Safety Data Sheet

according to Regulation (EC) No. 1907/2006

Lamp Black - 128

Material number		Version	4.0 / REG_EUR
Specification	000001000048	Revision Date	19.01.2018

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name	:	Lamp Black - 128
REACH Registration Number	:	01-2119384822-32-0003, -0006, -0007, -0008, -0012, -0013, -0031, -0032, -0033, -0057, -0058
CAS-No.	:	1333-86-4

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture	:	Coloured printing inks, Non-Impact Printing, Coatings, Paints and lacquers, Plastics, Spinning fibres, Special applications; Pigment, Conductivity, Reaction media, UV-filters
Recommended restrictions on use	:	Tattoo

1.3 Details of the supplier of the safety data sheet

Company	:	Michael Harding Art Formulas Ltd Unit K Springvale Ind Est Cwmbran, Torfaen NP44 5BE
Telephone	:	+44(0)1633484700
E-mail address	:	accounts@michaelharding.co.uk

1.4 Emergency telephone number

+44(0)1633484700 Mon - Thurs 08:00 - 16:30, Fri 08:00 - 15:30

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

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In 1995 IARC concluded, “There is inadequate evidence in humans for the carcinogenicity of Carbon Black.” Based on rat inhalation studies IARC concluded that there is “sufficient evidence in experimental animals for the carcinogenicity of Carbon Black,” IARC’s overall evaluation was that “Carbon Black is possibly carcinogenic to humans (Group 2B).” This conclusion was based on IARC’s guidelines, which require such a classification if one animal species exhibits carcinogenicity in two or more studies. Lung tumours in rats are the result of exposure under “lung overload” conditions. The development of lung tumours in rats is specific to this species. Mouse and hamster showed no carcinogenicity in similar studies.

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In 2006 IARC re-affirmed its 1995 classification of Carbon Black as, Group 2B (possibly carcinogenic to humans).

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Overall, as a result of the detailed epidemiological investigations, no causative link between Carbon Black exposure and cancer risk in humans has been demonstrated. This view is consistent with the IARC evaluation in 2006. Furthermore, several epidemiological and clinical studies of workers in the Carbon Black production industries show no evidence of clinically significant adverse health effects due to occupational exposure to Carbon Black. No dose response relationship was observed in workers exposed to Carbon Black.

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Applying the rules of the Globally Harmonized System of Classification and Labelling (GHS, e.g. UN `Purple Book´ , EU CLP Regulation) the results of repeated dose toxicity and carcinogenicity studies in animals do not lead to classification of Carbon Black for Specific target organ toxicity (Repeated exposure) and carcinogenicity. UN GHS says, that even if adverse effects are seen in animal studies or in-vitro tests, no classification is needed if the mechanism or mode of action is not relevant to humans. 2) The European CLP Regulation also mentions, that no classification is indicated, if the mechanism is not relevant to humans. 3) Furthermore, the CLP guidance on classification and labelling states, that „lung overload“ in animals is listed under mechanism not relevant to humans. 4)

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2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Labelling not required according to EU-CLP Ordinance (1272/2008).

2.3 Other hazards

Not a PBT, vPvB substance as per the criteria of the REACH Ordinance.

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SECTION 3: Composition/information on ingredients

3.1 Substances

CAS-No. : 1333-86-4

Chemical nature : Substance

Composition / information on ingredients / hazardous components

Chemical name	CAS-No. EC-No.	Concentration (% w/w)
Carbon Black, amorphous	1333-86-4 215-609-9	100

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice :

If inhaled : Restore normal respiration with first aid measures as necessary.
If cough, dyspnoea or other respiratory problems occur, bring exposed persons out into the fresh air. Consult a physician if symptoms persist.

In case of skin contact : Carefully wash off skin with soap and water. Consult a physician if symptoms occur.

In case of eye contact : Possible discomfort is due to foreign substance effect.
Rinse thoroughly with plenty of water keeping eyelid open.
In case of persistent discomfort: Consult an ophthalmologist.

If swallowed : Do not induce vomiting.
Rinse mouth with water.
If conscious, drink plenty of water.
Never give by mouth to anyone, who faints quickly, becomes unconscious or has cramps.
After absorbing large amounts of substance / In case of discomfort: Supply with medical care.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : After absorbing large amounts of substance:
Acceleration of gastrointestinal passage

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use foam, carbon dioxide (CO2), nitrogen (N2), dry chemical or water spray. Use of atomized spray is recommended if water is used.

Unsuitable extinguishing media : Do not use full-force water jet in order to avoid dispersal and spread of the fire.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : May be released in case of fire: carbon monoxide, carbon dioxide, sulphur oxides, organic products of decomposition.

5.3 Advice for firefighters

Special protective equipment for firefighters : In case of fire: wear a self contained respiratory apparatus

Further information : Carbon Black does not burn with an open flame and fire may not be noticed until material is poked to reveal visible sparks. Carbon Black that has burnt once should be observed carefully for at least 48 hours.
Water used to extinguish fire should not enter drainage systems, soil or stretches of water.
Ensure there are sufficient retaining facilities for water used to extinguish fire.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Retention of fire-extinguishing water in Germany: see FireExtinguishing Water Retention Directive "LoeRueRL":

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Caution: Moist industrial soot causes dangerously slick surfaces. Avoid dust formation. Ensure sufficient ventilation. Use personal safety equipment. See also Section 8.

6.2 Environmental precautions

Environmental precautions : Do not allow material to enter the groundwater system. Product floats on water and does not dissolve. If possible, try to keep floating material together. If larger amounts of spilt material cannot be contained, local authorities should be informed. Do not allow entrance in sewage water, soil stretches of water, groundwater, drainage systems.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Vacuum up immediately. A vacuum cleaner with a high-efficiency filtration system is recommended. To avoid raising

dust do not use brooms or compressed air. Collect and place in correctly labelled containers. For disposal see Section 13. Avoid dust formation.

6.4 Reference to other sections

Safe handling advice, see section 7.
For personal protection see section 8.
For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	Avoid contact with eyes and skin. Do not inhale dust. Ensure sufficient ventilation and extraction at processing machines and locations where dust may form. Use no brooms or compressed air to avoid raising dust. Fine dust may cause electrical short circuiting or penetrate into electrical devices that are not completely sealed. Take measures to prevent electrostatic charging. If work under hot conditions is unavoidable (welding, torch cutting, etc.), the working area must be kept as free as possible of soot product and dust. Provide sufficient ventilation and exhaust at the workplace.
Advice on protection against fire and explosion	:	In closed containers such as silos or poorly ventilated store rooms, carbon monoxide may be present. For this reason, sources of ignition should be kept clear and respiratory equipment independent of surrounding air should be worn as a precautionary measure. When repairs of the production system are to be made (e.g. welding work), the section to be repaired must be essentially free of product. Take measures to prevent the build up of electrostatic charge. Keep away from sources of ignition - No smoking.
Hygiene measures	:	When using, do not eat, drink or smoke. Wash face and/or hands before break and end of work. To ensure ideal skin protection: use super fatted soaps and skin cream for skin care.
Dust explosion class	:	St1 Method: VDI 2263

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Store cool and dry in a well-ventilated location. Keep away from heat and ignition sources. Do not store together with strong oxidants. Do not store together with volatile compounds, since they may be adsorbed. Store in correctly labelled containers.
Further information on storage conditions	:	Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. Apply technical measures to comply with the occupational exposure limits. Avoid exceeding the given occupational exposure

limits (see section 8).

7.3 Specific end use(s)

Specific use(s) : no

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Observe national regulations.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Carbon Black, amorphous	Worker	inhalation (respirable fraction)	see section 11.	0,5 mg/m3
	Worker	inhalation (inhalable fraction)	see section 11.	2 mg/m3

8.2 Exposure controls

Engineering measures

Use process enclosures and/or exhaust ventilation to keep airborne dust concentrations below the occupational exposure limit.
Depending on processing requirements, equipment, and the composition, concentration, and energy requirements of intermediates and/or finished products, dust control systems may require explosion relief vents, or an explosion suppression system, or an oxygen-deficient environment.
Local exhaust ventilation recommended for all transfer points to mixers, blenders, batch feeding processes and point sources that may release dust to work environment.
Recommend mechanical handling to minimize human contact with dust.
Recommend ongoing preventive maintenance and housekeeping programs to minimize dust release from ventilation control systems and the build-up of dust on surfaces in work environments.
Except for approved power-operated trucks designated as EX, power-operated industrial trucks shall not be used in atmospheres containing hazardous concentrations of carbon black dust.
See also section 7.

Personal protective equipment

Eye protection : Safety glasses with side-shields
If dust occurs: basket-shaped glasses

Hand protection

Material : No special glove composition is required for carbon black. Gloves may be used to protect hands from carbon black soiling.

Remarks : Recommendation: Wear protective gloves made of the following materials: natural latex (NR), PVC, nitrile rubber (NBR). The data about break through time/strength of material is not valid for undissolved solids/dust.

Skin and body protection : When using, do not eat, drink or smoke. Wash face and/or hands before break and end of work.

Wash hands and other exposed skin with mild soap and water.

Use of a barrier cream may help prevent skin drying and minimize soiling.

To ensure ideal skin protection: use super fatted soaps and skin cream for skin care.
When handling larger quantities:
chemical protective suit or disposable protective clothing
Remove and wash contaminated clothing before re-use.

Respiratory protection : If workplace exposure limits are exceeded and/or larger amounts are released (leakage, spilling, dust) the indicated respiratory protection should be used.
Dust mask with P2 particle filter

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.
When respiratory protection is required to minimize exposures to carbon black, programs should follow the requirements of the appropriate governing body for the country, province or state.

Protective measures : If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used.
Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls

Air : Knock down dust with water spray jet.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	solid, powder / beads
Colour	:	black
Odour	:	odourless
Odour Threshold	:	Not applicable
pH	:	>= 6,5 (20 °C) Concentration: 50 g/l
Melting point/range	:	> 3.000 °C
Boiling point/boiling range	:	> 3.000 °C
Flash point	:	Not applicable

Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	> 45 s Method: VDI 2263
Upper explosion limit	:	not determined
Lower explosion limit	:	50 g/m3 Medium: Dust. Method: VDI 2263
Vapour pressure	:	Not applicable
Relative vapour density	:	Not applicable
Density	:	1,7 - 1,9 g/cm3 (20 °C)
Solubility(ies)		
Water solubility	:	insoluble
Solubility in other solvents	:	insoluble
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	> 140 °C Method: IMDG-Code Volume-dependent parameter, measured temperature refers to the 1 l sample
Decomposition temperature	:	> 400 °C Method: VDI 2263 Smoulder temperature
Viscosity		
Viscosity, dynamic	:	Not applicable
Viscosity, kinematic	:	Not applicable
Explosive properties	:	Dust deflagration index (Kst) Kst = 30 - 100 bar m/s Method: VDI 2263 Dusts can form explosive mixtures with air. see section 7.

9.2 Other information

Impact sensitivity	:	Not impact sensitive.
Dust explosion class	:	St1 Method: VDI 2263
Metal corrosion rate	:	not determined

Minimum ignition energy	:	> 1 kJ Method: VDI 2263
Minimum ignition temperature	:	> 600 °C Method: VDI 2263 (BAM-furnace)
Maximal absolute explosion pressure	:	10 bar Method: VDI 2263
Metal corrosion	:	Remarks: not determined

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under normal conditions.
Carbon black cannot easily be caused to explode and therefore there is no danger in practical use.
However, in special test procedures a carbon black/air mixture can explode.

10.2 Chemical stability

The product is chemically stable.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	Hazardous polymerization does not occur. Will not occur under normal conditions. Carbon black cannot easily be caused to explode and therefore there is no danger in practical use. However, in special test procedures a carbon black/air mixture can explode. Take measures to prevent electrostatic discharges. Avoid dust formation. All metal parts of the mixing and processing machines must be earthed. Make sure all equipment is grounded before loading operations.

10.4 Conditions to avoid

Conditions to avoid	:	Avoid heat effect and sources of ignition. Avoid temperatures above 400°C.

10.5 Incompatible materials

Materials to avoid	:	Avoid contact with strong oxidants.

10.6 Hazardous decomposition products

Carbon monoxide
Carbon dioxide (CO_2)
organic products of decomposition
sulphoxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat): > 8.000 mg/kg
Method: Equivalent to OECD Test Guideline 401
Assessment: The substance or mixture has no acute oral toxicity

Skin corrosion/irritation

Product:

Species: Rabbit
Method: Equivalent to OECD Test Guideline 404
Result: not irritating
Remarks: .
Oedema
= 0 (max. attainable irritation score: 4)
Erythema
= 0 (max. attainable irritation score: 4)

Serious eye damage/eye irritation

Product:

Species: Rabbit
Method: OECD Test Guideline 405
Result: not irritating
Remarks: .
Cornea
= 0 (max. attainable irritation score: 4)
Iris
= 0 (max. attainable irritation score: 2)
Conjunctiva
= 0 (max. attainable irritation score: 3)
Chemosis
= 0 (max. attainable irritation score: 4)

Respiratory or skin sensitisation

Product:

Test Type: Buehler Test
Species: Guinea pig
Method: OECD Test Guideline 406
Result: not sensitizing to the skin
Remarks: No evidence of sensitization was found in animals.
No cases of sensitization in humans have been reported.

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: Carbon Black is not suitable to be tested in bacterial (Ames test) and other in vitro systems because of its insolubility. 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).

Genotoxicity in vivo : Remarks: 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.

Germ cell mutagenicity- Assessment : Not a mutagen

In vivo mutagenicity in rats is occurring by mechanisms secondary to a threshold effect 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.

Carcinogenicity

Product:

Species: Rat
Application Route: Oral
Exposure time: 2 years
Remarks: no tumours

Species: Rat
Application Route: Inhalation
Exposure time: 2 years
Remarks: lungs / inflammation, fibrosis, tumours

Remarks: exposure under overload conditions

Remarks: Lung tumours in rats are the result of exposure under “lung overload” conditions. The development of lung tumours in rats is specific to this species. Mouse and hamster do not develop lung tumours under similar test conditions. The CLP guidance on classification and labelling states, that „lung overload“ in animals is listed under mechanism not relevant to humans. 4)

Species: Mouse
Application Route: Oral
Exposure time: 2 years
Remarks: no tumours

Species: Mouse
Application Route: Dermal
Exposure time: 18 months
Remarks: no tumours

Carcinogenicity - Assessment : Not carcinogenic

Reproductive toxicity

Product:

Effects on fertility : Remarks: No experimental studies on effects of Carbon Black on fertility and reproduction have been located. However, based on the toxicokinetics data, Carbon Black is deposited in the lungs and based on its specific chemical-physical properties (insolubility, low absorption potential), it is not likely to distribute in the body to reach reproductive organs, embryo and/or foetus under in vivo conditions. Therefore, no adverse effects of Carbon Black to fertility/reproduction are expected. No effects have been reported in long-term animal studies.

Effects on foetal development : Remarks: No experimental studies on effects of Carbon Black on foetal development have been located. However, based on the toxicokinetics data, Carbon Black is deposited in the lungs and based on its specific chemical-physical properties (insolubility, low absorption potential), it is not likely to distribute in the body to reach reproductive organs, embryo and/or foetus under in vivo conditions. Therefore, no adverse effects of Carbon Black to foetal development are expected.

Reproductive toxicity - Assessment : Not a reproductive toxin
Not a teratogen

STOT - single exposure

Product:

Remarks: Based on the information available, organ-specific toxicity is not to be expected after one single exposure.

STOT - repeated exposure

Product:

Remarks: Effects in the rat lung are considered to be related to the “lung overload phenomenon” 1 & 6 & 7 & 8 & 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.

Remarks: Based on the information available, organ-specific toxicity is not to be expected after repeated exposure.

Repeated dose toxicity

Product:

Species: Rat
NOAEC: 1 mg/m3
Application Route: inhalation (respirable fraction)
Exposure time: 90 d
Target Organs: lungs / inflammation, hyperplasia, fibrosis

Species: Mouse
NOEL: 137 mg/kg
Application Route: Oral
Exposure time: 2 yr

Species: Rat
NOEL: 52 mg/kg
Application Route: Oral
Exposure time: 2 yr

Aspiration toxicity

Product:
No aspiration toxicity classification

Experience with human exposure

Product:

General Information : Results of epidemiological studies of Carbon Black production workers suggest that cumulative exposure to Carbon Black may result in small decrements in lung function. A recent U.S. respiratory morbidity study suggested a 27 ml decline in FEV1 from a 1 mg/m3 (inhalable fraction) exposure over a 40-year period. An older European investigation suggested that exposure to 1 mg/m3 (inhalable fraction) of Carbon Black over a 40-year working lifetime would result in a 48 ml decline in FEV1. However, the estimates from both studies were only of borderline statistical significance. Normal age-related decline over a similar period of time would be approximately 1200 ml.

The relationship between other respiratory symptoms and exposure to Carbon Black is even less clear. In the U.S. study, 9% of the highest exposure group (in contrast to 5% of the unexposed group) reported symptoms consistent with chronic bronchitis. In the European study, methodological limitations in the administration of the questionnaire limit the conclusions that can be drawn about reported symptoms. This study, however, indicated a link between Carbon Black and small opacities on chest films, with negligible effects on lung function.

A study on Carbon Black production workers in the UK 10) found an increased risk of lung cancer in two of the five plants studied; however, the increase was not related to the dose of Carbon Black. Thus, the authors did not consider the increased risk in lung cancer to be due to Carbon Black exposure. A German study of Carbon Black workers at one plant 11 &12 & 13 & 14) found a similar increase in lung cancer risk but, like the 2001 UK study 10), found no association with

Carbon Black exposure. In contrast, a large US study 15) of 18 plants showed a reduction in lung cancer risk in Carbon Black production workers. Based upon these studies, the February 2006 Working Group at IARC concluded that the human evidence for carcinogenicity was inadequate. 1)

Since this IARC evaluation of Carbon Black, Sorahan and Harrington 16) re-analyzed the UK study data using an alternative exposure hypothesis and found a positive association with Carbon Black exposure in two of the five plants. The same exposure hypothesis was applied by Morfeld and McCunney 17 & 18) to the German cohort; in contrast, they found no association between Carbon Black exposure and lung cancer risk and, thus, no support for the alternative exposure hypothesis used by Sorahan and Harrington 16) . Morfeld and McCunney 19) applied a Bayesian approach to unravel the role of uncontrolled confounders and identified smoking and prior exposure to occupational carcinogens received before being hired in the Carbon Black industry as main causes of the observed lung cancer excess risk.

Overall, as a result of these detailed investigations, no causative link between Carbon Black exposure and cancer risk in humans has been demonstrated. This view is consistent with the IARC evaluation in 2006.

Several epidemiological and clinical studies of workers in the Carbon Black production industries show no evidence of clinically significant adverse health effects due to occupational exposure to Carbon Black.

No dose response relationship was observed in workers exposed to Carbon Black.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish	:	LC0 ((Brachydanio rerio)): 1.000 mg/l Exposure time: 96 h Method: OECD 203 LC0 (Leuciscus idus melanotus): > 5.000 mg/l Exposure time: 14 d Method: DIN 38412 part 15
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna): > 5.600 mg/l Exposure time: 24 h Method: OECD 202
Toxicity to algae	:	EC50 (scenedesmus subspicatus): > 10.000 mg/l Exposure time: 72 h Method: OECD 201

NOEC (scenedesmus subspicatus): > 10.000 mg/l
Exposure time: 72 h
Method: OECD 201

Toxicity to microorganisms : EC0 (local activated sludge): > 400 mg/l
Exposure time: 3 h
Method: DEV L3 (TTC test)

: EC10 (local activated sludge): 800 mg/l
Exposure time: 3 h
Method: DEV L3 (TTC test)

Ecotoxicology Assessment

Acute aquatic toxicity : Carbon Black is an inert, inorganic and water insoluble substance therefore its bioavailability for aquatic organisms is low. As an element it has not further reactive or functional groups and an acute toxicity is not expected.

Chronic aquatic toxicity : Carbon Black is an inert, inorganic and water insoluble substance therefore its bioavailability for aquatic organisms is low. As an element it has not further reactive or functional groups and a chronic toxicity is not expected.

Toxicity Data on Soil : As an inert solid substance, insoluble in water and organic solvents diffusion through membranes or uptake and bioaccumulation to terrestrial organisms is not expected. Based on the available data, Carbon Black is not considered as toxic to terrestrial organism.

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: Carbon Black is substantially elemental carbon. The substance is inorganic and cannot be further biodegraded by microorganisms

Physico-chemical removability : Remarks: Carbon Black is substantially elemental carbon. It is inert and contains no functional or water-soluble groups. It cannot be further degraded by hydrolysis, light or by photo degradation in air or in surface water.

Stability in water : Remarks: The product is insoluble and floats on water.

Impact on Sewage Treatment : Based on the available data, Carbon Black is not expected to interfere with the operation of sewage treatment plants.

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Based on the physical-chemical properties of Carbon Black as an inert solid, its insolubility and stability in water and in organic solvents, diffusion through membranes of organisms and therefore bioaccumulation is not expected.

12.4 Mobility in soil

Product:

Stability in soil : Remarks: Carbon Black is an inert solid. It is stable and insoluble in water or organic solvents. Its vapour 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, respectively, can be dismissed. The deposition in soil or sediments is therefore the most relevant compartment of fate in the environment.

12.5 Results of PBT and vPvB assessment

Product:

Assessment : Not a PBT, vPvB substance as per the criteria of the REACH Ordinance..

12.6 Other adverse effects

Product:

Additional ecological information : No negative effects known.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : In accordance with local and national regulations.
Observe national regulations.

No waste key number as per the European Waste Types List can be assigned to this product, since such classification is based on the (as yet undetermined) use to which the product is put by the consumer.
The waste key number must be determined as per the European Waste Types List (decision on EU Waste Types List 2000/532/EC) in cooperation with the disposal firm / producing firm / official authority.

Contaminated packaging : Non-contaminated packaging may be re-used.
Contaminated packaging should ideally be emptied; it can then be recycled after having been decontaminated.
Packaging which cannot be decontaminated should be disposed of like the material.

SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Remarks	:	Not classified as dangerous in the meaning of transport regulations. Non-activated carbon black of mineral origin. No hazardous material of division 4.2 . Not dangerous goods in the meaning of ADR/RID, ADN, IMDG-Code, ICAO/IATA-DGR

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

:

Other regulations : All national and local regulations have to be followed.

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.
No Chemical Safety Report as per Articles 2(8), 2(9) or 14 of the REACH Ordinance is required for this product.
Not a hazardous substance or mixture.
Due to the lack of dangerous properties an exposure assessment is not necessary.

SECTION 16: Other information

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System;

GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Other information : R E F E R E N C E S

1) Baan, R. Carcinogenic Hazards from Inhaled Carbon Black, Titanium Dioxide, and Talc not Containing Asbestos or Asbestiform Fibers: Recent Evaluations by an IARC Monographs Working Group. Inhalation Toxicology, 19 (Suppl. 1); 213-228 (2007).

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This data sheet contains changes from the previous version in section(s):
1.3
Only representative

This version replaces all previous versions.

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