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ISO 9001: 2015

MATERIAL SAFETY DATA SHEET

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

1.1 Product identifiers

Carbon, mesoporous nanopowder, graphitized, <500 nm particle size (DLS), >99.95% trace metals basis
Code C 3056

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

2.2 Label elements

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

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

May form explosible dust-air mixture if dispersed.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : Graphitized carbon black

Formula : C

Molecular weight : 12,01 g/mol

CAS-No. : 1333-86-4

EC-No. : 215-609-9

No components need to be disclosed according to the applicable regulations.

SECTION 4: First aid measures

4.1 Description of first-aid measures

If inhaled

After inhalation: fresh air.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Foam Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Combustible.

Risk of dust explosion.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

5.4 Further information

none

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures
 Advice for non-emergency personnel: Evacuate the danger area, observe emergency procedures, consult an expert.
 For personal protection see section 8.
- 6.2 Environmental precautions
 No special precautionary measures necessary.
- 6.3 Methods and materials for containment and cleaning up
 Observe possible material restrictions (see sections 7 and 10).
- 6.4 Reference to other sections
 For disposal see section 13.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling
 Advice on protection against fire and explosion
 Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.
 Hygiene measures
 Change contaminated clothing. Wash hands after working with substance.
 For precautions see section 2.2.
- 7.2 Conditions for safe storage, including any incompatibilities
 Storage conditions
 Tightly closed.
 Storage class
 Storage class (TRGS 510): 11: Combustible Solids
- 7.3 Specific end use(s)
 Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

- 8.1 Control parameters
 Ingredients with workplace control parameters
- 8.2 Exposure controls
 Personal protective equipment
 Eye/face protection
 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses
 Skin protection
 not required
 Respiratory protection
 Not required; except in case of aerosol formation.
 Control of environmental exposure
 No special precautionary measures necessary.

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties
- | | |
|---|--|
| a) Appearance | Form: powder Color: black |
| b) Odor | odorless |
| c) Odor Threshold | No data available |
| d) pH | 4,0 - 11,0 at 50 g/l at 20 °C |
| e) Melting point/freezing point | Melting point/range: 3.654 - 3.697 °C |
| f) Initial boiling point and boiling range | 4.827 °C |
| g) Flash point | Not applicable |
| h) Evaporation rate | No data available |
| i) Flammability (solid, gas) | May form combustible dust concentrations in air. |
| j) Upper/lower flammability or explosive limits | No data available |
| k) Vapor pressure | No data available |
| l) Vapor density | No data available |
| m) Density | 0,056 g/cm ³ 31,887 g/cm ³ |
| Relative density | 1,8 - 2,1 at 20 °C - OECD Test Guideline 109 |
| n) Water solubility | 0,0001 g/l - OECD Test Guideline 105- insoluble |
| o) Partition coefficient: n-octanol/water | No data available |
| p) Autoignition temperature | > 315 °C |
| q) Decomposition | |

temperature No data available
r) Viscosity Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
s) Explosive properties No data available
t) Oxidizing properties none
9.2 Other safety information
No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

no information available

10.4 Conditions to avoid

no information available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals:

Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg

Inhalation LC50 Rat: > 50mg/L.

Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None. by NTP, None. by OSHA, None. by NIOSH.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of inhalation (lung irritant). Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available. Special Remarks on other Toxic Effects on Humans: Not available

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish semi-static test LC50 - Danio rerio (zebra fish) - > 1.000 mg/l - 96 h
(OECD Test Guideline 203)

Remarks: (above the solubility limit in the test medium)

Toxicity to daphnia

and other aquatic

invertebrates

semi-static test EC50 - Daphnia magna (Water flea) - > 5.600 mg/l
- 24 h

(OECD Test Guideline 202)

Remarks: (above the solubility limit in the test medium)

Toxicity to algae static test EC50 - Desmodesmus subspicatus (green algae) - >

10.000 mg/l - 72 h

(OECD Test Guideline 201)

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Biological effects:

Further information on ecology

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information

14.1 UN number

ADR/RID: - IMDG: - IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

Further information

Not classified as dangerous in the meaning of transport regulations.

SECTION 15: Regulatory information

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

Section 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

