime transport in bulk	Not applicable

Seven ASTM reference carbon blacks tested under the UN methods were found **not** to be self-heating substances (Division 4.2) nor readily combustible solids (Division 4.1) under the current UN Recommendations on the Transport of Dangerous Goods.

SECTION 15 Regulatory information

15.1 Safety, health and environmental regulations specific for the substance – European Union

Regulation (EC) No 1907/2006 (REACH): Authorisation list (Annex XIV) – not listed. Candidate list of SVHC – not listed. Restrictions (Annex XVII) – not subject to a restriction relevant to this substance. REACH registration: **in progress**.

Regulation (EC) No 1272/2008 (CLP): No harmonised classification in Annex VI; self-classified as not classified.

Note the following Directives: 98/24/EC (protection of workers from chemical agents); 94/33/EC (protection of young people at work); 92/85/EC (protection of pregnant and breastfeeding workers).

Inventory status

EU (EINECS)	US TSCA	CA DSL	JP ENCS	CN IECSC	KR KECL	PH PICCS	AU AICS
Listed	Listed	Listed	Listed	Listed	Listed	Listed	Listed

15.2 Chemical safety assessment

A chemical safety assessment for carbon black is addressed through the substance registration under REACH.

SECTION 16 Other information

Full text of hazard statements referred to in Section 3: Not classified – no hazard statements.

Revision: Version 2.0 – reformatted to the 16-section structure of Annex II to Regulation (EC) No 1907/2006 as amended by Commission Regulation (EU) 2020/878. Date: 22 November 2025.

Abbreviations and acronyms

TWA – Time-Weighted Average; STEL – Short-Term Exposure Limit; OEL – Occupational Exposure Limit; DNEL – Derived No-Effect Level; PNEC – Predicted No-Effect Concentration; PBT – Persistent, Bioaccumulative and Toxic; vPvB – very Persistent and very Bioaccumulative; SVHC – Substance of Very High Concern; IARC – International Agency for Research on Cancer; STOT – Specific Target Organ Toxicity; CLP – Classification, Labelling and Packaging Regulation (EC) No 1272/2008; REACH – Regulation (EC) No 1907/2006; LD₅₀/LC₅₀ – median Lethal Dose/Concentration; EWC – European Waste Catalogue.

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