



SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION

Product identifier used on the label:

Product Name: Westco Carbon Blacks

Other means of identification:

Product Description: Reinforcing/ Semi-Reinforcing Carbon Black
Synonyms: Carbon Black, N220, N234, N326, N330, N339, N550, N660, N762, and N774

Recommended use of the chemical and restrictions on use:

Product Use/Restriction: Westco Carbon blacks are fine particle size, highly reinforcing carbon blacks used most commonly in tire applications. to medium size semi reinforcing grades for use in a variety of rubber compounds. They offer improved tensile strength and modulus as well as increased abrasion resistance in tires and other rubber products. The less reinforcing grades enhance the extrudability and mold flow of compounds while the highly reinforcing grades are recommended for compression molding applications.

Chemical distributor, or other responsible party Name, address, and telephone number:

Distributor Name: Western Reserve Chemical Corporation
Address: 4837 Darrow Road
Stow, OH 44224
USA
General Phone Number: 330 650 2244
General Fax Number: 330 650 2255

Emergency phone number:

Emergency Phone Number: Chemtrec 1 800 424 9300 USA
Website: www.wrchem.com

SECTION 2 : HAZARD(S) IDENTIFICATION

Classification of the chemical in accordance with CFR 1910.1200(d)(f):

GHS Pictograms:



Signal Word: DANGER!

GHS Class: * Acute inhalation toxicity, Category 5.
* Carcinogenicity, Category 2.
* Specific Target Organ Toxicity, Repeated Exposure, Category 1, (lung).

Hazard Statements: * Harmful if inhaled.
* May cause respiratory irritation.
* May cause cancer.

Precautionary Statements: * Do not handle until all safety precautions have been read and understood.
* Do not breathe dust/fume/gas/mist/vapours/spray.
* Use personal protective equipment as required.
* Contaminated work clothing should not be allowed out of the workplace.
* Wear protective gloves/protective clothing/eye protection/face protection.
* Wash thoroughly after handling.
* Do not eat, drink or smoke when using this product.

Hazards not otherwise classified that have been identified during the classification process:

Route of Exposure: Eyes. Skin. Inhalation. Ingestion.
Eye: May cause watering, redness and stinging sensation.
Skin: May cause irritation to the skin.
Inhalation: May irritate the respiratory tract.
May cause damage to the lungs through prolonged exposure.
Ingestion: No evidence of adverse effects from available data.
Chronic Health Effects: Causes damage to lungs through prolonged or repeated exposure.
Carcinogenicity: Suspected of causing cancer.
Potential Environmental Effects: Not classified.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures:

Chemical Name	CAS#	Ingredient Percent	EC Num.
Carbon Black (amorphous)	1333-86-4	100 %	

SECTION 4 : FIRST AID MEASURES

Description of necessary measures:

Eye Contact:	Rinse eyes thoroughly with large volumes of water keeping eyelids open. If symptoms develop, seek medical attention.
Skin Contact:	Wash skin with mild soap and water. If symptoms develop, seek medical attention.
Inhalation:	Take affected persons into fresh air. If necessary, restore normal breathing through standard first aid measures
Ingestion:	Do not induce vomiting. If conscious, give several glasses of water. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed:

Other First Aid:	Most important symptoms, both acute and delayed Irritating to the eyes and respiratory tract if exposed above the occupational exposure limits.
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Indication of immediate medical attention and special treatment needed:

Note to Physicians:	Treat symptomatically
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SECTION 5 : FIRE FIGHTING MEASURES

Suitable and unsuitable extinguishing media:

Suitable Extinguishing Media:	Use foam, carbon dioxide (CO ₂), dry chemical, or water fog. A fog spray is recommended if water is used.
Unsuitable extinguishing media:	DO NOT USE HIGH PRESSURE WATER STREAM as this may spread burning powder (burning powder will float).

Specific hazards arising from the chemical:

Hazardous Combustion Byproducts:	May decompose upon combustion or in high temperatures to generate carbon oxides
Unusual Fire Hazards:	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. Products of combustion include carbon monoxide (CO), carbon dioxide (CO ₂), and oxides of sulfur

Special protective equipment and precautions for fire-fighters:

Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Fire Fighting Instructions:	Advice for fire fighters Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water. Wet carbon black produces very slippery walking surfaces.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personnel Precautions:	Personal precautions, protective equipment and emergency procedures Wear appropriate personal protective equipment and respiratory protection. See Section 8.
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Environmental precautions:

Environmental Precautions:	Carbon black poses no significant environmental hazards. As a matter of good practice, minimize contamination of sewage water, soil, groundwater, drainage systems, or bodies of water.
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Methods and materials for containment and cleaning up:

Methods for containment:	Vacuum spilled product when possible. Dry sweeping is not recommended. A vacuum equipped with high efficiency particulate air (HEPA) filtration is recommended. If necessary, light water spray will reduce dust for dry sweeping. Large spills may be shoveled into containers. See Section 13.
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In the US, carbon black is not a hazardous substance under the Comprehensive, Environmental Response, Compensation, and Liability Act (CERCLA, 40 CFR 302), or the Clean Water Act (40 CFR 116), or a hazardous air pollutant under the Clean Air Act Amendments of 1990 (CAA 40 CFR).

Methods for cleanup: Small spills should be vacuumed when possible. Dry sweeping is not recommended. A vacuum equipped with high efficiency particulate air (HEPA) filtration is recommended. If necessary, light water spray will reduce dust for dry sweeping. Large spills may be shoveled into containers. See Section 13.

Notes : Reference to other sections
See section 8. See section 13.

SECTION 7 : HANDLING and STORAGE

Precautions for safe handling:

Handling: Avoid dust exposures above the occupational exposure limits. Use engineering controls to limit exposures to below the occupational exposure limits.
Wash exposed skin daily.
Fine dust may cause electrical shorts and is capable of penetrating electrical equipment unless tightly sealed.
If hot work (welding, torch cutting, etc.) is required, the immediate work area must be cleared of carbon black product and dust.
Wear appropriate protective clothing and gloves.
Avoid inhalation.
Avoid contact with eyes, skin, and clothing.

Hygiene Practices: Wash hands and face thoroughly with mild soap before eating or drinking.

Conditions for safe storage, including any incompatibilities:

Storage: Store in a dry place away from ignition sources and strong oxidizers. Before entering closed vessels and confined spaces containing carbon black, test for adequate oxygen, flammable gases and potential toxic air contaminants (e.g. CO). Follow safe practices when entering confined spaces.

Specific end use(s):

Work Practices: Safety showers and eye wash stations should be available.

Notes : Specific end use(s)
Not available

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Appropriate engineering controls:

Engineering Controls: Use process enclosures and/or exhaust ventilation to keep airborne dust concentrations below the occupational exposure limit.

Individual protection measures:

Eye/Face Protection: Wear safety goggles.

Skin Protection Description: Wear general protective clothing to minimize skin contact. Work clothes should not be taken home and should be washed daily.

Hand Protection Description: Wash hands and other exposed skin with mild soap. Use of a barrier cream may help to prevent skin drying. General protective gloves may be used to protect hands from carbon black soiling.

Respiratory Protection: Approved particulate respirators should be used where airborne concentrations are expected to exceed occupational exposure limits.

PPE Pictograms:



SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES:

Physical State: Appearance: powder or pellet

Color: black

Odor: Odorless

Odor Threshold: Not Applicable

Boiling Point: Boiling point/range: not applicable

Melting Point: Melting point/range: not applicable

Density: Density (20°C): 1.7 – 1.9 g/cm³

Solubility: Insoluble in water

Vapor Pressure: Not Applicable

Evaporation Rate: Not Applicable

pH: 5 - 10 [50 g/L water, 20 °C (68 °F)] – non-post-treated carbon black
2 - 7 [50 g/L water, 20 °C (68 °F)] – non-post-treated carbon black

Molecular Formula: C

Molecular Weight: Molecular weight (as carbon): 12

Flash Point: Not Applicable

Lower Flammable/Explosive Limit: 50 g/m3 (VDI 2263)

Upper Flammable/Explosive Limit: not determined

9.2. Other information:

Notes : Bulk density: 1.25 – 40 lb/ft³
, 20 – 680 kg/m³
200 – 680 kg/m³ (Pellets)
20 – 380 kg/m³
(Powder)
Dust explosion class: ST 1 (VDI 2263, EC 84/449) Maximum absolute explosion pressure: 10 bar
Maximum rate of pressure rise: 30-100 bar/s Spontaneous ignition (auto ignition): >140 °C (>284 °F)
Maximum ignition temperature: BAM furnace: >500 °C (>932 °F) (VDI 2263)
Godbert-Greenwal Furnace: >315 °C (>600 °F) (VDI 2263)
Minimum ignition energy: >10 J
Burn rate: >45 s (VDI 2263, EC 84/449)
(not classifiable as "highly flammable" or "easily ignitable")
Ignition energy (furnace black): >1 kJ (VDI 2263)

Other information
Not available

SECTION 10 : STABILITY and REACTIVITY

Reactivity:

Reactivity: May react exothermically upon contact with strong oxidizers.

Chemical Stability:

Chemical Stability: Stable under normal ambient conditions; decomposition: >300 °C (> 572 °F).

Possibility of hazardous reactions:

Hazardous Polymerization: Will not occur. Not sensitive to mechanical impact.

Conditions To Avoid:

Conditions to Avoid: Prevent exposure to high temperatures >300 °C (> 572 °F) and open flames.

Incompatible Materials:

Incompatible Materials: Strong oxidizers such as chlorates, bromates, and nitrates

Hazardous Decomposition Products:

Special Decomposition Products: Carbon monoxide, carbon dioxide, organic products of decomposition, oxides of sulfur (sulfoxides) form if heated above decomposition temperature.

Notes : Static discharge effects
Take precautionary measures against static discharges. Avoid dust formation. All metal parts of the mixing and processing equipment must be earthed/grounded. When transferring material at locations where flammable gases or vapors can be present, ensure that all equipment is electrically earthed/grounded before beginning transfer operations.

SECTION 11 : TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Acute Toxicity: Acute Toxicity Acute oral toxicity: LD50 (rat), >8000 mg/kg Primary irritation: Skin (rabbit): non-irritative, index score 0.6/8 (4 = severe edema)
eye (rabbit): non-irritative, Draize score 10-17/110 (100 maximally irritating)
Sensitization: No evidence of sensitization was found in animals.
No cases of sensitization in humans have been reported
.Subchronic toxicity
Rat, inhalation, 90-days: inflammation, hyperplasia, fibrosis
Target organ: lungs
NOEL = 1 mg/m
Chronic toxicity
Rat, oral, 2 years: no tumors
Mouse, oral, 2 years: no tumors
Mouse, dermal, 2 years: no skin tumors
Rat, inhalation, 2 years: inflammation, fibrosis, tumors
Target organ: lungs
Mouse/hamster, inhalation, 2 years: no tumors
Target organ: lungs

Note: Effects in the rat lung are considered to be related to the "lung overload phenomenon" 1,6-9) 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

ACGIH: ACGIH: The American Conference of Governmental Industrial Hygienists classifies carbon black as A4, Not Classifiable as a Human Carcinogen

NIOSH: The U.S. National Institute of Occupational Safety and Health (NIOSH) 1978 criteria document on carbon black recommends that only carbon blacks with PAH contaminant levels greater than 0.1% require the measurement of PAHs in air. As some PAHs are possible human carcinogens, NIOSH recommends an exposure limit of 0.1 mg/m³ for PAHs in air, measured as the cyclohexane-extractable fraction.

IARC: classified as, 2B: Possibly carcinogenic to humans (Carbon Black).

NTP: NTP: Carbon black is not designated as a carcinogen by the U.S. National Toxicology Program (NTP).

Ingestion: Acute oral toxicity: LD50 (rat), >8000 mg/kg

Sensitization: No evidence of sensitization was found in animals. No cases of sensitization in humans have been reported.

No animal data is available. No cases in humans have been reported.

Subchronic Effects:	Subchronic toxicity Rat, inhalation, 90-days: inflammation, hyperplasia, fibrosis Target organ: lungs NOEL = 1 mg/m ³
Mutagenicity:	Mutagenic effects and germ cell mutagenicity 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. This observation is believed to be rat specific and a consequence of "lung overload" which led to chronic inflammation and 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. Carbon black is not suitable to be tested in bacterial (Ames test) and other in vitro systems because of its insolubility in aqueous solutions. When tested, however, results for carbon black showed no mutagenic effects. Organic solvent extracts of carbon black can, however, 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. 5)
Reproductive Toxicity:	Reproductive and teratogenic effects No experimental studies on effects of carbon black on fertility and reproduction have been located. However, based on toxicokinetic data, carbon black is deposited in the lungs and based on its specific physicochemical properties (insolubility, low absorption potential), it is not likely to distribute in the body to reach reproductive organs, embryo and/or fetus under in vivo conditions. Therefore, no adverse effects of carbon black to fertility/reproduction or to fetal development are expected. No effects have been reported in long-term animal studies.

SECTION 12 : ECOLOGICAL INFORMATION

Environmental Fate:	Carbon black is an inert solid, stable and insoluble in water or organic solvents. Its vapor pressure is negligible. Based on these properties it is expected that carbon black will not occur in air or water in relevant amounts. Also potential for distribution via water or air can be dismissed. The deposition in soil or sediments is therefore the most relevant compartment of fate in the environment.
<u>Persistence and degradability:</u>	
Biodegradation:	Persistence and degradability Carbon black is substantially elemental carbon, inorganic and cannot be further biodegraded by microorganisms. It is inert and contains no functional or water-soluble groups. It cannot be further degraded by hydrolysis, light or by photodegradation in air or in surface water.
<u>Bioaccumulative potential:</u>	
Bioaccumulation:	Bioaccumulative potential Potential bioaccumulation is not expected because of the physicochemical properties of the substance.
<u>Mobility in soil:</u>	
Mobility In Environmental Media:	Mobility in soil Not available
<u>Other adverse effects:</u>	
Effect of Material On Aquatic Life:	Acute algae toxicity: EC 50 (72 h) >10,000 mg/L, Scenedesmus subspicatus (OECD Guideline 201) NOEC 50 > 10,000 mg/L, Scenedesmus subspicatus (OECD Guideline 201) Acute fish toxicity: LC50 (96 h) > 1000 mg/L, Brachydanio rerio (zebrafish) (OECD Guideline 201) Acute water flea toxicity: EC50 (24 h) > 5600 mg/L, Daphnia magna (waterflea) (OECD Guideline 201)

SECTION 13 : DISPOSAL CONSIDERATIONS

<u>Description of waste:</u>	
Waste Disposal:	Product should be disposed of in accordance with the regulations issued by the appropriate federal, provincial, state, and local authorities. Brazil: Considered as a Class IIA waste – not inert. Canada: Not a hazardous waste under provincial regulations EU: EU Waste Code No. 061303 per Council Directive 75/422/EEC USA: Not a hazardous waste under U.S. RCRA, 40 CFR 261.
Contaminated Packaging:	Container/Packaging disposal Empty packaging must be disposed of in accordance with national and local laws.

SECTION 14 : TRANSPORT INFORMATION

DOT Shipping Name:	Not Regulated.
DOT Pictograms:	
IATA Shipping Name:	Not Regulated.
IATA Pictograms:	
IMDG Shipping Name :	Not Regulated.
ADR Shipping Name :	Not Regulated.
RID Shipping Name :	Not Regulated.
Notes :	UN Number Carbon blacks covered by this Safety Data Sheet are not restricted for transport and are not considered to be "dangerous goods" by the following regulations: Brazilian Ministry of Transport – GEIPOT

Canadian Transport of Dangerous Goods (TDG)
 European Carriage of Dangerous Goods by Rail (RID), by Road (ADR), or on the Rhine (ADNR)
 International Air Transport Association (IATA)

Note: listed as "carbon black, non-activated, mineral origin" International Civil Air Organization – Technical Instructions (ICAO – TI)
 Note: listed as "carbon black, non-activated, mineral origin" International Maritime Dangerous Goods Code (IMDG)
 Note: listed as "carbon black, non-activated, mineral origin" United Nations Recommendations on the Transport of Dangerous Goods United States Department of Transportation Hazardous Materials Regulations (DOT) GGVS and GGVE
 Additional Information: 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.

UN proper shipping name
 Not applicable
 Transport hazard class(es)
 Not applicable
 Packing group
 Not applicable
 Environmental hazards
 Not applicable
 Special precautions for user
 Not applicable
 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable

SECTION 15 : REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product:

TSCA Inventory Status: All components of this product are listed in the TSCA inventory of Chemical Substances.

CERCLA Section 302: Carbon black is not a hazardous substance under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, 40 CFR 302).

Section 311/312 Hazard Categories: Immediate health hazard: No
 Delayed (chronic) health hazard: Yes
 Sudden release of pressure hazard: No
 Reactive hazard: No

Clean Air Act: Carbon black is not a hazardous substance hazardous or air pollutant under the Clean Air Act Amendments of 1990.

Clean Water Act RQ: Carbon black is not a hazardous substance under the Clean Water Act (40 CFR 116)

State Regulations: US State Right-to-Know Standards Carbon black CAS # 1333-86-4 is listed or regulated under the right to know standards in the states of New Jersey, Pennsylvania and Massachusetts. For Louisiana: Right-to-know legislation requires inventory reporting through Community Right-to-Know when the quantity of carbon black exceeds 500 pounds on any given day. Spills or releases beyond the site of the facility of greater than 5,000 pounds are required to be immediately reported to the state Emergency Response Commission via the Office of the State Police, Transportation and Environmental Safety Section, Hazardous Material Hotline, (504) 925-6596 (collect calls accepted 24 hours a day).

California PROP 65: substance. Please note that all three listing qualifiers (airborne, unbound (not bound within a matrix), and respirable size (10 micrometers or less in diameter)) must be met for this substance to be considered a Proposition 65 substance.

Risk Phrases: * R20 - Harmful by inhalation.
 * R37 - Irritating to respiratory system.
 * R45 - May cause cancer.

Safety Phrase: S 9 - Keep container in a well-ventilated place. * S20/21 - When using, do not eat, drink or smoke.
 * S36/39 - Wear suitable protective clothing and eye/face protection.
 * S28 - After contact with skin, wash immediately with plenty of water.



SECTION 16 : ADDITIONAL INFORMATION

HMIS Ratings:

HMIS Health Hazard: 1*
 HMIS Fire Hazard: 1
 HMIS Reactivity: 0
 HMIS Personal Protection: X

Health Hazard	1*
Fire Hazard	1
Reactivity	0
Personal Protection	X

* Chronic Health Effects

SDS Revision Date: August 05, 2015

Notes : This information relates to the specific product described herein and may not be valid for this material when used in combination with other raw materials. The information provided is without warranty regarding its accuracy or completeness. The information may not be valid under all conditions. The user has the final responsibility for determining the suitability of the product in a given application.

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