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1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier	
Substance name	Carbon black
Trade name	Carbon black grades P803, P805, P514, N550, N650, N660, N772, N774, N762, P701, P 705, T900, N990, N991
ES#	215-609-9
IUPAC	Carbon black
CAS#	1333-86-4
Structural Formula	C
REACH No:	01-2119384822-32-XXXX

1.2 Relevant identified uses of the substance or mixture and uses advised against	
General use	<p>A filler for rubber in the manufacture of rubber products. Filler for plastics in the production of plastic products, including mixing processes and transformation.</p> <p>The pigment in the manufacture of textiles, leather, fur, pulp, paper, substances, fine chemicals, rubber products other non-metallic mineral products, e.g. plasters, cement.</p> <p>Reagent in the production of a large range of chemicals (including petroleum products), chemical products of fine organic synthesis, base metals, metal products, except machinery and equipment.</p> <p>The refractories in the production of a large spectrum of chemical substances, chemical products of fine organic synthesis, nonferrous metals, and also as a component of mixtures. Energy for the production of computers, office equipment, electrical equipment.</p>
restriction of use	Not recommended as a human tattooing pigment


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1.3 Details of the Manufacturer/supplier

Manufacturer name	«TUymazyteHUGLEROD» JSC 452750, 81, Chapaeva street, Tuymazy, Russia +7 (34782) 5-19-80 sekretar@tztu.ru
Only-Representative	"Planimpex" GmbH Uhlenhorster Weg 21 22085 Hamburg Telefon 0049 40 28807466 Telefax 0049 40 28807477 P. Lubenov
Contact person	Chief engineer A.I. Magdych +7 (34782) 5-19-80.
1.4. Emergency telephone number:	+7(34782) 5-19-80

2. Hazards identification.

2.1 Classification of the substance or mixture	
Not classified	
Potential Health Effects	
Inhalation	Temporary discomfort to upper respiratory tract may occur due to mechanical irritation when exposures are well above the occupational exposure limit. Long-term exposure may result in a small non-clinically significant increase in normal loss in one aspect of lung function.
Eye	High dust concentrations may cause mechanical irritation to eye.
Skin	May cause mechanical irritation, soiling and drying of skin
Ingestion	No evidence of adverse effects from available data
2.2 Label elements	
Not applicable	
2.3 Other hazards	
No special environmental precautions required. Not soluble in water.	

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3. COMPOSITION/INFORMATION ON INGREDIENTS.

3.1. Substances	
Substance name	Carbon black
CAS №	1333-86-4
EC №	215-609-9

Chemical Name (IUPAC)	Weight, %	EU Classification
Углерод	96-99,9	None


3.2. Mixtures
Not applicable

4. FIRST AID MEASURES

4.1. Description of first aid measures	
General informations	Following inhalation: Remove person to fresh air, to create the conditions for breathing. In the case you need to restore breathing by resorting to the standard measures of first aid.
	Following eye contact: Flush eyes immediately with large amounts of water for 15 minutes. Seek medical attention if symptoms develop.
	Following ingestion: Do not induce vomiting. If conscious, give several glasses of water. Never give anything by mouth to an unconscious person.
	Following skin contact: Wash thoroughly with soap and water. Seek medical attention if symptoms develop.

4.2. Most important symptoms and effects, both acute and delayed.

Following inhalation	Coughing, wheezing and shortness of breath
Following eye contact	Redness, minor irritation
Following skin contact	Dry skin
Following ingestion	None
Notes for the doctor	Treat symptomatically
The first aid tools	Universal medical kit with a set of drugs and a moisturizer.

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4.3. Indication of any immediate medical attention and special treatment needed		
None		

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Flammability	Carbon black is hardly combustible substance. 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 observed closely for at least 48 hours to ensure no smoldering material is present. Product decomposition temperature >300°C. Carbon blacks containing more than 8% volatile materials may form an explosive dust-air mixture. Manufactured carbon blacks do not exceed 8% volatile materials content.
Suitable extinguishing media	Use foam, carbon dioxide (CO ₂), nitrogen (N ₂), dry chemical or water spray. A fog spray is recommended if water is used.
Unsuitable extinguishing media	DO NOT USE a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products	Carbon monoxide, Carbon dioxide, Sulphur oxides, Organic products of combustion.
Средства индивидуальной защиты во время пожаротушения	Wear suitable protective equipment. In the event of fire, wear self-contained breathing apparatus.


5.3. Advice for fire-fighters

Wet carbon black produces very slippery walking surfaces. 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 observed closely for at least 48 hours to ensure no smoldering material is present. Burning produces irritant fumes.

6. ACCIDENTAL RELEASE MEASURES.

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. Emergency procedures	Avoid contacting the product with open ignition sources, sparks, high-temperature objects, strong oxidizers (chlorates, bromates and nitrates). Do not heat the product to a temperature >3000C Control of the material content in the air in the working area.
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6.1.2. Personal protective equipment	Wear personal protective equipment and use respiratory protection. Clean up promptly by vacuum. Use of a vacuum with high efficiency particulate air (HEPA) filtration is recommended
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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. 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 (CAAA-90, 40 CFR 63).

6.3. Methods and material for containment and cleaning up
Small spills should be vacuumed when possible. Dry sweeping is not recommended except with HEPA equipped machinery. A vacuum equipped with HEPA (high efficiency particulate air) filtration is recommended. If necessary, light water spray will reduce dust for dry sweeping but over-wetting may produce very slippery walking surfaces. Large spills may be shoveled into containers.

6.4. Reference to other sections
See Section 13. See Section 8.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling	
Protective measures	Avoid creating a dust cloud. Avoid dust concentration in the air above the MPC. Avoid contact with skin and eyes. After contact with skin, 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 to control exposures to below occupational exposure limit.



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Static electricity prevention

Fine dust may cause electrical shorts and is capable of penetrating electrical equipment unless tightly sealed.

Precautions for safe transport

Carbon black is not restricted for transportation according to the UN recommendations on the transport of dangerous goods. It is necessary to observe rules of transportation of cargoes, which exist for the respective mode of transport. Do not break the integrity of the container. During loading and unloading follow the instructions and rules for these types of jobs (see Section 14).

Advice on general occupational hygiene

Do not eat, drink or smoke in work areas. Wash hands after handling, remove contaminated clothing and protective equipment before entering dining rooms.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Keep in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Do not store together with strong oxidizing agents.

Packaging materials

Paper and polyethylene valve bags, flexible polypropylene containers of big-bag type. Use of other containers and packages is permitted while they prevent product moistening and keep it safe while transporting and storing.

Requirements for storage rooms and vessels

Special requirements for storage structures are not required. The product stored at the temperature and humidity of the environment. Before entering the closed warehouse test the content of oxygen, combustible gases, potentially hazardous pollutants (e.g. CO) in the air.

7.3. Specific end uses

None



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8.EXPOSURE CONTROLS / PERSONAL PROTECTION**8.1. Control parameters**

Occupational exposure limits


Limit value Source type (country of origin)	Substance name	EC-No	CAS No	Test method	Occupational exposure limit value	
					Long term Short (8 hours) mg/m ³	Short term mg/m ³
Belgium (VLEP)	Carbon black	215-609-9	1333-86-4	Gravimetry	3,5	
Danmark (OEL)					3,5	7
Finland (OEL)					3,5	7
France (VLE)					3,5	
Ireland (OEL)					3,5	7
Spain (VLA)					3,5	
Sweden (OEL)					3	
Great Britan (WEL)					3,5	7
USA-OSHA (PEL)					3,5	
Argentina (OEL)					3,5	
Brazil (OEL)					3,5	
Venezuela (OEL)					3,5	
South Korea(OEL)					3,5	
The DPRK (OEL)					4	
Canada (VEA)					3,5	
Norway (OEL)					3,5	
Russia (ИДК)					4	
Japan (OEL)	4					

DNEL/PNEC-values

The derived no effect level (DNEL) is the level of exposure to a substance above which humans should not be exposed.

The Predicted No Effect Concentration (PNEC) is the concentration of a chemical which marks the limit at which below no adverse effects of exposure in an ecosystem are measured.

Worker	Consumer	Exposure route
Industry		
DNEL= 2 mg/m ³	—	Inhalation

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PNEC values:

Exposure route	Value, mg/l	Exposure frequency	Remark
water (fresh)	5	1000	
water (sea)	5	1000	

8.2 Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls	<p>Ensure adequate ventilation to maintain exposures below occupational limits.</p> <p>Provide appropriate exhaust ventilation at machinery and at places where dust can be generated.</p>
Respiratory protection	<p>An approved air-purifying respirator (APR) for particulates may be permissible where airborne concentrations are expected to exceed occupational exposure limits.</p> <p>Protection provided by air-purifying respirators is limited. Use a positive-pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are not known, or any circumstances where air-purifying respirators may not provide adequate protection. Use of respirators must include a complete respiratory protection program in accordance with national standards and current best practices.</p>
Eye / Face protection	<p>Wear eye/face protection. Safety glasses with side-shields. Goggles.</p>
Skin protection	<p>Wear protective gloves to prevent soiling of hands. Use protective barrier cream before handling the product. Wash hands and other exposed skin with mild soap and water.</p>
Personal hygiene	<p>Handle in accordance with good industrial hygiene and safety practice. Emergency eyewash and safety shower should be located nearby.</p>


8.2.2. Environmental exposure controls

Measures to prevent	<p>No significant environmental hazards are associated with carbon black release to the environment. Carbon black is not soluble in water.</p>
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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Important health, safety and environmental information

Appearance:	powder or pellet
Colour	black
Odour	odorless
Odour threshold	Not applicable
pH	6-11 [50 g/l water, 68°F (20°C)]
Melting point/range, °C	not applicable


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Initial boiling point/range, °C	Not applicable	
Flash point, °C	Not applicable	
Ignition temperature, °C	> 600	
Self-Ignition temperature, °C	>140	
Decomposition temperature, °C	not applicable	
Evaporation rate	Not applicable	
Flammability	not applicable	
Explosive Limits (dust):		
Lower 50 g/m ³	50 g/m ³	
Upper not determined	not determined	
Vapour pressure (hPa) at 20°C):	Not applicable	
Vapour density (air=1)	Not applicable	
Density (g/cm ³) at 20°C:	1,8-1,98	
Water solubility (20°C in g/l):	Not applicable	
n-Octanol/Water (log Po/w)	Not applicable	
Viscosity, dynamic (mPa s):	Not applicable	
9.2. Other safety information		
Ignition Energy, κJ	20	
Maximum Rate of Pressure Rise	46 bar/sec.	

10. STABILITY AND REACTIVITY.

10.1 Reactivity	stable under normal ambient conditions
10.2 Chemical stability	stable under normal ambient conditions
10.3 Possibility of hazardous reactions	None
10.4 Conditions to avoid	exposure to high temp. >572°F (>300°C) and open flames
10.5 Incompatible materials	strong oxidizers such as chlorates, bromates, and nitrates
10.6 Hazardous decomposition products	carbon monoxide, carbon dioxide, organic products of decomposition, oxides or sulfur (sulfoxides) form if heated above decomposition temperature

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Toxicokinetics, metabolism and distribution
Small quantities of technical carbon was discovered in the feather platelets after oral administration. The absorption and retention of carbon black particles in lung macrophages have been detected after inhalation. It is unlikely that the insoluble particles are able to penetrate through the skin.

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12. Ecological information

12.1 Toxicity

Aquatic toxicity

Substance name	Target of toxicity	Value mg/l	Time, hours	Species	Method
Carbon black	Acute fish toxicity	LC50> 5000	96	Brachydanio rerio	OECD Guideline 203
	Acute daphnia toxicity	EC50> 5600	48	Daphnia magna	OECD Guideline 202
	Acute algae toxicity	EC50> 10,000	72	Desmodesmus subspicatus	OECD Guideline 201
	Toxicity for microorganisms	EC10= 800	3	Activated sludge	Deutsche Einheitsverfahren zur Wasseruntersuchung (1975) DEV L3 (TTC-Test)

12.2 Persistence and degradability

Abiotic Degradation

Not expected to degrade

Biodegradation

Unknown

12.3 Bioaccumulative potential

Not expected due to physicochemical properties of the substance.

12.4 Mobility in soil

Not expected to migrate. Insoluble.

12.5 Results of PBT and vPvB assessment

This substance does not fulfill the criteria for PBT or vPvB



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Delay cleaning of particles from the rats respiratory tract exposed with more than 0.5-1 mg/g of lung or 7 mg /m³ ("lung overflow"). The translocation of "ultrafine" (around 100 nm) carbonaceous particles from the lungs into the systemic circulation was not detected.

Acute toxicity

	Effect dose	Impact time	Species	Method
Acute oral toxicity	LD>8000 mg/kg	probe	rat	OECD Guideline 401
Acute inhalative toxicity	LCO> 4,6 mg/M ³	4 hours	rat	Acceptable, well documented publication
Irritation	Skin corrosion/irritation		None	
	Serious eye damage/irritation		Weak mechanical irritation of the conjunctiva and the eyelid	
	Irritation to respiratory tract		None	
Respiratory or skin sensitisation	None			
Mutagenicity:	None			
Carcinogenicity	None			
	IARC has classifiable Carbon black in group 2, although other studies indicate the inadequacy of such a classification.			
Toxicity for reproduction	None			
STOT-SE, STOT-RE	No expected toxic effects on target organs			

Chronic toxicity

Substance name		Value	Time	Species	Метод
Carbon black	Inhalation	NOAEL= 1,1 mg/M ³	13 weeks	Rat	Acceptable, well documented publication

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13. DISPOSAL CONSIDERATIONS.

13.1 Waste treatment methods	
Product disposal	Product, as supplied, should be disposed of in accordance with the regulations issued by the appropriate federal, state and local authorities.
Waste codes / waste designations according to EWC / AVV	RCRA Classification (40 CFR 261): Not a hazardous waste.
Packaging disposal	Return reusable containers to manufacturer. Paper packaging can be disposed of at suitable landfills in accordance with the Rules.

14. TRANSPORT INFORMATION.

Not classified as a "hazardous cargo".

14.1 UN-No	Not applicable
14.2 Proper shipping name	Not applicable
14.3 Class(es)	Not applicable
14.4 Packing group	Not applicable
14.5 Hazard label(s):	Not applicable
14.6 Special precautions for user	Not applicable
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable
14.8 Additional information	Carbon black is not a subject for any limitations on transportation in accordance with the rules of transportation of dangerous substances in Canada and


15. REGULATORY INFORMATION

15.1.1 EU regulations

No restrictions by Annex XVII REACH

Carbon black is not in the SVHC REACH.

Carbon black is not in the list of Annex XIV REACH.

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15.1.2. National regulations

Switzerland	non-toxic G-8938
Germany	water classification. WGK Number (Kenn-Nr): 1742. WGK Class (Wassergefährdungsklasse): nwg (non-hazardous to waters). Not a hazardous substance as defined by the Chemicals Act or Hazardous Substance Ordinance.
EU	Classification: Not defined as a dangerous substance or preparation according to Council Directive 67/548/EEC and its various amendments and adaptations.
Canada	Canadian Domestic Substances List
USA	U.S. Toxic Substances Control Act (TSCA)
Malaysia	Ministry of international trade and industry
Australia	Australian Inventory of Chemical Substances (AISC)

15.2 Chemical Safety Assessment - Unknown

16. OTHER INFORMATION

Training advice	Carefully read the MSDS before use.
Abbreviations and acronyms	NOAEL - no adverse event level LD50- lethal dose LC0- lethal concentration for 0 percent of animals used for testing LC50- Median lethal concentration EC50- Effective concentration for inhibition of 50% of isolates PBT or vPvB- Persistent, Bioaccumulative, and Toxic or very Persistent and very Bioaccumulative
Disclaimer	The data and information presented herein corresponds to the present state of our knowledge and experience and is intended to describe our product with respect to possible occupational safety and health concerns. The user of this product has sole responsibility to determine the suitability of the product for any use and manner of use intended, and for determining the regulations applicable to such use in the relevant jurisdiction. This SDS is updated on a periodic basis in accordance with applicable health and safety standards.
Key literature references and sources for data	ECHA Chemicals database GESTIS Chemicals database
Further information	In the event of a discrepancy between the information on the non-English document and its English counterpart, the English version shall supersede.

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