Limited Liability Company

«Kremenchuk carbon black plant»

Safety Data Sheet

(e-SDS)

in accordance with Annex II of Regulation No. (EC) 1907/2006

(based on latest Regulation (EU) 2020/878)

CARBON BLACK

CAS# 1333-86-4

Ukraine

Kremenchug

2025

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

1.1 Product identifier	
Substance name:	Carbon black
Trade name:	Carbon black grade N121, N220, N234, N326, N330, N339, N347, N375 N539, N550, N650, N660, N683, N772, SPH-5, SPH-6
ES#	215-609-9
IUPAC	Carbon black
CAS#	1333-86-4
Structural formula	Substantially elemental carbon, C
REACH registration No:	01-2119384822-32-XXXX
Nanoform	The SDS covers both nanoform and non-nanoform carbon black due to equal hazard profiles of these forms of the substance. Nanoforms are grades N121, N220, N234, N326, N330, N339, N347, N375 of carbon black.
1.2 Relevant identified uses of the substance or mixture and uses advised against	
Identified uses:	As additive for rubber in manufacture of rubber products. As additive for plastics in manufacture of plastics products, including compounding and conversion. As pigment in manufacture of textiles, leather, fur, pulp, paper, fine chemicals, rubber products, other non-metallic mineral products, e.g. plasters, cement. As chemical reagent in manufacture of bulk, large scale chemicals (including petroleum products), fine chemicals, basic metals, fabricated metal products, except machinery and equipment. As refractories in manufacture of large scale chemicals, fine chemicals, basic metals, formulation of preparations and/or re-packaging. As portable energy in manufacture of computer, electronic and optical products, electrical equipment.
Uses advised against:	As pigment in tattoo inks for human.
1.3 Details of the supplier of the safety data sheet	
Manufacturer	Limited Liability Company «Kremenchuk Carbon Black Plant» 4, Svishtovska str., Kremenchuk, Poltava region, 39610, UKRAINE +380891207900

	admin@kztv.com.ua
Only representative	CHIMET, s.r.o. trida Spojencu 22, 77900 Olomouc Ceska repablica VAT#: CZ62303708 +420585225094 +420585225094 vojtech.bily@chimet.cz.
Responsible person	Deputy Chief Engineer on Production Technology Podlesnyi I.I. +380891207891 chief_technologist @ kztv.com.ua.
1.4 Emergency telephone number:	
+380891207900 (7 days/24 hours, Ukrainian language).	

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance	
2.1.1 Classification according to Regulation (EC) No 1272/2008 (CLP)	**2.1.2 Additional information**
The substance is not classified as hazardous according to Regulation (EC) No 1272/2008 (CLP).	None.

2.2. Label elements	
Labelling according to Regulation (EC) No 1272/2008 [CLP]	
Product identifier	Not applicable.
Hazard pictograms	Not applicable.
Signal word	Not applicable.
Hazard statements	Not applicable.
Precautionary statements	Not applicable.
Supplemental Hazard information (EU)	Not applicable.

2.3. Other hazards

The substance does not meet the criteria for persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) according to Annex XIII of Regulation (EC) No 1907/2006.

The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine-disrupting properties.

The substance is not identified as having endocrine-disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

May form explosible dust-air mixture if dispersed.

Most important adverse effects

Carbon black may cause temporary mechanical irritation:

Inhalation: High concentrations of airborne dust may cause discomfort in the upper respiratory tract, coughing and wheezing.

Eye contact: Dust may cause mechanical irritation.

Skin contact: Prolonged or repeated exposure may lead to dryness or mechanical irritation.

Ingestion: No adverse effects expected under normal conditions of use.

Environmental effects: No significant environmental hazards identified based on available data.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical name	EC #	CAS #	Concentration, range %, ppm	Index#
Carbon black	215-609-9	1333-86-4	96 - 99,5%	not classified
Carbon black (solid: nanoform, no surface treatment)	Shape: spherical. Exists as aggregates of acneiform morphology. Amorphous structure. Fraction of constituent particles in the size range 1-100 nm: 92-98 %. Range of specific surface area: 72-112 m^2/g.			

3.2 Mixtures

Not applicable.

4. FIRST AID MEASURES

4.1. Description of first aid measures

General notes	No special measures required. If you feel unwell, seek medical attention (if possible, show Sections 2, 4, and 11 of the Safety Data Sheet).
In case of inhalation	Take affected persons into fresh air. If necessary, restore normal breathing through standard first aid measures. Consult doctor in case of complaints.
In case of eye contact	Remove contact lenses if present and easy to do. Rinse cautiously with water for several minutes. Seek medical attention if irritation persists.
In case of skin contact	Wash skin with mild soap and water. If symptoms develop, seek medical attention.
In case of ingestion	Do not induce vomiting. If conscious, give several glasses of water. Never give anything by mouth to an unconscious person.
Self-protection of the first aider	Use suitable respiratory protective equipment if airborne particles are present. Avoid contact with skin, eyes and clothing. Use appropriate personal protective equipment (gloves, goggles, protective clothing). Ensure adequate ventilation.

4.2. Most important symptoms and effects, both acute and delayed	
In case of inhalation	Coughing, wheezing, shortness of breath due to mechanical irritation of the respiratory tract.
In case of eye contact	Redness, tearing, slight mechanical irritation.
In case of skin contact	Dryness, possible mechanical irritation with prolonged or repeated exposure.
In case of ingestion	No specific effects expected under normal conditions of use.
Information to physician and first aider	Treat symptomatically. No specific antidote.
First aid arsenal	Universal medical kit including moisturising ointments or creams. Contents should be determined in consultation with the enterprise's occupational health service.

4.3. Indication of any immediate medical attention and special treatment needed

No specific antidote is known. Treatment should be symptomatic and supportive.

No delayed effects or complications are expected after short-term exposure.

Medical observation is recommended in case of excessive inhalation of dust.

Provide the safety data sheet, label, or packaging to the attending medical personnel.

5. FIREFIGHTING MEASURES

5.1. Extinguishing media	
Suitable extinguishing media	Foam, carbon dioxide (CO_2), dry chemical, nitrogen, or water fog. Water fog (spray) is preferred if water is used.
Unsuitable extinguishing media	Do not use high-pressure water streams, as they may disperse the burning powder. Carbon black may float on water and spread the fire.

5.2. Special hazards arising from the substance or mixture

The substance is not classified as flammable or explosive.

However, formation of explosible dust-air mixtures is possible when dispersed.

Carbon black involved in a fire should be monitored for at least 48 hours due to risk of smouldering material.

For further information, see Section 9.

Hazardous combustion products	Carbon monoxide (CO), carbon dioxide (CO_2), and sulfur oxides may be released during combustion.

5.3. Advice for firefighters

Carbon black on the floor may become slippery when wet. Wear anti-slip boots.

Avoid inhalation of combustion products and fumes.

Wear full protective firefighting gear (Bunker gear) including self-contained breathing apparatus (SCBA).

Isolate the fire area. Evacuate all non-essential personnel.

Cool exposed containers with water spray from a safe distance.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures	
6.1.1. For non-emergency personnel	Protective equipment: Wear appropriate protective equipment to prevent contamination of skin, eyes, and clothing: protective goggles, protective clothing, gloves, respirator. Emergency Procedures: Notify emergency response services. Evacuate non-essential personnel. Eliminate all sources of ignition if it is safe to do so. Keep dust levels to a minimum. Keep unprotected persons away. Avoid contact with skin, eyes, and clothing – wear suitable protective equipment (see section 8). Avoid inhalation of dust – ensure that sufficient ventilation or suitable respiratory protective equipment is used. Take care of wet product on floor, which presents a slip hazard. Clean up contaminated area.
6.1.2. For emergency responders	Do not attempt intervention without suitable protective equipment. Wear chemical-resistant personal protective equipment (PPE), including gloves, protective clothing, goggles, and approved respiratory protection. Recommended material: polyethylene. Avoid use of PPE made from PVC or latex, which may be unsuitable for fine particulate handling. For information on firefighting measures, see Section 5.

6.2. Environmental precautions
6.2 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. Product is not considered a hazardous substance according to: the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, 40 CFR 302, USA), Federal Water Pollution Control Act, (40 CFR 116, USA). It is not a hazardous air pollutant according to Amendments to the Federal Water Pollution Control Act of 1990 (SAAA-90, 40 CFR 63). Prevent spilled material from entering sewers, storm drains, other unauthorized treatment drainage systems and natural waterways.

6.3. Methods and material for containment and cleaning up	
6.3.1. For containment	For small spills: collect using a vacuum cleaner equipped with a

	HEPA filter to minimize airborne dust. Avoid dry sweeping, as it may generate dust clouds. If vacuuming is not possible, carefully shovel the material into suitable containers for disposal. For large spills: isolate the area and contain the material using non-combustible barriers. Remove spilled product by shoveling into sealable containers. Prevent material from entering drains, watercourses, basements or confined spaces.
6.3.2. For cleaning up	If necessary, use a light water spray to suppress dust before sweeping. Avoid excessive water use, as wet carbon black may create very slippery surfaces. Ensure the area is well ventilated during cleanup.
6.3.3. Other information	No additional information.
6.4. Reference to other sections	
For information on personal protective equipment, see Section 8. For disposal considerations, see Section 13.	

7. HANDLING AND STORAGE

7.1. Precautions for safe handling	
7.1.1 Protective measures:	
General precautions for safe handling	Avoid generation and accumulation of dust. Minimize exposure to airborne dust, especially above established occupational exposure limits (OELs). Avoid contact with eyes, skin, and clothing. Wash off dust to prevent mechanical irritation and soiling.
Fire prevention measures	If hot work (e.g. welding, torch cutting) is to be performed, ensure the immediate area is free from carbon black and dust residues. Carbon black dust may ignite if dispersed in air and exposed to an ignition source.
Measures to prevent aerosol and dust generation	Use local exhaust ventilation or other appropriate engineering controls to maintain airborne dust levels below occupational exposure limits. Handle in enclosed systems or areas with efficient dust control where possible.
Environmental precautions	Dust may cause electrical shorts if capable of penetrating electrical equipment. Some grades of carbon black are sufficiently electrically non-

	conductive and may allow a build-up of static charge during handling. Take measures to prevent the buildup of electrostatic charge, such as ensuring all equipment is electrically grounded.
7.1.2 Advice on general occupational hygiene	Wash hands and exposed skin thoroughly after handling. Remove contaminated clothing and protective equipment before eating or drinking. Do not eat, drink, or smoke in work areas. Follow standard workplace hygiene practices and provide training on proper handling procedures.
7.2. Conditions for safe storage, including any incompatibilities	
7.2.1 Technical measures and storage conditions	Store in a dry, well-ventilated area, away from sources of ignition and incompatible materials. Avoid dust accumulation. Provide adequate grounding and bonding of containers and equipment to prevent electrostatic discharge. Do not store near heat, open flame, or other potential ignition sources. No special temperature or pressure controls are required under normal storage conditions. Avoid exposure to excessive humidity, which may affect handling properties.
7.2.2 Packaging materials	Suitable packaging includes: – hopper cars for bulk storage, – polypropylene big bags, – polyethylene inner bags in suitable outer containers. Packaging should be moisture-resistant and able to prevent contamination and product loss during transport and storage.
7.2.3 Requirements for storage rooms and vessels	Store bulk or unpackaged carbon black in designated silos or bunker depots. No special structural requirements are defined, but storage areas should be constructed to minimise dust dispersion and allow cleaning. Ensure adequate ventilation to prevent airborne dust accumulation. Before entering closed vessels or confined spaces, monitor for oxygen levels, flammable gases, and potential contaminants such as carbon monoxide. Follow confined space entry procedures.
7.2.4 Further information on storage conditions	Avoid direct sunlight and unnecessary mechanical vibrations. Protect packaging from physical damage. Maintain general housekeeping to minimise dust buildup.
7.2.5 Incompatible materials	Avoid contact with strong oxidising agents such as chlorates,

	bromates, nitrates, and peroxides.
7.2.6 Need for use of stabilizers or antioxidants	Not required under normal recommended storage conditions.
7.3. Specific end use(s)	
Apart from the intended use as described in Section 1.2, no other specific uses are identified.	

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

8.1.1 National occupational exposure limit values:

Limit value type (country of origin)	Substance name	CAS-No.	Monitoring procedures	Occupational exposure limit value		Notes / Basis
				Long term mg/m³	Short term mg/m³	
Belgium (VLEP)	Carbon black	1333-86-4	Gravimetric method	3.5	-	RD 11/03/2002.
Denmark (OEL)				3.5	7	BEK No. 670 of 31/05/2018
Finland (OEL)				3.5	7	HTP-arvot 2016
France (VLE)				3.5	-	INRS ED 984
Ireland (OEL)				3.5	7	S.I. No. 619/2001
Spain (VLA)				3.5	-	RD 374/2001 INSST M-187/2018
Sweden (OEL)				3	-	AFS 2018:1
UK (WEL)				3.5	7	EH40/2005
USA-OSHA (PEL)				3.5	-	Cal/OSHA PELs NIOSH RELs
Argentina (TLV)				3.5	-	Decree 351/79 Law 19.587 / Decree 351/79
Brazil (OEL)				3.5	-	NR-15 (3214/1978)
Venezuela (OEL)				3.5	-	INPSASEL OELs
South Korea (OEL)				3.5	-	OSH Act Regs
Republic of China (OEL)				4	-	GBZ 2.1-2007

Canada (VEA)				3.5	-	Reg. 393/1988 / Reg. 833
Norway (OEL)				3.5	-	Administrative Norms (Arbeidstilsynet)
Russian Federation (ПДК)				4	-	GN 2.2.5.1313-03 (ПДК р.з.)
Japan (OEL)				4	-	JSOH OELs

Biological exposure limits:

No Union or national biological limit values have been established for carbon black.

8.1.2 Information on monitoring procedures

EN 689:2018 + A1:2019 – Workplace exposure – Measurement of exposure by inhalation to chemical agents – Strategy for testing compliance with occupational exposure limit values.

EN 482:2021 – Workplace exposure – Procedures for the determination of the concentration of chemical agents – Basic performance requirements.

8.1.3 Exposure to air contaminants

Under intended use conditions, airborne carbon black dust may be generated. See occupational exposure limits above.

8.1.4 DNEL values:

Carbon Black (CAS: 1333-86-4)

	Workers				**Consumers**			
Route of exposure	***Acute effect local***	***Acute effects systemic***	***Chronic effects local***	***Chronic effects***	***Acute effect local***	***Acute effects systemic***	***Chronic effects local***	***Chronic effects***
Oral	not applicable				not applicable	no hazard identified	not applicable	no hazard identified
Inhalation	no hazard identified	2 mg/m³	no hazard identified	no hazard identified	no hazard identified	no hazard identified	no hazard identified	no hazard identified
Dermal	no hazard identified	no hazard identified	no hazard identified	no hazard identified	no hazard identified	no hazard identified	no hazard identified	no hazard identified
Eyes	no hazard	not applicabl	no hazard	not applica	no hazard identified	not applicabl	no hazard	not applica

	identified	e	identified	ble		e	identified	ble

8.1.4 PNEC values

Environmental protection target	Carbon Black (CAS: 1333-86-4)
Fresh water	5 mg/L
Marine water	5 mg/L
Microorganisms in sewage treatment	no hazard identified
Freshwater sediments	no hazard identified
Marine sediments	no hazard identified
Air	no hazard identified
Soil	no hazard identified
Food chain	no potential for bioaccumulation

8.2. Exposure controls	
8.2.1. Appropriate engineering controls	
Technical measures to prevent exposure	Use process enclosures and/or exhaust ventilation to keep airborne dust concentrations below the occupational exposure limit.
8.2.2. Individual protection measures, such as personal protective equipment	
8.2.2.1 Eye/face protection:	Safety glasses or goggles recommended as a matter of good practice.
8.2.2.2 Skin protection	Wear general protective clothing to minimize skin contact. Gloves may be used to protect hands from carbon black soiling. Use of a barrier cream may help to prevent skin drying.
8.2.2.3 Respiratory protection	Approved air purifying respirator (APR) for particulates should 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.
8.2.2.4 Thermal hazards	Not necessary.
8.2.3. Environmental exposure controls	

Measures to prevent exposure	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.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties	
Physical state	Solid.
Colour	Black.
Odour	Odourless.
Melting point/range (°C)	3652-3697 (sublimation).
Initial boiling point/range (°C)	Not applicable.
Flammability	Combustible at 600 °C. Not classified as flammable solid.
Lower and upper explosion limit	The formation of explosive dust-air-mixtures is possible. LEL: 50 g/m3 KSt = 110 bar m/s (ST class 1) Maximum explosion pressure: 6.7 bars.
Flash point (°C)	Does not apply to solids.
Auto-ignition temperature (°C)	>140 Not classifiable as a self-heating substance.
Decomposition temperature (°C)	Not applicable.
pH	6-11 (water suspension 50g/dm3).
Kinematic viscosity (cSt = mm2/c, 20°C)	Does not apply to solids.
Solubility	< 1.
Partition coefficient n-Octanol/Water (log Po/w)	Not applicable.
Vapour pressure	Not applicable.
Relative density at 20 ° C , g/cm³	1.80 – 1.98.
Relative vapour density	Does not apply to solids.
Particle characteristics	Nanoform: Shape: spherical. Exists as aggregates of acneiform morphology. Amorphous structure. Fraction of constituent particles in the size range 1-100 nm: 92-98 % Range of specific surface area: 72-112 m²/g Particle size distribution and range: percentiles D90 63-77 nm; D50 34-44 nm; D10 11-22 nm.

	Not nanoform: Shape: spherical. Exists as aggregates of acneiform morphology. Amorphous structure. Fraction of constituent particles in the size range 1-100 nm: < 50% Range of specific surface area: 20-40 m^2/g Particle size distribution and range: percentiles D90 184 nm; D10 40 nm.
9.2 Other information	
9.2.1. Information with regard to physical hazard classes	None.
9.2.2. Other safety characteristics	Maximum ignition energy: 20 kJ. Explosion pressure rise ratio (bar./s): 46.

10. STABILITY AND REACTIVITY

10.1 Reactivity	Stable under regular storage and use conditions. Hazardous polymerization will not occur.
10.2 Chemical stability	Stable under normal ambient conditions
10.3 Possibility of hazardous reactions	Will not occur.
10.4 Conditions to avoid	Prevent exposure to high temperatures and open flames.
10.5 Incompatible materials	Strong oxidizers such as chlorates, bromates, and nitrates.
10.6 Hazardous decomposition products	Carbon monoxide, carbon dioxide, oxides or sulfur.

11. TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicokinetics, metabolism and distribution

Little carbon black is found in Peyer`s patches after oral exposure. It is unlikely that the insoluble particles are capable of skin penetration. Uptake and retention of carbon black particles in lung macrophages have been observed following inhalation. In rats, clearance of carbon black particles from the respiratory tract is delayed at lung burdens equal or greater than 0.5 – 1.0 mg carbon black/g lung or 7 mg carbon black / m3 (“lung overload”).

No evidence of a quantitatively important translocation of “ultrafine” (around 100 nm) carbonaceous particles from the lungs to the systemic circulation was found.

Acute toxicity	Based on available data, the substance does not meet the classification criteria. Relevant data are provided below.

Substance name	Exposure	Value	Exposure time period	Species	Method (as is, equivalent or similar)

Carbon black	oral	LD50 > 8000 mg/kg bw	gavage	rat	OECD Guideline 401
	inhalation	LC0 > 4.6 mg/m³	4 h	rat	Acceptable, well-documented publication
Skin corrosion/irritation	The substance is not classified as irritative to skin. Relevant data are provided below.				
Substance name	**Relevance**	**Result**		**Species**	**Method (as is, equivalent or similar)**
Carbon black	No	IP: Erythema score Time point: 24/48/72 h Score: 0. Max. score: 4 Reversibility: no effects Remarks on result: also at 120h, abraded and intact skin. IP: edema score Time point: 24/48/72 h Score: 0. Max. score: 4.		Rabbit	OECD Guideline 404
Serious eye damage/irritation	The substance is not classified as irritative to eyes. Relevant data are provided below.				
Substance name	**Relevance**	**Result**		**Species**	**Method (as is, equivalent or similar)**
Carbon black	No	IP: cornea opacity score Time point: 24/48/72 h Score: 0. Max. score: 4. IP: iris score Time point: 24/48/72 h Score: 0. Max. score: 2. IP: conjunctivae score Time point: 24/48/72 h Score: 0. Max. score: 3. IP: chemosis score Time point: 24/48/72 h Score: 0. Max. score: 4.		Rabbit	OECD Guideline 405
Respiratory or skin sensitization	The substance is not classified as respiratory or skin sensitizer. Relevant data are provided below.				
Substance name	**Relevance**	**Result**		**Species**	**Method (as is, equivalent or similar)**

Carbon black	No	Parameter: SI Value: 1.13 Test group / Remarks: 0.25% (w/v). No treatment-related systemic clinical signs were observed.	Mouse	OECD Guideline 429
Germ cell mutagenicity	The substance is not classified as mutagen. Relevant data are provided below.			
Substance name	**Relevance**	**Result**	**Species**	**Method (as is, equivalent or similar)**
Carbon black	No	No genotoxic effects	Bacteria	OECD Guideline 471 *in vitro*
	No	No genotoxic effects	Rat	*in vivo*
Carcinogenicity	Based on available data, the substance does not meet the classification criteria IARC classified Carbon Black in Group 2B but another reliable studies show the inadequacy of such classification. Relevant data are provided below.			
Substance name	**Relevance**	**Result**	**Species**	**Method (as is, equivalent or similar)**
Carbon black	No	NOAEC: not determinable	human	read-across
Reproductive toxicity	The substance is not classified as possessing reproductive toxicity. Relevant data are provided below.			
Substance name	**Relevance**	**Result**	**Species**	**Method (as is, equivalent or similar)**
Carbon black	No	NOEC = 34 mg/m³ air	Mouse	no guideline followed (Toxicity to reproduction)
	No	NOAEL = 1 000 mg/kg bw/day	Rat	OECD Guideline 414 (Developmental toxicity / teratogenicity)
STOT-single exposure	The substance is not classified for specific target organ toxicity — single exposure.			
STOT-repeated exposure	The substance is not classified for specific target organ toxicity — repeated exposure. Relevant data are provided below.			

Substance name	Exposure route	Value	Exposure time period	Species	Method
Carbon black	inhalation	NOAEL= 1.1 mg/m3	13 weeks	Rat	Acceptable, well-documented publication
	oral	dose level: 2.05 g/kg >= 2 050 - <= 2 050 mg/kg diet	2 years	Mouse	OECD Guideline 452
	dermal	NOEL = 20 %	12-18 months	Mouse	no guideline followed
Aspiration hazard	Based on available data, the classification criteria are not met.				

Adverse health effects and symptoms associated with exposure	
In case of inhalation	Mechanical irritation of upper respiratory tract. Short-term effects after exposure of dust of carbon black at high concentrations of dust may cause temporary discomfort in the upper respiratory tract, accompanied by coughing and wheezing.
In case of eye contact	High concentrations of dust may cause mechanical eye irritation.
In case of skin contact	Prolonged or repeated contact with product may cause mechanical irritation, dry skin.
In case of ingestion	No effect.
11.2 Information on other hazards	
11.2.1. Endocrine disrupting properties	The substance is not identified as having endocrine disrupting properties for human health according to the criteria set out in Regulation (EU) 2017/2100 or Regulation (EU) 2018/605. No adverse health effects associated with endocrine disruption have been reported.
11.2.2. Other information	None.

12. ECOLOGICAL INFORMATION

12.1 Toxicity:

The substance does not meet the classification criteria for this hazard class.

Relevant data are provided below.

Chemical name	Aquatic toxicity	Effect dose	Exposure time	Species	Method (as is, equivalent or similar)
Carbon black	Acute toxicity to fish	LC_{50} > 5000 mg/L	96 hours	*Brachydanio rerio*	OECD Guideline 203
	Acute toxicity to	EC_{50} > 5600	48 hours	*Daphnia magna*	OECD Guideline 202

	aquatic invertebrates	mg/L,			
	Toxicity to aquatic algae and cyanobacteria	EC_{50} >10,000 mg/L.	72 h	*Desmodesmus subspicatus*	OECD Guideline 201
	Toxicity to microorganisms	EC_{10} = 800 mg/L	3 h	activated sludge	Deutsche Einheitsverfahren zur Wasseruntersuchung (1975) DEV L3 (TTC-Test)

12.2 Persistence and degradability

Abiotic Degradation

Carbon black is substantially elemental carbon it is inert, inorganic and contains no water-soluble groups, and is therefore insoluble in water.

It cannot be further degraded by hydrolysis, light or by photodegradation in air or in surface water.

Biodegradation

In accordance with column 2 of REACH Annex VII, the ready biodegradability study (required in section 9.2.1.1.) does not need to be conducted as the substance is inorganic.

12.3 Bioaccumulative potential

Based on the physical-chemical properties of carbon black as an inert solid, its insolubility and stability in water and in organic solvents, and its particular character and forming of aggregates and agglomerates, the substance will not cross biological membranes. Bioaccumulation is not expected to occur.

12.4 Mobility in soil

Based on the physical chemical properties (insolubility, no vapour pressure) it is expected that carbon black will not occur in air or water in relevant amounts. Also potential for distribution via water or air, respectively, can be dismissed. The deposition in soil or sediments is therefore the most relevant compartment of fate of carbon black in the environment. Carbon is widely distributed in nature and an essential element in the components of all living organisms.

12.5 Results of PBT and vPvB assessment

Carbon black does not meet the criteria for classification as persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB), according to Annex XIII of REACH.

12.6 Endocrine disrupting properties

The substance is not identified as having endocrine disrupting properties for the environment according to the criteria set out in Regulation (EU) 2017/2100 or Regulation (EU) 2018/605.

No adverse effects related to endocrine disruption in environmental organisms have been reported.

12.7 Other adverse effects

No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods	
13.1.1 Product / Packaging disposal	Product can be burned in suitable incineration plants or disposed of in a suitable landfill in accordance with the regulations issued by the appropriate federal, provincial, state and local authorities. Return reusable containers to manufacturer. Paper bags may be incinerated, or recycled, or disposed of in an appropriate landfill in accordance with national and local laws.
Waste codes / waste designations according to EWC	The appropriate European Waste Catalogue (EWC) code depends on the nature, use, and contamination status of the waste. An example of an applicable code is: 06 13 03 – carbon black. The final assignment of the waste code must be made by the waste producer in accordance with national and local regulations.
13.1.2 Waste treatment-relevant information	Where possible, the generation of waste should be avoided or minimised. Mechanical handling is recommended to limit dust generation. Use dust suppression or containment measures during collection and disposal.
13.1.3 Sewage disposal-relevant information	Do not discharge carbon black waste to wastewater systems, surface water, or sewers. Due to its particulate nature, it may cause clogging and sedimentation.
13.1.4 Other disposal recommendations	Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC. Waste of carbon black is not classified as hazardous according to US RCRA, 40 CFR 261.

14. TRANSPORT INFORMATION

The product is permitted for transport by road (ADR), rail (RID), sea (IMDG), and air (IATA-ICAO).	
14.1 UN number or ID number	ADR/RID/IMDG/IATA- ICAO: Not applicable.
14.2 UN proper shipping name	ADR/RID/IMDG/IATA- ICAO: Not applicable.
14.3 Transport hazard class(es)	Not classified as a dangerous good.
14.4. Packing group	ADR / RID / IMDG / ICAO: Not applicable.
14.5. Environmental hazards	ADR/RID/IATA-ICAO: not classified as hazardous to the environment. IMDG: not classified as a marine pollutant. No limitations according to transportation requirements for hazardous substances in Canada and USA (TDG, DOT).
14.6. Special precautions for user	The product is not subject to transport regulations. Avoid exposure to high temperatures and ignition sources during handling and transport.

14.7. Maritime transport in bulk according to IMO instruments	The product is not intended for bulk transport under MARPOL Annex II or the IBC Code.

15. REGULATORY INFORMATION

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

Carbon black (CAS No. 1333-86-4) is listed in the following chemical inventories:

Ukraine: All-Union Classifier of Industrial and Agricultural Products

European Union: EINECS No. 215-609-9 (European Inventory of Existing Commercial Chemical Substances)

United States: TSCA (Toxic Substances Control Act)

Canada: DSL (Domestic Substances List)

Australia: AICS (Australian Inventory of Chemical Substances)

Japan: MITI (Ministry of International Trade and Industry) List

Korea: TCCL (Toxic Chemical Control Law).

15.2 Chemical Safety Assessment

A chemical safety assessment has been carried out for the Carbon Black.

16. OTHER INFORMATION

16.1 Indication of changes

Revision number: REV. 8.4

Date of last revision: 10.07.2025

Revision summary:

REV. 8.4 – The Safety Data Sheet has been updated and revised in accordance with the requirements of Regulation (EC) No. 1907/2006 (REACH), as amended by Commission Regulation (EU) 2020/878 of 18 June 2020. The structure and content have been aligned with the format required by Annex II of the Regulation.

16.2 Abbreviations and acronyms

OEL – Occupational Exposure Limit

VLEP – Valeurs limites d'exposition professionnelle (France)

MAK – Maximale Arbeitsplatz-Konzentration (Germany)

WEL – Workplace Exposure Limit (UK)

APR – Air-Purifying Respirator

SCBA – Self-Contained Breathing Apparatus

LD_{50} – Median Lethal Dose

LC_{50} – Median Lethal Concentration

EC_{50} – Half Maximal Effective Concentration

NOEL – No Observed Effect Level

NOAEL – No Observed Adverse Effect Level

NOEC – No Observed Effect Concentration

PBT / vPvB – Persistent, Bioaccumulative and Toxic / very Persistent, very Bioaccumulative

STOT SE / RE – Specific Target Organ Toxicity – Single / Repeated Exposure

ADR / RID – European Road / Rail Transport Regulations for Dangerous Goods

IMDG – International Maritime Dangerous Goods Code

MARPOL – International Convention for the Prevention of Pollution from Ships

SI – Stimulation Index

EC_3 – Estimated concentration yielding SI = 3

IP – Irritation Parameter.

16.3 Key literature references and sources for data

Chemical safety report for Carbon Black (Evonik Degussa GmbH, Germany)

ECHA database on registered substances

Hazardous Substances Data Bank (HSDB)

GESTIS database on international limit values

GESTIS database on hazardous substances

Criteria for a recommended Standard - Occupational Exposure to Carbon Black DHHS/NIOSH Pub. No. 78-204; Cincinnati, OH, 1978

16.4 Classification and procedure used to derive the classification according to Regulation (EC) 1272/2008 [CLP]

Classification was based on substance-specific data available and expert judgement in accordance with Regulation (EC) No 1272/2008.

16.5 Relevant H-statements (number and full text)

None.

16.6 Training advice

Ensure personnel read and understand the Safety Data Sheet before using this product.

Provide training on proper handling, personal protection, spill response, and fire safety procedures.

16.7 Further information

The information in this Safety Data Sheet is believed to be accurate and is based on the best knowledge available at the time of its publication.

It is intended to describe the product in terms of safety requirements and does not guarantee any specific properties.

The user is responsible for ensuring the product's suitability for their particular application or process, especially when used in combination with other substances or under different operating conditions.

Annex 1

EXPOSURE SCENARIOS ACCORDING TO CHEMICAL SAFETY REPORT

Carbon black does not fulfill the hazard criteria given in Article 14 (4) of Regulation (EC) No 1907/2006 so there is no need to generate exposure scenarios.
Risk characterization
No adverse health effects could be identified after dermal exposure to carbon black and a DNEL cannot therefore be derived. As there are no health risks associated with this route of exposure, it is not necessary to perform a risk characterization. Risk characterization ratio (RCR) = Current Exposure / DNEL = < 2.0 mg/m3/2.0 mg/m3 As the exposure is below the DNEL, the risk is adequately controlled.

Director
Limited Liability Company
«Kremenchuk Carbon Black Plant» Mykola Vikariy

Chief Engineer
Limited Liability Company
«Kremenchuk Carbon Black Plant» Oleksandr Kalina