

## CARBON BLACK

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

|                      |                                                                                                                                                                           |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product name         | Carbon Black                                                                                                                                                              |
| Synonyms             | Furnace black; carbon black, non-activated, mineral origin                                                                                                                |
| Grades covered       | N220, N234, N326, N330, N339, N375, N550, N660, N330-P, N550-P, P-8201                                                                                                    |
| CAS number           | 1333-86-4                                                                                                                                                                 |
| EC / EINECS number   | 215-609-9                                                                                                                                                                 |
| REACH registration   | To be stated by the manufacturer for material placed on the EU market.                                                                                                    |
| Identified uses      | Reinforcing filler in rubber products; pigment and UV stabiliser in polymers, plastic pipe and printing inks. Industrial and professional use only.                       |
| Uses advised against | Consumer applications; any use where inhalation of dust is not controlled.                                                                                                |
| Supplier             | BHD Dış Ticaret A.Ş.<br>Yeşilköy Mah. Atatürk Cad. No:10 A2 Blok D:182, İstanbul Dünya Ticaret Merkezi / İstanbul, Türkiye<br>Tel: +90 212 485 50 69   sales@bhdtrade.com |
| Emergency telephone  | [BHD 24-hour emergency number to be inserted]<br>Türkiye: Zehir Danışma Merkezi 114 (national poison centre)                                                              |

## SECTION 2: HAZARDS IDENTIFICATION

## 2.1 Classification of the substance

Regulation (EC) No 1272/2008 (CLP): not classified as a hazardous substance. Carbon black does not meet the criteria for classification in any physical, health or environmental hazard class under CLP.

## 2.2 Label elements

No signal word, hazard pictogram, hazard statement or precautionary statement is required under CLP. Labelling is applied in accordance with transport and supply requirements only.

## 2.3 Other hazards

**Dust explosion.** Carbon black dust dispersed in air can form an explosible atmosphere (dust explosion class ST 1, VDI 2263). Avoid dust clouds; earth and bond all handling equipment.

**Smouldering combustion.** Burning carbon black may not be visibly apparent. Material that has been involved in a fire must be observed for at least 48 hours for smouldering.

**Nuisance dust.** Dust may cause mechanical irritation of the eyes and irritation of the upper respiratory tract. Repeated inhalation of high dust concentrations may impair lung function.

**Carcinogenicity classification (IARC).** Carbon black is classified by IARC in Group 2B, possibly carcinogenic to humans. IARC concluded there is inadequate evidence in humans and sufficient evidence in experimental animals. See Section 11. This IARC classification does not trigger classification under CLP.

**Slip hazard.** Wet carbon black produces slippery surfaces.

The substance does not meet the PBT or vPvB criteria of REACH Annex XIII.

## SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Mono-constituent substance. Elemental carbon produced by the oil furnace process from heavy residual oil feedstock.

| Chemical name | CAS No.   | EC No.    | Concentration | CLP classification |
|---------------|-----------|-----------|---------------|--------------------|
| Carbon black  | 1333-86-4 | 215-609-9 | min 99 %wt    | Not classified     |

Manufacturer: Iran Carbon Company (ICC), Karoon Industrial Zone, Ahwaz, Iran.

## SECTION 4: FIRST AID MEASURES

|                             |                                                                                                                                                                                                                   |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>           | Move the affected person to fresh air. If cough, shortness of breath or other breathing difficulty occurs or persists, obtain medical attention. If breathing has stopped, apply standard resuscitation measures. |
| <b>Skin contact</b>         | Wash thoroughly with soap and water. Obtain medical attention if irritation develops.                                                                                                                             |
| <b>Eye contact</b>          | Flush immediately with large amounts of water for at least 15 minutes, holding the eyelids open. Obtain medical attention if irritation persists.                                                                 |
| <b>Ingestion</b>            | Do not induce vomiting. If the person is conscious, give water to drink. Never give anything by mouth to an unconscious person. Obtain medical attention.                                                         |
| <b>Symptoms and effects</b> | Mechanical irritation of the eyes; irritation of the upper respiratory tract from dust. No adverse effects expected from skin contact.                                                                            |
| <b>Note to physician</b>    | Treat symptomatically. Pre-existing asthma or respiratory disorders may be aggravated.                                                                                                                            |

## SECTION 5: FIREFIGHTING MEASURES

|                                      |                                                                                                                                                                                                                                                                                                               |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suitable extinguishing media</b>  | Water fog or spray, foam, carbon dioxide, dry chemical.                                                                                                                                                                                                                                                       |
| <b>Unsuitable media</b>              | Solid water jet — may scatter the material and spread the fire.                                                                                                                                                                                                                                               |
| <b>Specific hazards</b>              | Burning carbon black may not be visibly apparent unless the material is stirred and sparks become visible. Material that has been on fire must be observed for at least 48 hours to confirm no smouldering remains. The product floats on water, which can spread a fire. Combustion produces irritant fumes. |
| <b>Hazardous combustion products</b> | Carbon monoxide, carbon dioxide, oxides of sulphur, products of organic decomposition.                                                                                                                                                                                                                        |
| <b>Protection for firefighters</b>   | Self-contained breathing apparatus and full protective clothing.                                                                                                                                                                                                                                              |

## SECTION 6: ACCIDENTAL RELEASE MEASURES

|                                  |                                                                                                                                                                                                                             |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal precautions</b>      | Avoid dust formation. Ensure adequate ventilation. Use the personal protective equipment described in Section 8. Caution: wet carbon black creates slippery surfaces.                                                       |
| <b>Environmental precautions</b> | Prevent entry into drains, surface water and groundwater. The product is insoluble and floats on water; contain floating material where possible. Notify the local authority if a significant spillage cannot be contained. |
| <b>Containment and cleaning</b>  | Collect promptly by vacuum, preferably with HEPA filtration. Do not raise a dust cloud by sweeping with a brush or by using compressed air. Transfer to properly labelled containers for recovery or disposal (Section 13). |

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes and do not breathe dust. Provide local exhaust ventilation at machinery and at any point where dust may be generated. Do not create dust clouds using brushes or compressed air. Take

precautions against static discharge: earth and bond all metal parts of conveying, mixing and processing equipment before transfer operations begin. Fine dust can penetrate electrical equipment and cause short circuits. Apply good industrial hygiene practice; wash hands before breaks and after handling.

## 7.2 Conditions for safe storage

Store in a dry, cool, well-ventilated place in properly labelled, closed containers. Keep away from heat and sources of ignition. Do not store with strong oxidising agents (chlorates, bromates, nitrates). Do not store with volatile chemicals, which may be adsorbed onto the product. Protect from liquid water and high humidity.

## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

|                          |                                                                                                                                          |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Türkiye</b>           | Occupational exposure limits for dusts are set under the Tozla Mücadele Yönetmeliği. Verify the current national limit value before use. |
| <b>ACGIH TLV-TWA</b>     | 3 mg/m <sup>3</sup> (inhalable fraction)                                                                                                 |
| <b>OSHA PEL-TWA (US)</b> | 3.5 mg/m <sup>3</sup>                                                                                                                    |
| <b>Germany AGW</b>       | 0.5 mg/m <sup>3</sup> (respirable fraction) — among the strictest national limits; applies where German rules are followed.              |
| <b>DNEL / PNEC</b>       | To be taken from the manufacturer's REACH registration dossier where applicable.                                                         |

Exposure limits vary between jurisdictions. The values above are for guidance; the limit applicable at the place of use governs.

### 8.2 Exposure controls

|                               |                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Engineering controls</b>   | Local exhaust ventilation at dust-generating points, sufficient to hold airborne concentrations below the applicable occupational exposure limit. Enclose transfer and conveying operations where practicable.                                                                                                                                                                            |
| <b>Respiratory protection</b> | Where concentrations may exceed the exposure limit, use an approved particulate air-purifying respirator (minimum FFP2; FFP3 for higher concentrations). Use a positive-pressure supplied-air respirator where levels are unknown, uncontrolled release is possible, or air-purifying respirators may be inadequate. Respirator use requires a complete respiratory protection programme. |
| <b>Eye protection</b>         | Safety glasses with side shields, or goggles where dust exposure is significant.                                                                                                                                                                                                                                                                                                          |
| <b>Hand protection</b>        | Protective gloves to prevent soiling.                                                                                                                                                                                                                                                                                                                                                     |
| <b>Body protection</b>        | Suitable protective clothing. Wash work clothing daily; work clothing should not be taken out of the workplace.                                                                                                                                                                                                                                                                           |
| <b>Facilities</b>             | Emergency eyewash and safety shower nearby.                                                                                                                                                                                                                                                                                                                                               |

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

|                                |                                                                                 |
|--------------------------------|---------------------------------------------------------------------------------|
| <b>Appearance</b>              | Black powder or pellets                                                         |
| <b>Odour</b>                   | Odourless                                                                       |
| <b>pH</b>                      | 4 - 11 (50 g/l in water, 20 °C), non-oxidised grades; 2 - 4 for oxidised grades |
| <b>Density</b>                 | 1.7 - 1.9 g/cm <sup>3</sup> at 20 °C                                            |
| <b>Bulk density</b>            | 20 - 550 kg/m <sup>3</sup> (grade dependent; see product Technical Data Sheet)  |
| <b>Melting / boiling point</b> | Not applicable                                                                  |
| <b>Flash point</b>             | Not applicable                                                                  |
| <b>Water solubility</b>        | Insoluble                                                                       |
| <b>Volatile content</b>        | less than 2.5 %wt at 950 °C (non-oxidised); 2 - 11 %wt (oxidised)               |

|                                      |                                                                                  |
|--------------------------------------|----------------------------------------------------------------------------------|
| <b>Auto-ignition temperature</b>     | above 140 °C (IMDG Code, transport classification)                               |
| <b>Minimum ignition temperature</b>  | above 500 °C (BAM furnace) / above 315 °C (Goldberg-Greenwald furnace), VDI 2263 |
| <b>Burn velocity</b>                 | more than 45 seconds — not classifiable as highly flammable or easily ignitable  |
| <b>Lower explosion limit (dust)</b>  | 50 g/m <sup>3</sup>                                                              |
| <b>Dust explosion class</b>          | ST 1 (VDI 2263)                                                                  |
| <b>Maximum explosion pressure</b>    | 10 bar at 1 bar initial pressure (VDI 2263)                                      |
| <b>Maximum rate of pressure rise</b> | 30 - 400 bar/s (VDI 2263, ASTM E1226)                                            |
| <b>Minimum ignition energy</b>       | above 10,000 mJ (VDI 2263)                                                       |

## SECTION 10: STABILITY AND REACTIVITY

|                                 |                                                                                                                                                         |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reactivity / stability</b>   | Stable under normal conditions of storage and handling.                                                                                                 |
| <b>Conditions to avoid</b>      | Dust cloud formation. Static discharge. Heat and sources of ignition.                                                                                   |
| <b>Incompatible materials</b>   | Strong oxidising agents such as chlorates, bromates and nitrates — contact may cause an exothermic reaction. Volatile chemicals, which may be adsorbed. |
| <b>Hazardous decomposition</b>  | Carbon monoxide, carbon dioxide, oxides of sulphur, products of organic decomposition.                                                                  |
| <b>Hazardous polymerisation</b> | Does not occur.                                                                                                                                         |

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Acute toxicity

|                                 |                                                 |
|---------------------------------|-------------------------------------------------|
| <b>Oral (rat)</b>               | LD50 above 8,000 mg/kg — not classified         |
| <b>Eye irritation (rabbit)</b>  | Draize score 10-17/110 at 24 h — non-irritating |
| <b>Skin irritation (rabbit)</b> | 0.6/8 — slight irritation                       |
| <b>Sensitisation</b>            | Contains no known sensitisers                   |

### 11.2 Repeated dose toxicity

Rat, inhalation, 90 days: NOAEL 1.0 mg/m<sup>3</sup>. Target organ: lungs. Effects: inflammation, hyperplasia, fibrosis.

### 11.3 Carcinogenicity

Rat, oral, 2 years: no tumours. Mouse, oral, 2 years: no tumours. Mouse, dermal, 18 months: no skin tumours. Rat, inhalation, 2 years: lung inflammation, fibrosis and tumours.

The lung tumours observed in rats are attributed to the fine particle overload phenomenon rather than to a specific chemical effect of the particles. Comparable effects have been reported for other insoluble inorganic particles and appear to be species specific: tumours have not been observed in mice or hamsters under similar conditions.

IARC (1995) concluded that there is inadequate evidence in humans and sufficient evidence in experimental animals for the carcinogenicity of carbon black, and classified it in Group 2B, possibly carcinogenic to humans.

### 11.4 Human epidemiology

Studies of carbon black production workers indicate that cumulative exposure may be associated with small decrements in lung function (FEV1). European data suggest an additional decline of approximately 48 ml over a 40-year working lifetime at 1 mg/m<sup>3</sup> inhalable; a comparable United States study suggested approximately 27 ml. Studies of lung cancer mortality in carbon black workers have produced inconsistent results, with no clear dose-response relationship demonstrated between exposure and lung cancer.

### 11.5 Mutagenicity and reproductive toxicity

A DMSO suspension of carbon black gave negative results in the Ames test. Organic solvent extracts may contain traces of polycyclic aromatic hydrocarbons, which can influence results in some in-vitro systems. Mutational changes reported in rat alveolar epithelial cells following inhalation are considered rat specific and a consequence of lung overload. No effects on reproduction were observed in animal studies.

## SECTION 12: ECOLOGICAL INFORMATION

|                                    |                                                                              |
|------------------------------------|------------------------------------------------------------------------------|
| <b>Fish</b>                        | Brachydanio rerio: LC50 (96 h) above 1,000 mg/l (OECD 203)                   |
| <b>Invertebrates</b>               | Daphnia magna: EC50 (24 h) above 5,600 mg/l (OECD 202)                       |
| <b>Algae</b>                       | Scenedesmus subspicatus: EC50 (72 h) above 10,000 mg/l; NOEC min 10,000 mg/l |
| <b>Micro-organisms</b>             | Activated sludge: EC0 (3 h) min 800 mg/l (DEV L3 TTC test)                   |
| <b>Mobility</b>                    | Insoluble; not expected to migrate. Expected to remain on the soil surface.  |
| <b>Persistence / degradability</b> | Not expected to degrade.                                                     |
| <b>Bioaccumulation</b>             | Not expected, based on the physicochemical properties of the substance.      |
| <b>PBT / vPvB</b>                  | Does not meet the criteria of REACH Annex XIII.                              |

## SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of the product and contaminated packaging in accordance with national and local waste regulations, through an authorised waste contractor. In Türkiye, apply the Atık Yönetimi Yönetmeliği; in the EU, assign the appropriate European Waste Catalogue code according to the process of origin. Do not allow the material to enter drains or watercourses. Empty bags may retain product residue and must be handled with the same precautions as the product.

## SECTION 14: TRANSPORT INFORMATION

Carbon black of mineral origin, non-activated, is not classified as a dangerous good for transport under ADR/RID, IMDG or ICAO/IATA.

|                                  |                                                                         |
|----------------------------------|-------------------------------------------------------------------------|
| <b>UN number</b>                 | None — not classified                                                   |
| <b>Proper shipping name</b>      | Not classified. Declare as: carbon black, non-activated, mineral origin |
| <b>Transport hazard class</b>    | Not classified                                                          |
| <b>Packing group</b>             | Not assigned                                                            |
| <b>Marine pollutant</b>          | No                                                                      |
| <b>Sea transport (IMDG)</b>      | Not dangerous according to the IMDG Code                                |
| <b>Air transport (ICAO/IATA)</b> | Not dangerous according to ICAO-TI / IATA-DGR                           |
| <b>Road / rail (ADR/RID)</b>     | Not classified                                                          |

Note: activated carbon and certain carbon blacks of animal or vegetable origin are subject to UN 1361/UN 1362 and are not covered by this Safety Data Sheet.

## SECTION 15: REGULATORY INFORMATION

|                          |                                                                                                                                                                                                                                                                                                  |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>EU classification</b> | Not a hazardous substance or mixture under Regulation (EC) No 1272/2008 (CLP).                                                                                                                                                                                                                   |
| <b>REACH</b>             | Registration of the substance is the responsibility of the manufacturer or EU importer. Obtain the registration number from the manufacturer for material placed on the EU market.                                                                                                               |
| <b>Türkiye</b>           | SEA Yönetmeliği (classification, labelling and packaging) and KKDİK Yönetmeliği (registration, evaluation, authorisation and restriction of chemicals) apply. A Turkish-language Safety Data Sheet must be prepared and certified by a registered preparer (Güvenlik Bilgi Formu Hazırlayıcısı). |

|                                   |                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Food contact (US)</b>          | Carbon black produced by the furnace process is permitted for indirect food contact as a filler in rubber articles for repeat use under 21 CFR 177.2600. Total carbon black content may not exceed 50 %wt of the rubber article; furnace black content may not exceed 10 %wt in articles intended for contact with milk or edible oils. |
| <b>Chemical safety assessment</b> | Not performed by BHD. Refer to the manufacturer's dossier.                                                                                                                                                                                                                                                                              |

## SECTION 16: OTHER INFORMATION

### Solvent extractable content

Furnace carbon blacks generally contain less than 0.1 %wt of solvent extractable polycyclic aromatic hydrocarbons. The extractable content depends on the manufacturing process, the product specification and the analytical procedure used. Grade P-8201 is supplied to a toluene extract (PAH) limit of max 0.10 %; refer to the relevant Technical Data Sheet for grade-specific limits.

### Abbreviations

ACGIH — American Conference of Governmental Industrial Hygienists; ADR — European Agreement concerning the International Carriage of Dangerous Goods by Road; AGW — Arbeitsplatzgrenzwert; CLP — Classification, Labelling and Packaging; DNEL — Derived No-Effect Level; IARC — International Agency for Research on Cancer; IMDG — International Maritime Dangerous Goods Code; KKDIK — Turkish REACH; LD50/LC50 — median lethal dose/concentration; NOAEL — No Observed Adverse Effect Level; OEL — Occupational Exposure Limit; PBT — Persistent, Bioaccumulative and Toxic; PEL — Permissible Exposure Limit; PNEC — Predicted No-Effect Concentration; REACH — Registration, Evaluation, Authorisation and Restriction of Chemicals; SEA — Maddelerin ve Karışımların Sınıflandırılması, Etiketlenmesi ve Ambalajlanması; TLV — Threshold Limit Value; vPvB — very Persistent, very Bioaccumulative.

### Revision status

Revision 1, August 2026 — first issue.

This Safety Data Sheet has been prepared from data supplied by the manufacturer and from publicly available information on the substance. The information relates to the product as supplied and does not constitute a guarantee of any specific property. It is the responsibility of the user to determine suitability and to comply with all applicable national and local legislation. For placing on the Turkish market this document must be issued in Turkish and certified by a registered Safety Data Sheet preparer.