



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Revision date 2-Jan-2023

Revision Number 5

According to Article 31 of the Regulation (EC) No 1907/2006 (REACH), a Safety Data Sheet (SDS) must be provided for hazardous substances or preparations. This product does not meet the classification criteria of the Regulation (EC) No 1272/2008 (CLP). Therefore, such document is outside the scope of Article 31 of REACH and the requirements for content in each section do not apply.

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

1.1. Product Identifier

Product group: Steam Activated Granular Carbon; S-GAC

Product names:

| | | | |
|---------------------|-------------------------|----------------------|-----------------------|
| DARCO® 12X20 | NORIT® GAC 1240 | NORIT® GAC 830 PLUS | NORIT® NRS EA 3-4 |
| DARCO® 12X40 | NORIT® GAC 1240 A | NORIT® GAC 830R | NORIT® NRS GA 0.5-2.5 |
| DARCO® 20X40 | NORIT® GAC 1240 AF | NORIT® GAC 830RL | |
| DARCO® 4X12 | NORIT® GAC 1240 AFMX | NORIT® GAC 830RS | NORIT® PK 0.25-1 M |
| DARCO® 4X12B | NORIT® GAC 1240 AW | NORIT® GAC 830W | NORIT® PK 0.25-1 |
| DARCO® 8X30 A | NORIT® GAC 1240 EN | NORIT® GAC 830WI | NORIT® PK 0.25-1 NG |
| | NORIT® GAC 1240 EV | NORIT® GAC 840R | NORIT® PK 1-3 |
| DARCO® BG 1 | NORIT® GAC 1240G | NORIT® GAC H-2-12S | NORIT® PK 1-3 M |
| DARCO® BG 1P | NORIT® GAC 1240 PLUS | | NORIT® PK 2-4 M |
| DARCO® BGH | NORIT® GAC 1240 PLUS AQ | NORIT® G 1220 EXTRA | NORIT® PK 3-5 |
| DARCO® H2S | NORIT® GAC 1240 PLUS N | NORIT® G 1230 EXTRA | NORIT® PK 3-5 M |
| DARCO® H2SG | NORIT® GAC 1240 PLUS NR | NORIT® G 2040 EXTRA | |
| DARCO® H2S HF | NORIT® GAC 1240AFX | | NORIT® R 0.8 AGRU |
| DARCO® H2S LP | NORIT® GAC 1240R | NORIT® GCN 1020 | NORIT® R 0.8 EXTRA |
| DARCO® MRX | NORIT® GAC 1240W | NORIT® GCN 1240 | NORIT® R 1 EXTRA |
| | NORIT® GAC 1240 XCT | NORIT® GCN 1240 LC | NORIT® R 2030 |
| HYDRODARCO® 3000 | NORIT® GAC 2442 | NORIT® GCN 1240 PLUS | NORIT® R 2030 CO2 |
| HYDRODARCO® 4000 | NORIT® GAC 300 | NORIT® GCN 1840 | NORIT® R 2030W |
| HYDRODARCO® 820 | NORIT® GAC 3040 AW | NORIT® GCN 3070 | NORIT® R 2040W |
| | NORIT® GAC 400 | NORIT® GCN 48 | NORIT® R 2540W |
| NORIT® 830X | NORIT® GAC 400 PLUS | NORIT® GCN 48 R | NORIT® RAX 1 |
| NORIT® 830WPLUS | NORIT® GAC 410 AF | NORIT® GCN 610 G | NORIT® RB 0.8 CC |
| NORIT® 1240X | NORIT® GAC -40R | NORIT® GCN 612 G | NORIT® RB 1 |
| NORIT® CBI 367 | NORIT® GAC 40S | NORIT® GCN 816 G | NORIT® RB 2 |
| NORIT® CBI 368 | NORIT® GAC 610 | NORIT® GCN 830 | NORIT® RB 2 H2 |
| NORIT® CUSTOM REACT | NORIT® GAC 612WFD | NORIT® GCN 830 PLUS | NORIT® RB 3 |
| NORIT® DRK 1 | NORIT® GAC 818AW | NORIT® GCNY 1240 | NORIT® RB 3 H2 |
| | NORIT® GAC 820 | NORIT® GCNX 1840 | NORIT® RB 3W |
| NORIT® GAC 1020 AF | NORIT® GAC 830 | | NORIT® RB 30M |
| NORIT® GAC 1020 EN | NORIT® GAC 830 AF | NORIT® MRX-AF | NORIT® RB 4 |
| NORIT® GAC 1030AW | NORIT® GAC 830 EN | | NORIT® RB 4C |
| NORIT® GAC 1070MP | NORIT® GAC 830NR | | NORIT® RB 4W |

| | | | |
|------------------------|-----------------------|------------------|--------------------|
| NORIT® RB 40M | NORIT® ROX 0.8 | SORBONORIT® 3 | PETRODARCO® 4X10 |
| NORIT® RBW 1 | NORIT® ROX 0.8 T | SORBONORIT® 4 | PETRODARCO® 4X10N |
| NORIT® RBX 4C | NORIT® ROX 0.8 TX | SORBONORIT® B 3 | PETRODARCO® 8X30 |
| NORIT® R RMA | NORIT® ROY 0.8 | SORBONORIT® B 4 | PETRODARCO® 8X30 C |
| NORIT® RO 0.8 C | NORIT® RST 3 | SORBONORIT® BX 3 | PETRODARCO® 8X30N |
| NORIT® RO 3515 | NORIT® RST 4 | SORBONORIT® BX 4 | PETRODARCO® MS |
| NORIT® RO 3520 | NORIT® RX 1.5 EXTRA | SORBONORIT® K 3 | |
| NORIT® ROW 0.8 | NORIT® RX 3 EXTRA | SORBONORIT® K 4 | NORIT® VAPURE 410 |
| NORIT® ROW 0.8 CAT | NORIT® RX 4 EXTRA | SORBONORIT® K 4S | NORIT® VAPURE 610W |
| NORIT® ROW 0.8 SUPRA | NORIT® RXS 1 | SORBONORIT® KB 3 | NORIT® VAPURE 612 |
| NORIT® ROW 0.8 SUPRA N | | SORBONORIT® KB 4 | |
| | NORIT® SILREACT | SORBONORIT® X 4 | |
| | NORIT® SoilPure 12x20 | | |

REACH registration number: 01-2119488894-16

Synonyms: Activated carbon

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

Recommended use: Liquid and vapor applications (purification, decolorization, separation, catalyst and deodorization)

Uses advised against: None known.

1.3. Details of the supplier of the safety data sheet

Norit Nederland B.V.
Astronaut 34
Amersfoort
3824 MJ
The Netherlands
Tel: +31 33 464 8911
Fax: +31 33 461 7429

E-mail address: sdssupport@norit.com

1.4. Emergency telephone number

Emergency Telephone Number: The Netherlands CHEMTREC: +(31)-858880596
International CHEMTREC: +1 703-741-5970 or +1-703-527-3887
US: CHEMTREC 1-800-424-9300 or 1-703-527-3887

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This substance is classified as not hazardous according to regulation (EC) 1272/2008 [CLP]

2.2. Label elements

Signal word

None

Hazard statements

None

Precautionary Statements - EU (§28, 1272/2008)

None

2.3. Other Hazards

This substance does not fulfill the criteria for PBT or vPvB.

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.

Activated carbon (especially when wet) can deplete oxygen from air in enclosed spaces, and dangerously low levels of oxygen may result. Prior to entering a confined space that contains or previously contained activated carbon, the space should be evaluated for oxygen and carbon monoxide concentrations, and any other hazards, by a qualified person.

Workers should also take appropriate precautions when dealing with spent (used) activated carbons which may exhibit hazardous properties associated with the adsorbed materials.

Avoid generation of dust. Powdered material may form an explosible dust-air mixture. If transferring product under pressure, avoid generation of dust if an ignition source is present.

Activated carbons have high surface area which may cause self-heating during oxidation. See section 5.

Do not generate dust because airborne respirable crystalline silica may be generated.

Dust contact with the eyes can lead to mechanical irritation. Contact with dust can cause mechanical irritation or drying of the skin. Dust may be irritating to respiratory tract.

3. COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substances**

| Chemical name | Weight-% | REACH registration number | EC No | Classification according to Regulation (EC) No. 1272/2008 [CLP] | Specific concentration limit (SCL) | M-Factor | M-Factor (long-term) |
|----------------------------|----------|---------------------------|-----------|---|------------------------------------|----------|----------------------|
| Activated Carbon 7440-44-0 | 100 | 01-2119488894-16 | 931-328-0 | - | - | - | - |

4. FIRST AID MEASURES**4.1. Description of first aid measures****Inhalation**

If cough, shortness of breath or other breathing problems occur, move to fresh air. Seek medical attention if symptoms persist. If necessary, restore normal breathing through standard first aid measures.

Eye contact

In case of eye contact, immediately flush eyes with plenty of water for at least 15

minutes. Get medical attention if symptoms occur.

Skin contact Wash skin with soap and water. Get medical attention if symptoms occur.

Ingestion Do NOT induce vomiting. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.

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

Symptoms See Section 11 for additional Toxicological Information.

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

Note to physicians Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Use foam, carbon dioxide (CO₂), dry chemical or water spray. A fog is recommended if water is used.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire. DO NOT USE high pressure media which could cause formation of a potentially explosible dust-air mixture. In the event of a fire, spreading large amounts of activated carbon is not recommended due to the risk of creating uncontrolled dust emissions.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Burning produces irritant fumes. If transferring product under pressure, avoid generation of dust if an ignition source is present.

Activated carbons have high surface area which may cause self-heating during oxidation. An adequate air gap between packages of activated carbon is recommended to reduce risk of propagation of the event. Activated carbon is difficult to ignite and tends to burn slowly (smolder) without producing smoke or flame.

Hazardous combustion products Materials allowed to smolder for long periods in enclosed spaces may produce amounts of carbon monoxide which reach the lower explosive limit (carbon monoxide LEL = 12.5% in air), Used activated carbon may produce additional combustion products which are based on the substance(s) adsorbed, Carbon monoxide, Carbon dioxide (CO₂)

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters In case of fire: Wear self-contained breathing apparatus. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid generation of dust. Ensure adequate ventilation. Use personal protective

equipment as required. See section 8.

6.2. Environmental precautions

Environmental precautions No special environmental measures are necessary. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Avoid dry sweeping and use water spraying or vacuum cleaning systems to prevent airborne dust generation. If the spilled material contains dust or has the potential to create dust, use explosion-proof vacuums and/or cleaning systems suitable for combustible dusts. Use of a vacuum with high efficiency particulate air (HEPA) filtration is recommended. Do not create a dust cloud by using a brush or compressed air. Pick up and transfer to properly labeled containers. Spent granular activated carbon may be recyclable. Dispose of virgin (unused) carbon (surplus or spillage) in a facility permitted for non-hazardous wastes. Spent (used) carbon should be disposed of in accordance with applicable laws. Do not reuse empty bags: dispose of in a facility permitted for non-hazardous wastes. See section 13.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Avoid contact with skin and eyes. Avoid generation of dust. Do not breathe dust. Provide appropriate local exhaust ventilation at machinery and at places where dust can be generated. Do not create a dust cloud by using a brush or compressed air. Dust can form an explosive mixture with air.

Activated carbons have high surface area which may cause self-heating during oxidation. Take precautionary measures against static discharges. All metal parts of the mixing and processing equipment must be earthed/grounded. Ensure all equipment is electrically earthed/grounded before beginning transfer operations. Fine dust is capable of penetrating electrical equipment and may cause electrical shorts. If hot work (welding, torch cutting, etc.) is required the immediate work area must be cleared of product and dust.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat. Keep away from sources of ignition - No smoking. Do not store together with strong oxidizing agents. Do not store together with volatile chemicals as they may be adsorbed onto product. Keep in properly labeled containers. Activated carbon is difficult to ignite and tends to burn slowly (smolder) without producing smoke or flame. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive

mixture if they are released in the atmosphere in sufficient concentrations. Prior to entering a confined space that contains or previously contained activated carbon, the space should be evaluated for oxygen and carbon monoxide concentrations, and any other hazards, by a qualified person.

7.3. Specific end use(s)

Risk Management Methods (RMM) Per Article 14.4 of the REACH Regulation no exposure scenario has been developed as the substance is not hazardous.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits Exposure limits for components or similar components are stated below.

| Chemical name | Activated Carbon 7440-44-0 |
|----------------|---|
| Austria | TWA: 5 mg/m ³ STEL 10 mg/m ³ |
| Poland | TWA: 6 mg/m ³ |
| Chemical name | Quartz (respirable) 14808-60-7 |
| European Union | TWA: 0.1 mg/m ³ |
| Austria | TWA: 0.05 mg/m ³ alveolar dust, respirable fraction |
| Belgium | TWA: 0.1 mg/m ³ alveolar dust |
| Bulgaria | TWA: 0.1 mg/m ³ |
| Czech Republic | TWA: 0.1 mg/m ³ dust |
| Denmark | TWA: 0.3 mg/m ³ total; 0.1 mg/m ³ respirable |
| Finland | TWA: 0.05 mg/m ³ respirable dust |
| France | TWA: 0.1 mg/m ³ alveolar fraction |
| Greece | TWA: 0.1 mg/m ³ |
| Hungary | TWA: 0.1 mg/m ³ respirable |
| Ireland | TWA: 0.1 mg/m ³ STEL: 0.3 mg/m ³ |
| Italy REL | TWA: 0.025 mg/m ³ respirable fraction |
| Netherlands | TWA: 0.075 mg/m ³ respirable fraction |
| Norway | TWA: 0.3 mg/m ³ total dust; 0.1 mg/m ³ respirable dust STEL: 0.9 mg/m ³ total dust; 0.3 mg/m ³ respirable dust |
| Poland | TWA: 0.1 mg/m ³ respirable fraction |
| Portugal | TWA: 0.025 mg/m ³ respirable fraction |
| Romania | TWA: 0.1 mg/m ³ dust, respirable fraction |
| Slovakia | TWA: 0.1 mg/m ³ STEL: 0.5 mg/m ³ |
| Spain | TWA: 0.05 mg/m ³ respirable fraction |
| Sweden | NGV: 0.1 mg/m ³ respirable fraction |
| Switzerland | TWA: 0.15 mg/m ³ respirable dust |
| United Kingdom | TWA: 0.1 mg/m ³ |
| ACGIH TLV | TWA: 0.025 mg/m ³ respirable particulate matter |
| Chemical name | Dust, or particulates not otherwise specified RR-00072-6 |

| | |
|-----------|--|
| Belgium | TWA: 3 mg/m ³ alveolar fraction; 10 mg/m ³ inhalable fraction |
| France | TWA: 10 mg/m ³ inhalable; 5 mg/m ³ alveolar fraction |
| Ireland | TWA: 10 mg/m ³ total inhalable; 4 mg/m ³ respirable STEL: 30 mg/m ³ total inhalable, calculated; 12 mg/m ³ respirable, calculated |
| Italy REL | TWA: 10 mg/m ³ inhalable particles, calculated; 3 mg/m ³ respirable particles, calculated |
| Norway | TWA: 10 mg/m ³ total dust; 5 mg/m ³ respirable dust STEL: 20 mg/m ³ total dust, calculated; 10 mg/m ³ respirable dust, calculated |
| Portugal | TWA: 10 mg/m ³ inhalable fraction; 3 mg/m ³ respirable fraction |
| Slovakia | TWA: 10 mg/m ³ |
| Spain | TWA: 10 mg/m ³ inhalable fraction; 3 mg/m ³ respirable fraction |
| ACGIH TLV | TWA: 10 mg/m ³ inhalable particles, recommended TWA: 3 mg/m ³ respirable particles, recommended |

Derived No Effect Level (DNEL) As required under the EU Registration, Evaluation and Authorization of Chemicals (REACH) regulation, the Activated Carbon REACH Consortium (of which Norit is a member) developed the following Derived No Effect Levels (DNELs) for Activated Carbon based on a 90-day repeated dose inhalation toxicity study in rats: DNEL_{worker} of 1.8 mg/m³ (respirable) and DNEL_{consumer} of 0.9 mg/m³ (respirable).

Predicted No Effect Concentration (PNEC) According to the guidelines of the EU Registration, Evaluation and Authorization of Chemicals (REACH), a Predicted No Effect Concentration (PNEC)_{soil} of 10 mg/kg soil was derived based on an earthworm reproduction study. No other PNECs are derived.

8.2. Exposure controls

Engineering controls Ensure adequate ventilation to maintain exposures below occupational limits. Provide appropriate exhaust ventilation at machinery and at places where vapors from hot product or dust can be generated. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves.

Skin and body protection Wear suitable protective clothing. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.

Respiratory protection Approved respirator may be necessary if local exhaust ventilation is not adequate.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls No special environmental measures are necessary. Local authorities should be advised if significant spillages cannot be contained.

SECTION 9: Physical and chemical properties

Information given is based on data obtained from this substance or from similar substances.

9.1. Information on basic physical and chemical properties

| | |
|----------------|---|
| Physical state | Solid |
| Appearance | Granular |
| Color | black |
| Odor | Generally odorless. May produce slight sulfur smell when wet. |
| Odor threshold | Not applicable |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|--------------------------------|---------------------------|-------------------------|
| Melting point / freezing point | | Not applicable |
| Boiling point / boiling range | | Not applicable |
| Flammability (solid, gas) | Not flammable | |
| Flammability Limit in Air | | Not applicable |
| Flash point | | Not applicable |
| Autoignition temperature | | No data available |
| Decomposition temperature | | Not applicable |
| pH | | Not applicable |
| Kinematic viscosity | | Not applicable |
| Dynamic viscosity | | Not applicable |
| Water solubility | insoluble | @ 20 °C, OECD 105 |
| Solubility(ies) | | Not applicable |
| Partition coefficient | | Not applicable |
| Vapor pressure | | Not applicable |
| Relative density | | No data available |
| Bulk density | 250-600 kg/m ³ | |
| Relative vapor density | | Not applicable |

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Not applicable

9.2.2. Other safety characteristics

| | |
|----------------------|----------------|
| Explosive properties | Not applicable |
| Oxidizing properties | Not applicable |

SECTION 10: Stability and reactivity

10.1. Reactivity

| | |
|------------|--|
| Reactivity | May react exothermically upon contact with strong oxidizers. |
|------------|--|

10.2. Chemical stability

| | |
|-----------|--|
| Stability | Stable under normal conditions. Stable under recommended storage conditions. |
|-----------|--|

Explosion data

| | |
|----------------------------------|--|
| Sensitivity to mechanical impact | None. |
| Sensitivity to static discharge | Dust can form an explosive mixture with air. Avoid generation of dust. Do not create a dust cloud by using a brush or compressed air. Take precautionary measures against static discharges. All metal parts of the mixing and processing equipment must be earthed/grounded. Ground and bond containers when transferring material. |

10.3. Possibility of hazardous reactions

| | |
|---|--|
| Possibility of hazardous reactions | None under normal processing. |
| Hazardous polymerization | Hazardous polymerization does not occur. |

10.4. Conditions to avoid

| | |
|----------------------------|--|
| Conditions to avoid | dust formation. Keep away from heat. Eliminate sources of ignition. Activated carbon (especially when wet) can deplete oxygen from air in enclosed spaces, and dangerously low levels of oxygen may result. Activated carbons have high surface area which may cause self-heating during oxidation. |
|----------------------------|--|

10.5. Incompatible materials

| | |
|-------------------------------|--|
| Incompatible materials | Strong oxidizing agents. Strong acids. |
|-------------------------------|--|

10.6. Hazardous decomposition products

| | |
|---|--|
| Hazardous decomposition products | Materials allowed to smolder for long periods in enclosed spaces may produce amounts of carbon monoxide which reach the lower explosive limit (carbon monoxide LEL = 12.5% in air), Used activated carbon may produce additional combustion products which are based on the substance(s) adsorbed, Carbon oxides |
|---|--|

SECTION 11: Toxicological information

Information given is based on data obtained from this substance or from similar substances.

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

| | |
|--|--|
| Oral LD50 | > 2000 mg/kg (rat); OECD 423. |
| Dermal LD50 | No data are available on the product itself. |
| Inhalation LC50 | > 8.5 mg/l (rat, 1 hr); OECD 403. |
| Skin corrosion/irritation | Not classified. Skin irritation test, rabbit (OECD 404): Not irritating. |
| Serious eye damage/eye irritation | Not classified. Eye irritation test, rabbit (OECD 405): Not irritating. |
| Respiratory or skin sensitization | Not classified. Not sensitizing based on Local Lymph Node Assay (OECD 429). |
| Germ cell mutagenicity | Not classified. - Gene mutation in bacteria (Bacterial Reverse Mutation Assay/Ames) (OECD 471): not mutagenic. - In vitro Mammalian Chromosome Aberration Test (OECD 473): not clastogenic. - In vitro Mammalian Cell Gene Mutation Test (OECD 476): non-mutagenic. |
| Carcinogenicity | Not classified. |
| Reproductive toxicity | Not classified. Repeated dose inhalation toxicity test showed no reproductive target organ effects, and a toxicokinetic study showed no product migration to reproductive |

| | |
|---------------------------------|---|
| | organs. |
| STOT - single exposure | Not classified. |
| STOT - repeated exposure | Not classified. Repeated dose toxicity study, inhalation (rat) 90 days (OECD 413): NOAEC 7.29 mg/m ³ (respirable). This test was conducted on activated carbon containing negligible crystalline silica; therefore activated carbon itself is not classified for STOT-RE. Although respirable crystalline silica is classified as STOT-RE1, this product contains <1% respirable crystalline silica, therefore it is not classified for STOT-RE. |
| Aspiration hazard | Based on industrial experience and available data, no aspiration hazard is expected. |

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

| | |
|--|--|
| Endocrine disrupting properties | 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 |
|--|--|

11.2.2. Other information

| | |
|------------------------------|---------------------------|
| Other adverse effects | No information available. |
|------------------------------|---------------------------|

SECTION 12: Ecological information

Information given is based on data obtained from this substance or from similar substances.

12.1. Toxicity

| | |
|--------------------|---|
| Ecotoxicity | Non toxic. The substance is highly insoluble in water and the substance is unlikely to cross biological membranes. No adverse ecological effects are known. |
|--------------------|---|

12.2. Persistence and degradability

| | |
|--------------------------------------|--------------------------|
| Persistence and degradability | Not expected to degrade. |
|--------------------------------------|--------------------------|

12.3. Bioaccumulative potential

| | |
|------------------------|--|
| Bioaccumulation | Not expected due to physicochemical properties of the substance. |
|------------------------|--|

12.4. Mobility in soil

| | |
|-----------------|-------------------------------------|
| Mobility | Not expected to migrate. Insoluble. |
|-----------------|-------------------------------------|

12.5. Results of PBT and vPvB assessment

| | |
|--------------------------------|---|
| PBT and vPvB assessment | This substance does not fulfill the criteria for PBT or vPvB. |
|--------------------------------|---|

12.6. Endocrine disrupting properties

| | |
|--|--|
| Endocrine disrupting properties | 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

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products

Activated carbon, in its original state, is not a hazardous material or hazardous waste. Follow applicable regulations for waste disposal.

Spent (used) activated carbon may be classified as a hazardous waste depending upon its use, the substance(s) adsorbed, and how it is ultimately managed. Follow applicable regulations for disposal.

Recycling (reactivation) may be a viable alternative to disposal. Dust formation from residues in packaging should be avoided and suitable worker protection assured. Store used packaging in enclosed receptacles.

Contaminated packaging

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

Waste codes / waste designations according to EWC / AVV

Waste hierarchy to be followed (Directive 2008/98/EC on waste, article 4).

SECTION 14: Transport information

Note: This activated carbon product is made by a steam activation process.

IATA

| | |
|--|----------------|
| 14.1 UN number or ID number | Not regulated |
| 14.2 | |
| 14.3 Transport hazard class(es) | Not regulated |
| 14.4 Packing group | Not regulated |
| 14.5 Environmental hazards | Not applicable |
| 14.6 Special precautions for user | |
| Special Provisions | None |

IMDG

| | |
|---|--------------------------|
| 14.1 UN number or ID number | Not regulated |
| 14.2 | |
| 14.3 Transport hazard class(es) | Not regulated |
| 14.4 Packing group | Not regulated |
| 14.5 Environmental hazards | Not applicable |
| 14.6 Special precautions for user | |
| Special Provisions | None |
| 14.7 Maritime transport in bulk according to IMO instruments | No information available |

RID

| | |
|-----------------------------------|----------------|
| 14.1 UN number or ID number | Not regulated |
| 14.2 | |
| 14.3 Transport hazard class(es) | Not regulated |
| 14.4 Packing group | Not regulated |
| 14.5 Environmental hazards | Not applicable |
| 14.6 Special precautions for user | |
| Special Provisions | None |

ADR

| | |
|-----------------------------------|----------------|
| 14.1 UN number or ID number | Not regulated |
| 14.2 | |
| 14.3 Transport hazard class(es) | Not regulated |
| 14.4 Packing group | Not regulated |
| 14.5 Environmental hazards | Not applicable |
| 14.6 Special precautions for user | |
| Special Provisions | None |

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Germany**

| | |
|--------------------------|------------------------------|
| Water hazard class (WGK) | non-hazardous to water (nwg) |
|--------------------------|------------------------------|

International Inventories

| | |
|---------------|----------|
| TSCA | Complies |
| DSL/NDSL | Complies |
| EINECS/ELINCS | Complies |
| ENCS | Complies |
| IECSC | Complies |
| KECL | Complies |
| PICCS | Complies |
| AICS | Complies |
| TCSI | Complies |
| NZIoC | Complies |

Legend:**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AICS** - Australian Inventory of Chemical Substances**TCSI** - Taiwan Chemical Substance Inventory**NZIoC** - New Zealand Inventory of Chemicals**15.2. Chemical safety assessment**

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend Section 8: Exposure controls/personal protection**

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AELG(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Prepared by: Norit B.V. - Safety, Health and Environmental Affairs

Revision date: 2-Jan-2023

Disclaimer:

The information set forth is based on information that Norit believes to be accurate. No warranty, expressed or implied, is intended. The information is provided solely for your information and consideration and Norit assumes no legal responsibility for use or reliance thereon. In the event of a discrepancy between the information on the non-English document and its English counterpart, the English version shall supersede.

The DARCO®, HYDRODARCO®, PETRODARCO®, NORIT® and SORBONORIT® trademarks are owned by one or more Norit B.V. subsidiaries.

End of Safety Data Sheet