



According to Article 31 of the Regulation (EC) No 1907/2006 (REACH), a Safety Data Sheet (SDS) must be provided for hazardous substances or mixtures. This product does not meet the classification criteria of the Regulation (EC) No 1272/2008 (CLP). Therefore such document is outside the scope of Article 31 of REACH and the requirements for content in each section do not apply.

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product Identifier**

Product Name	CARBON BLACK, NON ACTIVATED, MINERAL ORIGIN
Common Names	Carbon Black, Channel Black
CAS Number	1333-86-4
REACH Registration Number	01-2119384822-32-XXXX

1.2 Relevant identified uses of the substance or mixture and uses advised against

Recommended use	Filler/Additive/Colorant for plastics, rubber, inks and coatings; chemical reagent; additive for batteries; indirect food contact substance.
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Uses advised against	Pigment in tattoo inks for humans.
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1.3 Details of supplier of the safety data sheet

AMCOM GROUP LLC
34 Saint James Drive
Palm Beach Gardens, FL 33418
United States

1.4 Emergency telephone number

+421 905 364 184 (During office hours, GMT +1)

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

This substance is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

2.2 Label elements

Signal word	None
Hazard statements	None
Precautionary statements	None

2.3 Other hazards

This substance is classified as hazardous as a combustible dust by the United States 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Hazardous Products Regulation (HPR) 2015. The signal word, hazard statement and precautionary statements in the United States and Canada are: **WARNING** May form combustible dust concentrations in air. Keep away from all ignition sources including heat, sparks and flame. Prevent dust accumulations to minimize explosion hazard. Do not expose to temperatures above 400°C. Hazardous products of combustion can include carbon monoxide, carbon dioxide, oxides of sulfur, and organic products.

Eye	May cause reversible mechanical irritation.
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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. See Section 8.
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). See Section 11.

SECTION 3: Composition/information on ingredients**3.1 Substances**

Chemical name	CAS# EC#	Concentration (% w/w)	M-Factor, SCL, ATE
Carbon Black, Amorphous	1333-86-4 215-609-9	100	-

SECTION 4: First aid measures**4.1 Description of first aid measures**

Inhalation	If cough, shortness of breath or other breathing problems occur, move to fresh air. Seek medical attention if symptoms persist. If necessary, restore normal breathing through standard first aid measures.
Eye contact	In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.
Skin contact	Wash skin with soap and water. Get medical attention if symptoms occur.
Ingestion	Do NOT induce vomiting. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms, both acute and delayed

Irritation to the eyes or respiratory tract if exposed above the occupational exposure limits. See Section 2.

4.3 Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media Use foam, carbon dioxide (CO₂), dry chemical or water spray. A fog is recommended if water is used.

Unsuitable extinguishing Media DO NOT USE a solid water stream or high pressure media, as it could cause formation of potentially explosive dust-air mixtures.

**5.2 Special hazards arising from the substance or mixture****Specific hazards arising from the chemical**

It may not be obvious that carbon black is burning unless the material is stirred and embers and/or sparks are apparent. Carbon black that has been on fire should be observed closely for at least 48 hours to ensure no smoldering material is present. Burning produces irritant fumes. The product is insoluble and floats on water. If possible, try to contain floating material.

Hazardous combustion Products

Carbon monoxide (CO), carbon dioxide (CO₂), oxides of sulfur.

5.3 Advice for firefighters**Special protective equipment and precautions for fire-fighters**

In case of fire: Wear self-contained breathing apparatus. Use personal protection equipment. Wet carbon black produces very slippery walking surfaces.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures****Personal precautions**

CAUTION: Wet carbon black produces very slippery walking surfaces. Avoid generation of dust. Ensure adequate ventilation. Use personal protection equipment. See section 8.

Other information

Refer to protective measures listed in Sections 7 and 8.

6.2 Environmental precautions**Environmental precautions**

Do not allow material to enter the groundwater system. Product floats on water and does not dissolve. If possible, try to keep floating material together. If larger amounts of spilt material cannot be contained, local authorities should be informed. Do not allow entrance in sewage water, soil stretches of water, groundwater, drainage systems.

6.3 Methods and material for containment and cleaning up**Methods for containment**

Prevent further leakage or spillage if safe to do so. Contain spilled product on land, if possible. The product is insoluble and floats on water. Any product that reaches water should be contained.

Methods for cleaning up

If the spilled material contains dust or has the potential to create dust, use explosion-proof vacuums and/or cleaning systems suitable for combustible dusts. Use of a vacuum with high efficiency particulate air (HEPA) filtration is recommended. Do not create a dust cloud by using a brush or compressed air. Dry sweeping is not recommended. Water spray will produce very slippery walking surfaces and will not result in satisfactory removal of carbon black contamination. Pick up and transfer to properly labeled containers. See Section 13.

6.4 Reference to other sections**Safe handling advice**

See Section 7.

Personal protection

See Section 8.

Disposal considerations

See Section 13.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling****Advice on safe handling**

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.

7.2 Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat. Eliminate sources of ignition. Do not store together with strong oxidizing agents. Do not store together with volatile chemicals as they may be adsorbed onto product. Keep in properly labeled containers. Carbon black is not classifiable as a Division 4.2 self-heating substance under the UN test criteria. However, the UN criteria for determining if a substance is self-heating is volume dependent, i.e., the auto-ignition temperature decreases with increasing volume. This classification may not be appropriate for large volume storage containers. Before entering vessels and confined spaces containing carbon black, test for adequate oxygen, flammable gases and potential toxic air contaminants, such as carbon monoxide. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosible mixture if they are released in the atmosphere in sufficient concentrations.

Incompatible materials

Strong oxidizing agents.

7.3 Specific end use(s)**Risk Management Methods (RMM)**

Per Article 14.4 of the REACH Regulation no exposure scenario has been developed, as the substance is not hazardous.

SECTION 8: Exposure controls/personal protection**8.1 Precautions for safe handling****Exposure limits**

The table on the next page is a summary. Please see the specific legislation for complete information.



Country/Region	Exposure limits Carbon Black, CAS# 1333-86-4
Belgium	TWA: 3 mg/m ³
Czech Republic	TWA: 2.0 mg/m ³ dust
Denmark	TWA: 3.5 mg/m ³
Finland	TWA: 3.5 mg/m ³ ; STEL: 7 mg/m ³
France	TWA: 3.5 mg/m ³
Greece	TWA: 3.5 mg/m ³ ; STEL: 7 mg/m ³
Hungary	TWA: 3 mg/m ³ respirable
Ireland	TWA: 3 mg/m ³ inhalable fraction; STEL: 15 mg/m ³ calculated, inhalable fraction
Italy ADII	TWA: 3 mg/m ³
Norway	TWA: 3.5 mg/m ³ ; STEL: 7 mg/m ³ calculated
Poland	TWA: 4 mg/m ³ inhalable fraction
Portugal	TWA: 3 mg/m ³
Slovakia	TWA: 3 mg/m ³ respirable fraction; STEL: 10 mg/m ³ respirable fraction
Spain	TWA: 3.5 mg/m ³
Sweden	NVG: 3 mg/m ³
United Kingdom	TWA: 3.5 mg/m ³ ; STEL: 7 mg/m ³
ACGIH TLV	TWA: 3 mg/m ³ inhalable particulate matter

Other information

Unless otherwise indicated as "respirable" or "inhalable", the exposure limit represents a "total" value. The inhalable exposure limit has been demonstrated to be more restrictive than the total exposure limit, by a factor of approximately 3.

Derived No Effect Level (DNEL)

As required under the EU Registration, Evaluation and Authorization of Chemicals (REACH) regulation, the Carbon Black REACH Consortium developed a Derived No Effect Level (DNEL) for carbon black of 2 mg/m³ inhalable based on human health studies, and 0.5 mg/m³ respirable based on animal studies.

Predicted No Effect Concentration (PNEC)

Not applicable.

8.2 Exposure controls**Engineering controls**

Ensure adequate ventilation to maintain exposures below occupational exposure limits. Provide appropriate local exhaust ventilation at machinery and at places where dust can be generated. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection
Hand protection**

Safety glasses with side-shields. If dust occurs: basket-shaped glasses. No special glove composition (material, thickness) is required for carbon black and chemical breakthrough time considerations do not apply when selecting gloves. General duty gloves may be used to protect hands from carbon black soiling. Glove selection should be based on the task to be performed, dexterity requirements, and associated physical hand hazards (temperature, cuts, punctures, etc.), not chemical exposure. Use of a barrier cream may help prevent skin drying and minimize soiling. Wash hands and other exposed skin with mild soap and water.



Skin and body protection	Wear suitable protective clothing. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.
Respiratory protection	An approved air-purifying respirator (APR) for particulates may be permissible where airborne concentrations are expected to exceed occupational exposure limits. Protection provided by air-purifying respirators is limited. Use a positive-pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are not known, or any circumstances where air-purifying respirators may not provide adequate protection. Use of respirators must include a complete respiratory protection program in accordance with national standards and current best practices.
Environmental exposure controls	In accordance with all local legislation and permit requirements.

SECTION 9: Handling and storage

9.1 Information on basic physical and chemical properties

Physical state	Solid
Appearance	Fine pellet
Color	Black
Odor	Odorless
Odor threshold	Not applicable
Melting point / freezing point	> 3.000 °C
Boiling point / boiling range	Not applicable
Flammability (solid, gas)	> 45 seconds
Flash Point	Not applicable
Vapor pressure	Not applicable
Vapor Density	Not applicable
Evaporation rate	Not applicable
Relative Density	1.7 – 1.9 g/cm ³ at 20 °C
Decomposition temperature	Not applicable
pH	≤ 5 at 20 °C
Volatile content	< 1.0 %
Burn rate	> 45 seconds
Particle Size Distribution	D10: ca. 98.6 nm; D50: ca. 127.2 nm; D90: ca. 180.2 nm Method: Particle Tracking Analysis
Dustiness	High (per DIN-EN 15051-2)
Specific Surface Area	21 – 1200 m ² /g

9.2 Other information

Explosives	Kst = 30-100 bar.m/s (VDI 2263)
Dust explosion class	St1 (VDI 2263)
Minimum Explosive Conc.	50 g/m ³
Minimum Ignition Temperature	> 500 °C (BAM Furnace); > 315 °C (Godbert-Greenwald Furnace)
Minimum Ignition Energy	> 10 J (VDI 2263)

**SECTION 10: Stability and reactivity****10.1 Reactivity**

Reactivity May react exothermically upon contact with strong oxidizers.

10.2 Chemical stability

Chemical stability Stable under normal handling and storage conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Dust in high concentrations may form explosive mixture in air. Do not use compressed air or vigorous sweeping with carbon black. Take precautionary measures against static discharges/ electrical sparking in the vicinity and ground all equipment.

10.3 Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.

10.4 Conditions to avoid

Conditions to avoid Avoid high temperatures >400 °C.

10.5 Incompatible materials

Incompatible materials Strong oxidizing agents.

10.6 Hazardous decomposition products

Hazardous decomposition products Carbon monoxide, Carbon dioxide (CO₂), Sulfur oxides, Organic products of combustion.

SECTION 11: Toxicological information**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**

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

Dermal LD50 No data available

Inhalation LC50 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/eye 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.

Respiratory or skin sensitization

Guinea pig skin (Buehler Test): Not sensitizing (OECD 406). Assessment: Not sensitizing in animals. No cases of sensitization in humans have been reported.

**Germ cell mutagenicity**In Vitro

Carbon black is not suitable to be tested in bacterial (Ames test) and other in vitro systems because of its insolubility. However, when organic solvent extracts of carbon black have been tested, results showed no

mutagenic effects. Organic solvent extracts of carbon black can contain traces of polycyclic aromatic hydrocarbons (PAHs). A study to examine the bioavailability of these PAHs showed that PAHs are very tightly bound to carbon black and not bioavailable (Borm, 2005).

In Vivo

In an experimental investigation, mutational changes in the HPTR gene were reported in alveolar epithelial cells in the rat following inhalation exposure to carbon black. This observation is believed to be rat specific and a consequence of "lung overload" (Driscoll, 1997) which led to chronic inflammation and release of reactive oxygen species. This is considered to be a secondary genotoxic effect and, thus, carbon black itself would not be considered to be mutagenic. Assessment: In vivo mutagenicity in rats occurs by mechanisms secondary to a threshold effect and is a consequence of "lung overload," which leads to chronic inflammation and the release of genotoxic oxygen species. This mechanism is considered to be a secondary genotoxic effect and, thus, carbon black itself would not be considered to be mutagenic.

CarcinogenicityAnimal Toxicity

Rat, oral, duration 2 years. Effect: no tumors.

Mouse, oral, duration 2 years. Effect: no tumors.

Mouse, dermal, duration 18 months. Effect: no skin tumors.

Rat, inhalation, duration 2 years. Target organ: lungs. Effect: inflammation, fibrosis, tumors.

Mortality Studies (Human Data)

A study on carbon black production workers in the UK (Sorahan, 2001) found an increased risk of lung cancer in two of the five plants studied; however, the increase was not related to the dose of carbon black. Thus, the authors did not consider the increased risk in lung cancer to be due to carbon black exposure. A German study of carbon black workers at one plant (Morfeld, 2006; Buechte, 2006) found a similar increase in lung cancer risk but, like the Sorahan, 2001 (UK study), found no association with carbon black exposure. A large US study of 18 plants showed a reduction in lung cancer risk in carbon black production workers (Dell, 2006). Based upon these studies, the February 2006 Working Group at the International Agency for Research on Cancer (IARC) concluded that the human evidence for carcinogenicity was inadequate (IARC, 2010). Since the IARC evaluation of carbon black, Sorahan and Harrington (2007) have re-analyzed the UK study data using an alternative exposure hypothesis and found a positive association with carbon black exposure in two of the five plants. The same exposure hypothesis was applied by Morfeld and McCunney (2009) to the German cohort; in contrast, they found no association between carbon black exposure and lung cancer risk and, thus, no support for the alternative exposure hypothesis used by Sorahan and Harrington. Overall, as a result of these detailed investigations, no causative link between carbon black exposure and cancer risk in humans has been demonstrated.

IARC Cancer Classification

In 2006 IARC re-affirmed its 1995 finding that there is "inadequate evidence" from human health studies to assess whether carbon black causes cancer in humans. IARC concluded that there is "sufficient evidence" in experimental animal studies for the carcinogenicity of



Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008
ISO 11014-1, ANSI Standard Z400.1-2004, and JIS Z 7253:2012

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carbon black. IARC's overall evaluation is that carbon black is "possibly carcinogenic to humans (Group 2B)". This conclusion was based on

IARC's guidelines, which generally require such a classification if one species exhibits carcinogenicity in two or more animal studies (IARC, 2010).

Solvent extracts of carbon black were used in one study of rats in which skin tumors were found after dermal application and several studies of mice in which sarcomas were found following subcutaneous injection. IARC concluded that there was "sufficient evidence" that carbon black extracts can cause cancer in animals (Group 2B).

ACGIH Cancer Classification

Confirmed Animal Carcinogen with Unknown Relevance to Humans
(Category A3 Carcinogen)

ASSESSMENT

Applying the guidelines of self-classification under the Globally Harmonized System of Classification and Labeling of Chemicals, carbon black is not classified as a carcinogen. Lung tumors are induced in rats as a result of repeated exposure to inert, poorly soluble particles like carbon black and other poorly soluble particles. Rat tumors are a result of a secondary non-genotoxic mechanism associated with the phenomenon of lung overload. This is a species-specific mechanism that has questionable relevance for classification in humans. In support of this opinion, the CLP Guidance for Specific Target Organ Toxicity – Repeated Exposure (STOT-RE), cites lung overload under mechanisms not relevant to humans. Human health studies show that exposure to carbon black does not increase the risk of carcinogenicity.

Reproductive toxicity

ASSESSMENT: No effects on reproductive organs or fetal development have been reported in long-term repeated dose toxicity studies in animals.

STOT - single exposure

ASSESSMENT: Based on available data, specific target organ toxicity is not expected after single oral, single inhalation, or single dermal exposure.

STOT - repeated exposure

Animal Toxicity

Repeated dose toxicity: inhalation (rat), 90 days, No Observed Adverse Effect Concentration (NOAEC) = 1.1 mg/m³ respirable). Target organ effects at higher doses are lung inflammation, hyperplasia, and fibrosis. Repeated dose toxicity: oral (mouse), 2 yrs, No Observed Effect Level (NOEL) = 137 mg/kg (body wt.) Repeated dose toxicity: oral (rat), 2 yrs, NOEL = 52 mg/kg (body wt.). Although carbon black produces pulmonary irritation, cellular proliferation, fibrosis, and lung tumors in the rat under conditions of "lung overload", there is evidence to demonstrate that this response is principally a species-specific response that is not relevant to humans.

Morbidity Studies (Human Data)

Results of epidemiological studies of carbon black production workers suggest that cumulative exposure to carbon black may result in small, non-clinical decrements in lung function. A U.S. respiratory morbidity study suggested a 27 ml decline in FEV1 from a 1 mg/m³ 8 hour TWA daily (inhalable fraction) exposure over a 40-year period (Harber, 2003). An earlier European investigation suggested that exposure to 1 mg/m³ (inhalable fraction) of carbon black over a 40-year working lifetime would result in a 48 ml decline in FEV1 (Gardiner, 2001). However, the



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estimates from both studies were only of borderline statistical significance. Normal age-related decline over a similar period of time would be approximately 1200 ml.

In the U.S. study, 9% of the highest non-smokers exposure group (in contrast to 5% of the unexposed group) reported symptoms consistent with chronic bronchitis. In the European study, methodological limitations in the administration of the questionnaire limit the conclusions

that can be drawn about reported symptoms. This study, however, indicated a link between carbon black and small opacities on chest films, with negligible effects on lung function.

Inhalation Assessment

Applying the guidelines of self-classification under GHS, carbon black is not classified under STOT-RE for effects on the lung. Classification is not warranted on the basis of the unique response of rats resulting from the "lung overload" following exposure to poorly soluble particles such as carbon black. The pattern of pulmonary effects in the rat, such as inflammation and fibrotic responses, are not observed in other rodent species, non-human primates, or humans under similar exposure conditions. Lung overload does not appear to be relevant for human health. Overall, the epidemiological evidence from well-conducted investigations has shown no causative link between carbon black exposure and the risk of non-malignant respiratory disease in humans. A STOT-RE classification for carbon black after repeated inhalation exposure is not warranted.

Oral Assessment

Based on available data, specific target organ toxicity is not expected after repeated oral exposure.

Dermal Assessment

Based on available data and the chemical-physical properties (insolubility, low absorption potential), specific target organ toxicity is not expected after repeated dermal exposure.

Aspiration Hazard Assessment

Based on industrial experience and the available data, no aspiration hazard is expected.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

11.2.2 Other information Other adverse effects

No information available.

SECTION 12: Ecological information

12.1 Toxicity

Ecotoxicity

Fish (Brachydanio rerio): LC50 (96hr) > 1,000 mg/L. (Method: OECD 203).

Daphnia magna: EC50 (24hr) > 5,600 mg/L. (Method: OECD 202).

Algae (Scenedesmus subspicatus): EC50 (72hr) > 10,000 mg/L.



Algae (*Scenedesmus subspicatus*): NOEC \geq 10,000 mg/L (Method: OECD 201). Activated sludge: EC₀ (3hr) \geq 800 mg/L. (Method: DEV L3 TTC test).

12.2 Persistence and degradability**Persistence and degradability**

The methods for determining biodegradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential**Bioaccumulation**

Not expected due to physicochemical properties of the substance.

12.4 Mobility in soil**Mobility**

Insoluble. Not expected to migrate.

12.5 Results of PBT and vPvB assessment**PBT and vPvB assessment**

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

12.6 Endocrine disrupting properties**Endocrine disrupting properties**

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Autres effets néfastes**Additional ecological information**

No negative effects known.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Waste from residues/
unused products**

Waste should not be released to sewers. Product, as supplied, can be burned in suitable incineration facilities or should be disposed of in accordance with the regulations issued by the appropriate federal, state and local authorities. Same consideration should be given to containers and packaging.

Contaminated packaging

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

Waste codes / waste designations according to EWC / AVV

EU Waste Code No. 61303.

**SECTION 14: Transport information**

Note: Seven (7) ASTM reference carbon blacks were tested according to the UN method, Self Heating Solids, and found to be "Not a self-heating substance of Division 4.2"; the same carbon blacks were tested according to the UN method, Readily Combustible Solids, and found to be "Not a readily combustible solid of Division 4.1"; under current UN Recommendations on the Transport of Dangerous Goods.

The following organizations do not classify carbon black as a "hazardous cargo" if it is "carbon, non-activated, mineral origin". This product meets this definition

IATA

14.1	UN number or ID number	Not regulated
14.2	UN proper shipping name	Not regulated
14.3	Transport hazard class(es)	Not regulated
14.4	Packing group	Not regulated
14.5	Environmental hazards	Not applicable

14.6	Special precautions for user Special Provisions	None
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IMDG

14.1	UN number or ID number	Not regulated
14.2	UN proper shipping name	Not regulated
14.3	Transport hazard class(es)	Not regulated
14.4	Packing group	Not regulated
14.5	Environmental hazards	Not applicable
14.6	Special precautions for user Special Provisions	None
14.7	Maritime transport in bulk according to IMO instruments	No information available

RID

14.1	UN number or ID number	Not regulated
14.2	UN proper shipping name	Not regulated
14.3	Transport hazard class(es)	Not regulated
14.4	Packing group	Not regulated
14.5	Environmental hazards	Not applicable
14.6	Special precautions for user Special Provisions	None

ADR

14.1	UN number or ID number	Not regulated
14.2	UN proper shipping name	Not regulated
14.3	Transport hazard class(es)	Not regulated
14.4	Packing group	Not regulated
14.5	Environmental hazards	Not applicable
14.6	Special precautions for user Special Provisions	None

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****National Regulations****Germany****Water hazard class (WGK)** Non-hazardous to water (nwg)

**International Inventories**

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies
TCSI	Complies
NZIoC	Complies

Legend

TSCA	United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL	Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS	European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS	Japan Existing and New Chemical Substances
IECSC	China Inventory of Existing Chemical Substances
KECL	Korean Existing and Evaluated Chemical Substances
PICCS	Philippines Inventory of Chemicals and Chemical Substances
AICS	Australian Inventory of Chemical Substances
TCSI	Taiwan Chemical Substance Inventory
NZIoC	New Zealand Inventory of Chemicals

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend Section 8: Exposure controls/personal protection**

TWA: Time-Weighted Average
STEL: Short Term Exposure Limit
Ceiling: Maximum limit value

Key literature references and sources for data used to compile the SDS

Chemical Safety Report REACH Carbon Black, Lead Registrant, January 14 2021.

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Buechte, S, Morfeld, P, Wellmann, J, Bolm-Audorff, U, McCunney, R, Piekarski, C. (2006) Lung cancer mortality and carbon black exposure – A nested case-control study at a German carbon black production plant. J.Occup. Env.Med. 12: 1242-1252.

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Driscoll KE, Deyo LC, Carter JM, Howard BW, Hassenbein DG and Bertram TA (1997) Effects of particle exposure and particle-elicited inflammatory cells on mutation in rat alveolar epithelial cells. Carcinogenesis 18(2) 423-430.



Gardiner K, van Tongeren M, Harrington M. (2001) Respiratory health effects from exposure to carbon black: Results of the phase 2 and 3 cross sectional studies in the European carbon black manufacturing industry. *Occup. Env. Med.* 58: 496-503.

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Sorahan T, Harrington JM (2007) A "Lugged" Analysis of Lung Cancer Risks in UK Carbon Black Production Workers, 1951–2004. *Am. J. Ind. Med.* 50, 555–564.

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