



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
NOM-018-STPS-2015

Issuing Date 17-Oct-2023

Revision Date 17-Oct-2023

Revision Number 1

1. Identification

Product identifier

Product Name Carbon Black (Oxidized)

Other means of identification

Synonyms BARONX Specialty Products

Recommended use of the chemical and restrictions on use

Recommended use Additive for plastic and rubber; Pigment for coatings, paints and lacquers; Special applications such as semi conductive compounds, UV filters, additive for batteries, refractories, etc.

Restrictions on use Not recommended for use as a human tattoo pigment
For professional use only

Details of the supplier of the safety data sheet

Supplier

Himadri Speciality Chemical Ltd.
321 Billerica Road, Suite 100
Chelmsford, MA 01824
+1 (978) 729-9771

E-mail carbonblack@himadri.com

Emergency telephone number

Emergency telephone CHEMTREC: +1-703-527-3887 (INTERNATIONAL)
1-800-424-9300 (NORTH AMERICA)

2. Hazard(s) identification

Classification

Not classified.

Label elements

Hazard statements

Not classified

Other information

May form combustible dust concentrations in air. Contact with dust can cause mechanical irritation or drying of the skin. Dust contact with the eyes can lead to mechanical irritation. Inhalation of dust in high concentration may cause irritation of respiratory system. Do not expose to temperatures above 400 °C.

3. Composition/information on ingredients

Substance

Synonyms BARONX Specialty Products

Chemical name	CAS No.	Weight-%
Carbon black	1333-86-4	100

4. First-aid measures

Description of first aid measures

Inhalation	Remove to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if symptoms occur.
Skin contact	Wash skin with soap and water. If symptoms persist, call a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Symptoms Irritating to the eyes and respiratory tract if exposed above the occupational exposure limits. See Section 11 for additional Toxicological Information.

Effects of Exposure See Section 11 for additional Toxicological Information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media Foam, Dry chemical, Carbon dioxide (CO₂), Fog. A fog spray is recommended if water is used.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical Avoid generation of dust. It may not be obvious that carbon black is burning unless the material is stirred and sparks are apparent. Carbon black that has been on fire should be closely observed for at least 48 hours to ensure no smoldering material is present.

Burning produces irritant fumes. Product is insoluble and floats on water. If possible, try to contain floating material. Dusts or fumes may form explosive mixtures in air.

Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Ground and bond all lines and equipment associated with product system. All equipment should be

non-sparking and explosion proof. Take precautionary measures against static discharge.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes. Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Special protective actions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. Material becomes extremely slippery when wet.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions

Material becomes extremely slippery when wet. Avoid generation of dust. All equipment used when handling the product must be grounded. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Use personal protective equipment as required. See section 8 for more information.

Other information

Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment

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

Methods for cleaning up

Avoid sweeping spilled dry material. If possible, vacuum using an explosion-proof vacuum and/or cleaning system suitable for combustible dusts. Cleaning system/vacuum equipped with high efficiency particulate air (HEPA) filtration is recommended. Transfer to properly labelled containers. See Section 13 for additional waste treatment information.

Prevention of secondary hazards

Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage

Precautions for safe handling

Advice on safe handling

Avoid contact with skin and eyes. Avoid generation of dust. Do not breathe dust. Do not use compressed air. Take precautionary measures against static discharges. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Fine dust is capable of penetrating electrical equipment and may cause electrical shorts. 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.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep in a dry, cool and well-ventilated place. Store away from heat, ignition sources, volatile chemicals and strong oxidizers. Do not store together with volatile chemicals as they may be adsorbed onto the product.

Carbon black is not classifiable as a Division 4.2 self-heating substance under the UN test criteria. However, 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 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.

8. Exposure controls/personal protection

Control parameters

Exposure Limits NOM-010-STPS-2014.

Chemical name	Exposure Limits
Carbon black 1333-86-4	Mexico: TWA 3.0 mg/m ³

Other information NOTE: 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

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering controls Use process enclosures and/or exhaust ventilation to keep airborne dust concentrations below the occupational exposure limit. Ensure that eyewash stations and safety showers are close to the workstation location.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Protective gloves. Barrier creams may help to protect the exposed areas of skin.

Skin and body protection Wear suitable protective clothing.

Respiratory protection Approved air purifying respirator (APR) for particulates may be used where airborne dust concentrations are expected to exceed occupational exposure limits. Use a positive-pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are not known, or in circumstances where APRs may not provide adequate protection. When respiratory protection is required to minimize exposures to carbon black, programs should follow the requirements of the appropriate governing body for the country, province or state. Selected references to respiratory protection standards are provided below:
EU: CR 529 Guidelines for Selection and Use of Respiratory Protective Devices (CEN).
Germany: DIN/EN 143 Respiratory Protective Devices for Dusty Materials.
UK: BS 4275 Recommendations for the Selection, Use and Maintenance of Respiratory Protective Equipment. HSE Guidance Note HS (G)53 Respiratory Protective Equipment.

Environmental exposure controls See Section 12 for additional Ecological Information.

General hygiene considerations Contaminated work clothing should not be allowed out of the workplace. Take off contaminated clothing and wash it before reuse. Wash hands and face before breaks and immediately after handling the product. Do not breathe dust.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance Black powder or pellet
Physical state Solid
Color Black
Odor Odorless
Odor threshold Not applicable

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	> 2 - 4	50 g/L Water, 20°C/68°F (ASTM 1512)
Melting point / freezing point		Not applicable
Initial boiling point and boiling range		Not applicable
Flash point		Not applicable
Evaporation rate		Not applicable
Flammability	> 45 sec	Not flammable
Flammability Limit in Air		
Upper flammability or explosive limits		Not applicable
Lower flammability or explosive limits	50 g/m ³	dust
Vapor pressure		Not applicable
Relative vapor density		Not applicable
Relative density	1.7 - 1.9 g/cm ³	@20°C
Water solubility	Insoluble	
Solubility in other solvents		None known
Partition coefficient		Not applicable
Autoignition temperature	> 140 °C / > 284.0 °F	Transport - IMDG Code
Decomposition temperature		Not applicable
Kinematic viscosity		Not applicable
Dynamic viscosity		Not applicable

Other information

Explosive properties Dust explosive, Dust explosion category: ST 1.
Oxidizing properties No information available.
Softening point No information available
Specific surface area 18 - 310 m²/g BET
Molecular weight 12
VOC content 2 - 14 % w/w @ 950 °C
Liquid Density Not applicable
Bulk density 1.25 - 40 lb/ft³, 20 - 640 kg/m³ Pellets: 200 - 680 kg/m³; Powder: 20 - 380 kg/m³
Formation of explosible dust/air mixtures:
Maximum Pressure Rise (bar) 10 bar (VDI 2263)
Maximum Rate of Pressure Rise (bar/sec) 30-400 bar/sec (VDI 2263 and ASTM E1226-88)
Minimum Ignition Energy (mJ) > 10,000 mJ (VDI 2263)
Minimum Ignition Temperature (°C) > 500°C (BAM Furnace) (VDI 2263)
 > 315°C (Godberg-Greenwald Furnace) (VDI 2263)

10. Stability and reactivity

Reactivity May react exothermically upon contact with strong oxidizers.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions	None under normal processing.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Temperatures above > 400 °C / > 752 °F. Eliminate sources of ignition. Incompatible materials. Avoid accumulation of airborne dusts.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon monoxide, Carbon dioxide (CO ₂), Sulfur oxides, Organic products of combustion.

11. Toxicological information

Information on likely routes of exposure

Product Information

Inhalation	Inhalation of dust in high concentration may cause irritation of respiratory system.
Eye contact	Dust contact with the eyes can lead to mechanical irritation.
Skin contact	Contact with dust can cause mechanical irritation or drying of the skin.
Ingestion	No known hazard by swallowing.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	None known.
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Acute toxicity

Numerical measures of toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Carbon black 1333-86-4	> 8000 mg/kg (Rat) Equivalent to OECD TG 401	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Interactive effects	No information available.
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Skin corrosion/irritation	Based on available data, the classification criteria are not met.
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Component Information	
Carbon black (1333-86-4)	
Method	Equivalent to OECD TG 404
Species	Rabbit
Results	non-irritant; Product score: erythema: 0, edema: 0

Serious eye damage/eye irritation	Based on available data, the classification criteria are not met.
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Component Information	
Carbon black (1333-86-4)	
Method	OECD TG 405
Species	Rabbit

Results	non-irritant; Product score: Iris: 0, Chemosis: 0, Cornea: 0, Conjunctivae: 0
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Respiratory or skin sensitization Based on available data, the classification criteria are not met.

Component Information	
Carbon black (1333-86-4)	
Method	OECD TG 406
Species	Guinea pig
Results	Not a skin sensitizer

Germ cell mutagenicity

In vitro: Carbon black is not suitable to be tested directly 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 they are very tightly bound to carbon black and are not bioavailable (Borm, 2005).

In vivo: In an experimental investigation, mutational changes in the hprt gene were reported in alveolar epithelial cells in the rat following inhalation exposure to carbon black (Driscoll, 1997). This observation is considered to be rat-specific and a consequence of "lung overload," which leads 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.

Carcinogenicity

Animal 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.

Note: Tumors in the rat lung are considered to be related to "lung overload" rather than to a specific chemical effect of carbon black itself in the lung. These effects in rats have been reported in many studies on other poorly soluble inorganic particles and appear to be rat specific (ILSI, 2000). Tumors have not been observed in other species (i.e., mouse and hamster) for carbon black or other poorly soluble particles under similar circumstances and study conditions.

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 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 Labelling 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.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	Mexico
Carbon black 1333-86-4	A3	Group 2B	-	A3

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)

Group 2B - Possibly Carcinogenic to Humans

Mexico - Secretary of Labor and Social Prevention Official Mexican Norm NOM-010-STPS-2014 Carcinogens

A3 - Animal Carcinogen

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 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.

Assessment:

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

Dermal: 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.

Other information

This product does not contain any known or suspected endocrine disruptors.

12. Ecological information

Ecotoxicity

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
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Carbon black 1333-86-4	EC50: >10,000 mg/L (72h, Scenedesmus subspicatus) NOEC: ≥10,000 mg/L (Scenedesmus subspicatus) Method: OECD Guideline 201	LC50: >1000mg/L (96h, Brachydanio rerio (zebrafish)) Method: OECD Guideline 203	EC0: 800 mg/L (3h, Activated sludge) Method: DEV L3 (TTC test)	EC50: > 5600 mg/l (24h, Daphnia magna (waterflea)) Method: OECD Guideline 202
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Persistence and degradability	Insoluble in water. The methods for determining biodegradability are not applicable to inorganic substances.
Bioaccumulation	Not expected because of the physicochemical properties of the substance.
Mobility in soil	Insoluble. Not expected to migrate.
Other adverse effects	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).

13. Disposal considerations

Disposal methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Dispose of contents/containers in accordance with local regulations.

14. Transport information

Note: The International Carbon Black Association organized the testing of seven ASTM reference carbon blacks according to the UN method, Self-Heating Solids. All seven reference carbon blacks were 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." Himadri Speciality Chemical Ltd's carbon black products meet this definition

<u>MEX</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG</u>	Not regulated

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories

Contact supplier for inventory compliance status

TSCA	Active.
DSL/NDSL	Listed on DSL.
EINECS/ELINCS	Listed. RN: 215-609-9.
ENCS	Listed.
IECSC	Listed.
KECL	Listed.
PICCS	Listed.
AICS	Listed.
NZIoC	Listed.
TCSI	Listed.

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 Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals
TCSI - Taiwan Chemical Substance Inventory

16. Other information

NFPA	Health hazards -	Flammability -	Instability -	Special hazards -
HMIS	Health hazards -	Flammability -	Physical hazards -	Personal protection -

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitizers		

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

Borm, P.J.A., Cakmak, G., Jermann, E., Weishaupt C., Kempers, P., van Schooten, F.J., Oberdorster, G., Schins, R.P. (2005) Formation of PAH-DNA adducts after in-vivo and vitro exposure of rats and lung cell to different commercial carbon blacks. *Tox.Appl. Pharm.* 1:205(2):157-67.

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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

U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGl(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

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Revision Note Initial Release.

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The information is believed to be accurate, but it is not exhaustive and must be used only as guidance. It is based on the current state of knowledge of the chemical substance or mixture and is applicable to the appropriate safety precautions for the product.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet