Limited Liability Company
«Kremenchuk Carbon Black Plant»

Safety Data Sheet
(e-SDS)
in accordance with Annex II of Regulation No. (EC) 1907/2006

CARBON BLACK
CAS# 1333-86-4

Ukraine
Kremenchuk
2023

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	
Carbon Black is not classified according to the Regulation (EC) No 1272/2008	
Human Health effects	
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.
Eyes	High concentrations of dust may cause mechanical eye irritation.
Skin	Prolonged or repeated contact with product may cause mechanical irritation, dry skin.
Swallowing	No effect
2.2 Label elements:	
No labeling is required according to the Regulation (EC) No 1272/2008	
2.3 Other hazards:	
The substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII of the Regulation (EC) No. 1907/2006; is not identified as having endocrine disrupting properties according to Regulation (EU) 2017/2100. May form an explosive dust-air mixture when dispersed.	

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			

4. FIRST AID MEASURES

4.1 Description of first aid measures

General information:	**In case of inhalation:** Take affected persons into fresh air. If necessary, restore normal breathing through standard first aid measures. **In case of eye contact:** Rinse eyes thoroughly with large volumes of water keeping eyelid open. If symptoms develop, seek medical attention. **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.
4.2 Most important symptoms and effects, both acute and delayed	
In case of inhalation:	Cough, wheezing and breathlessness.
In case of eye contact:	Redness, slight mechanical irritation.
In case of skin contact:	Dry skin
In case of ingestion:	No effect
Information to physician:	Treat symptomatically.
First aid arsenal:	Universal medical kit with a set of drugs (in consultation with the medical department of the enterprise), moisturizers.
4.3 Indication of any immediate medical attention and special treatment needed	
If exposed there is no need to seek urgent medical attention.	

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media	
Flammable properties	Nonflammable or explosive solid. The formation of explosive dust-air-mixtures is possible. Carbon black that has been on fire should be observed closely for at least 48 hours to ensure no smoldering material is present. For further information, see Section 9.
Suitable extinguishing media	Use foam, carbon dioxide, dry chemical, nitrogen, or water fog. A fog spray is recommended if water is used.
Unsuitable extinguishing media:	High-pressure water stream as this may spread burning powder because burning powder will float and may spread fire.
5.2 Special hazards arising from the substance or mixture	

Hazardous combustion products:	Products of combustion include carbon monoxide, carbon dioxide, and oxides of sulfur.
Special protective equipment for fire-fighters:	Full protective firefighting gear (Bunker gear) including self-contained breathing apparatus (SCBA).
5.3 Advice for firefighters	
Product on floor when wetted will become slippery and may present a hazard - wear anti-slip boots. It may not be obvious that carbon black is burning unless the material is stirred and sparks are apparent.	

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures	
6.1.1. For non-emergency personnel	Protective equipment: Put on appropriate personal protective equipment if necessary. Emergency procedures: Alert emergency personnel. Keep unnecessary and unprotected personnel from entering. 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	Wear personal protection equipment as required depending on the nature of accidental release. In case of fire – see Section 5.
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	Small spills should be vacuumed when possible. A vacuum equipped with HEPA (high efficiency particulate air) filtration is recommended. Dry sweeping is not recommended. Move containers from spill area. Large spills may be shoveled into

	containers. Prevent entry into sewers, water courses, basements or confined areas.
6.3.2. For cleaning up	If necessary, light water spray will reduce dust for dry sweeping, but over-wetting may produce very slippery walking surfaces.
6.3.3. Other information	None.
6.4 Reference to other section	
Information about personal precautions - see Section 8. Information about waste disposal - see Section 13.	

7. HANDLING AND STORAGE

7.1 Precautions for safe handling	
7.1.1 Protective measures:	
General precautions for safe handling	Avoid dust generation. Avoid dust exposures above the occupational exposure limit. Avoid contact with skin and eyes. If exposed, wash to avoid mechanical irritation and soiling.
Fire preventions	If hot work (welding, torch cutting, etc.) is required the immediate work area must be cleared of carbon black product and dust.
Aerosol and dust generation preventions	Use local exhaust ventilation or other appropriate engineering controls to maintain exposures below occupational exposure limit.
Electrostatics prevention	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.
Safe transporting	Carbon black is not restricted for transport by the United Nations Recommendations on the Transport of Dangerous Goods. Adhere to the rules on the transport of goods, which operate for the appropriate type of transport. Do not violate the integrity of container. During loading works, execute instructions and rules for the appropriate works. (see section 14)
7.1.2 Advice on general occupational hygiene	Do not eat drink and smoke in work areas, wash hands after use, remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities	
7.2.1 Technical measures and storage conditions	Store in a dry place away from ignition sources and strong oxidizers.
7.2.2 Packaging materials	Bulk in hopper cars, Polypropylene containers (big bag), Polyethylene bags. Package should exclude moisture penetration and guarantee the safety of the product during transportation and storage.
7.2.3 Requirements for storage rooms and vessels	Unpacked carbon black should be stored in special bunker depots. Special requirements for storage structures are not established. The product is to be stored at room temperature and normal humidity environment. 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 standard safe practices when entering confined spaces.
7.2.4 Further information on storage conditions	None.
7.2.5 Incompatible materials	Strong oxidizers such as chlorates, bromates, and nitrates.
7.2.6 Need for use of stabilizers or antioxidants	No.
7.3 Specific end use(s)	
None.	

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters
OEL values

Limit value type (country of origin)	Substance name	EC-No.	CAS-No.	Monitoring procedures	Occupational exposure limit value		Regulatory Reference
					Long term (8 hours) mg/m³	Short term mg/m³	
Belgium (VLEP)	Carbon black	215-609-9	1333-86-4	Gravimetric method	3.5	-	Royal Decree of March 11, 2002 on the safety and protection of the health of workers from the risks of chemicals exposure in the

							workplace.
Denmark (OEL)					3.5	7	Order on limit values for substances and materials, BEK No. 670 dated May 31, 2018
Finland (OEL)					3.5	7	Limit concentrations in the air of the working zone HTP-arvot 2016. Decree of the Ministry of Social Policy and Health on December 23, 2016
France (VLE)					3.5	-	National Research and Safety Institute (INRS) Limits of occupational chemicals exposure in France, technical checklist. ED 984.
Ireland (OEL)					3.5	7	Code of Rules of 2007 on Safety, Health and Welfare on Production (Chemical Agents) 2001 (S.I. No. 619 dated 2001)
Spain (VLA)					3.5	-	Royal Decree 374/2001 on the transposition of Directive 98/24/EC. 72/5000 Occupational exposure limits for chemicals in Spain. 2018, M-187-2018
Sweden (OEL)					3	-	The limits of exposure in the workplace. Provisions and general

							recommendations of the Swedish Environment Management Office on hygienic limit values AFS 2018: 1
UK (WEL)					3.5	7	EH40/2005 Workplace exposure limits
USA-OSHA (PEL)					3.5	-	California Department of Occupational Safety and Health (Cal/OSHA) Permissible exposure limits (PELs). California Division of Occupational Safety and Health Administration (Cal/OSHA) Permissible Exposure Limits (PELs) National Institute for Occupational Safety and Health (NIOSH) Recommended exposure limits (RELs).
Argentina (TLV)					3.5	-	Decree 351/79 of the President of Argentina on the application of Law No. 19.587 and the cancellation of the schedule approved by Decree No. 4 160/73 Law No. 19,587 and Executive Order No. 351/79 establish general health and safety requirements.
Brazil (OEL)					3.5	-	Decree of the

							Ministry of Labor No. 3214 of June 08, 1978. Standard NR N-15
Venezuela (OEL)					3.5	-	Organic Law on Social Security System No. 37600 of December 30, 2002. ACGIH
South Korea (OEL)					3.5	-	Executive Regulations of the Ministry of Employment and Labor for the Occupational Safety and Health Act
Republic of China (OEL)					4	-	Standard GBZ 2.1-2007 - Occupational Exposure Limits for Hazardous Agents in the Workplace.
Canada (VEA)					3.5	-	Chemical Hazards Regulation, Alta Reg 393/1988, ACGIH, RRO 1990, reg. 833: Control of biological or chemical agents exposure, S-2.1, d. 13 - Occupational health and safety regulations
Norway (OEL)					3.5	-	Norwegian Labor Inspectorate - Administrative Standards for Pollutants in the Air of the Work Area.
Russian federation (ПДК)					4	-	GN 2.2.5.686-98 Maximum allowable concentrations (MAC) of harmful substances in the air of the working

							area. Hygienic standards
Japan (OEL)					4	-	Recommendations of Japanese Society for Occupational Health (JSOH)

8.1.2 Information on monitoring procedures

Not available.

8.1.3 DNEL values:

Carbon black. EC number: 215-609-9 CAS number: 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 required				no hazard identified			
Inhalation	no hazard identified	2 mg/m³	no hazard identified		no hazard identified			
Dermal	no hazard identified				no hazard identified			

8.1.4 PNEC values:

Environmental protection target	**PNEC**
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	
Substance related measures to prevent exposure during identified uses	Not applicable.
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	
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.
Eye/face protection	Safety glasses or goggles recommended as a matter of good practice
Skin/body 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.
General hygiene considerations	Emergency eyewash and safety shower should be in close proximity as a matter of good practice. Wash hands and face thoroughly with mild soap before eating and drinking.
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 m²/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

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. Data is presented 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. Reversibility: no effects. Remarks on result: also at 120h, abraded and intact skin.	Rabbit	OECD Guideline 404
Serious eye damage/irritation	The substance is not classified as irritative to eyes. Data is presented 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.	Rabbit	OECD Guideline 405

		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.		
Respiratory or skin sensitization	The substance is not classified as respiratory or skin sensitizer. Data is presented 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. Data is presented 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**.** Carbon black is listed by the International Agency for Research on Cancer (IARC) as a Group 2B substance (possibly carcinogenic to humans).			
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. Data is presented 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. Data is presented 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	The substance is not classified for aspiration toxicit.
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 considered to have endocrine-disrupting properties with respect to humans as does not meet the criteria set out in section A of Regulation (EU) No 2017/2100.
11.2.2. Other information	None.

12. ECOLOGICAL INFORMATION

12.1 Toxicity:

Aquatic toxicity:

Chemical name	**Aquatic toxicity**	**Effect dose**	**Exposure time**	**Species**	**Method (as is, equivalent or similar)**
Carbon black	Acute toxicity to fish	LC50 > 5000 mg/L	96 hours	Brachydanio rerio	OECD Guideline 203
	Acute toxicity to aquatic invertebrates	EC50 > 5600 mg/L,	48 hours	Daphnia magna	OECD Guideline 202
	Toxicity to aquatic algae and cyanobacteria	EC50 >10,000 mg/L.	72 h	Desmodesmus subspicatus	OECD Guideline 201
	Toxicity to microorganisms	EC10 = 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
It is concluded that carbon black is not a PBT/vPvB substance.
12.6 Endocrine disrupting properties
The substance does not have endocrine disrupting properties with respect to non-target organisms as it does not meet the criteria set out in section B of Regulation (EU) No 2017/2100.
12.7 Other adverse effects
None.
12.8 Additional information
None.

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:	EU Waste Code No. 61303 per Council Directive 75/422/EEC Waste of carbon black is not classified as hazardous according to US RCRA, 40 CFR 261.
13.1.2 Waste treatment-relevant information	The generation of waste should be avoided or minimised wherever possible.
13.1.3 Sewage disposal-relevant information:	Waste should not be disposed of by release to sewers.
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.

14. TRANSPORT INFORMATION

The product is not considered as dangerous goods under TDG regulations.	
14.1 UN number or ID number	None
14.2 UN proper shipping name	None
14.3 Transport hazard class(es)	None
14.4. Packing group	None
14.5. Environmental hazards	Not considered as marine pollutant according to IMDG Code regulations. No limitations according to transportation requirements for hazardous substances in Canada and USA (TDG, DOT).
14.6. Special precautions for user	None
14.7 Maritime transport in bulk according to IMO instruments	This product is out of the scope of IMO instruments (Chapter VI or Chapter VII of SOLAS, Annex II or Annex V of MARPOL, the IBC Code, the IMSBC Code).

15. REGULATORY INFORMATION

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

Carbon black, CAS No. 1333-86-4, is included in following inventories :

- All-Union Classifier of Industrial and Agricultural Products (Ukraine);
- U.S. Toxic Substances Control Act (TSCA);
- European Inventory of Existing Chemical Substunces (EINESC - No. 215-609-9);
- Canadian Domestic Substances List (DSL);
- Australian Inventory of Chemical Substances (AICS);
- List of Existing Chemical Substances of Japanese
- Ministry of international Trade and Industry (MITI);

Korean Toxic Chemicals Control Law (TCCL).

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 and Last date revised : REV. 8.3, 27.01.2023.

- REV.8.3 : The Safety Data Sheet has been reviewed and the data therein were revised and laid out according the requirements of the Commission Regulation (EC) No. 1907/2006 (as amended by EU Regulation No. 2020/878 of 18 June 2020).

16.2 Abbreviations and acronyms

OEL – occupational exposure limit

VLEP – valeurs limites d'exposition professionnelle- occupational exposure limit values

MAK - maximum workplace concentrations

WEL- Workplace Exposure Limits

APR - Air purifying respirator

SCBA - Self-contained breathing apparatus

LD50 – lethal dose

LC50 - lethal concentration

EC50 – half maximal effective concentration

NOEL - no observed effect level

NOEC - no observed effect concentration

NOAEL - no observed adverse effect level

PBT or vPvB - persistent, bioaccumulative and toxic or very persistent very bioaccumulative

STOT SE – Specific target organ toxicity – single exposure

STOT RE - Specific target organ toxicity – repeated exposure

ADR - Agreement on Dangerous Goods by Road

RID - International Rule for Transport of Dangerous Substances by Railway

IMDG - International Maritime Dangerous Goods

MARPOL - International Convention for the Prevention of Pollution From Ships

SI – Stimulation index values.

EC3: The estimated concentration of SI.

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]

For the purpose of classification data on the substance was used.

16.5 Relevant H-statements (number and full text)

None

16.6 Training advice

Read carefully the SDS before using the product.

Train personnel in the safe use of this product.

16.7 Further information

The data contained in the safety data sheet is based on the amount of information and experience available to the company at this time. A consumer of product is responsible for the consequences of its use in specific purposes. Information refers to this particular substance. It may be invalid in case this substance is used together with any other materials or any other production process.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only.

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
PrJSC "KCBP" **Mykola Vikarii**

First Deputy Director - Chief Engineer
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