SAFETY DATA SHEET

MAGNAFLUX® Activated Carbon

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

1.1 Product identifier: MAGNAFLUX® Activated Carbon

1.2 Relevant identified uses of the mixture and uses advised against:
Relevant identified uses: Rinse water processing used in Non Destructive Testing (NDT).
Uses advised against: This product is not recommended for any use other than the identified uses above.

1.3 Details of the supplier of the safety data sheet
Manufacturer: Magnaflux® (A Division of ITW Ltd)
Address: Faraday Road, South Dorcan Industrial Estate, Swindon, UK
Postcode: SN3 5HE
Telephone/fax number: Telephone: +44 (0)1793 524566
Fax: +44 (0)1793 490459
Web: www.eu.magnaflux.com
Email address of competent person responsible for SDS: support.eu@magnaflux.com
National contact: None appointed.

1.4 Emergency telephone number:
DURING OFFICE HOURS, CALL
T: +44 (0)1793 524566 (English only)
Opening hours:
Office hours (GMT) Monday - Thursday 8am - 5pm, Friday 8am - 4pm
OUT OF OFFICE HOURS, CALL
T: +44(0)203 394 9866

SECTION 2  HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:
Classification according to Regulation (EC) No 1272/2008 (CLP):
Physical and Chemical Hazard: None
Health Hazard: None
Environmental Hazard: None

Additional information
For full text of hazard statements and EU hazard statements see SECTION 16.

2.2 Label Elements:
Labelling according to regulation (EC) No 1272/2008 [CLP]
Hazard Pictograms: This product does not need to be labelled in accordance with Regulation (EC) No 1272/2008 [CLP].
Signal Word: None.
Hazard Statement(s): None.
Precautionary Statement(s): None.
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Supplementary Precautionary Statement(s): None.
Supplementary Hazard Information (EU) EUH210: Safety data sheet available on request.
Hazard Determining Component(s) Activated Carbon.

2.3 Other hazards:
Dry product is a dust inhalation hazard. Prolonged or repeated exposure to dust may cause eye and respiratory tract irritation. Wet product can remove oxygen from the atmosphere possibly resulting in asphyxiation in confined spaces. Never enter a confined space containing activated carbon as it will adsorb oxygen and asphyxiation may result. May form combustible dust concentrations in air.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances Activated Carbon
CAS number: 7440-44-0
EC number: 931-328-0
REACH: 01-211948894-16-xxxx

This substance is not classified as dangerous according to Regulation (EC) No 1272/2008 [CLP]

Note: Hazard statement(s) in this section apply only to raw materials, not necessarily to finished products.
*See Section 16 for hazard statement(s) text in full.

SECTION 4 FIRST AID MEASURES

4.1 Description of first aid measures:
General notes: If symptoms persist, seek medical attention. Show this safety data sheet to the doctor in attendance.

Following inhalation: Remove to fresh air. Keep at rest. If not breathing give artificial respiration. Seek medical attention if symptoms occur.

Following skin contact: Flush with water, use soap if available. Contaminated clothing should be washed before re-use. Seek medical attention if irritation persists.

Following eye contact: Flush eyes with large amounts of water for at least 15 minutes. Seek medical attention if irritation persists.

Following ingestion: Do NOT induce vomiting. Give ½ pint of water to drink. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

Self-protection of the first aider: No action shall be taken involving any personal risk or without suitable training. If it is suspected that the mixture is still present, wear appropriate personal protective equipment.
4.2 **Most important symptoms, both acute and delayed:**
No delayed effects known.

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

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

### SECTION 5   FIREFIGHTING MEASURES

5.1 **Extinguishing media:**
**Suitable extinguishing media:** Water fog, foam, dry chemical.
**Unsuitable extinguishing media:** High pressure water jet.

5.2 **Special hazards arising from the substance or mixture:**
Material will burn in a fire, releasing combustion products of oxides of carbon. Other material absorbed onto the carbon may also be released.
**Hazardous combustion products:** Carbon monoxide and carbon dioxide. Other material absorbed onto the carbon may also be released.

5.3 **Advice for fire-fighter:**
Self contained breathing apparatus and full protective clothing must be worn if necessary.

### SECTION 6   ACCIDENTAL RELEASE MEASURES

6.1 **Personal precautions, protective equipment and emergency procedures:**
Suitable protective equipment (see Section 8) should be worn to prevent any contamination of skin, eyes and personal clothing.
**For non-emergency personnel:**
- Shut off ignition sources.
- Ensure adequate ventilation.
- Avoid creating dust.

**For emergency responders:**
- Keep unnecessary people at a safe distance.
- Shut off ignition sources.
- Ensure adequate ventilation.
- Avoid creating dust.

6.2 **Environmental precautions:**
Prevent product from entering drains, sewers and watercourses. Notify the Environment Agency or water authorities if a major spillage occurs.

6.3 **Methods and material for containment and cleaning up:**
Avoid creating dust. Take measures to prevent the build-up of electrostatic charge.
**For containment:**
Contain spillage and then collect solid material. Place in a container for disposal according to local/national regulations. Large spills should be placed into containers pending disposal. Dispose of waste according to local/national regulations.
**For cleaning up:**
Vacuum up. Flush remaining product with plenty of water.

6.4 **Reference to other sections:**
For Personal Protective Equipment see Section 8. For disposal information see Section 13.
SECTION 7  HANDLING & STORAGE

7.1 Precautions for safer handling:

Protective Measures:
Wear suitable protective clothing, such as chemical resistant gloves, apron, goggles and mask to protect from dust. Avoid prolonged contact with skin and eyes. Do not breathe product dust. Ensure adequate exhaust ventilation when in use.

Measures to prevent fire:
Take measures to prevent the build-up of electrostatic charge.

Advice on general occupational hygiene:
Wash thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities:

Technical measures and storage conditions:
Store in a cool dry area away from heat and sources of ignition. Keep containers closed when not in use.

Packaging materials:
Store in original container.

Requirements for storage rooms and vessels:
Keep containers out of direct sunlight. Keep away from strong oxidizers, strong acids, ignition sources, combustible materials and heat.

Further information on storage conditions:
Rotate stock and check regularly for damaged items.

7.3 Specific end use(s):

Recommendations:
Use only for Non Destructive Testing (NDT) applications.

Industrial sector specific solutions:
See product data sheet for further information.

SECTION 8  EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

Occupational exposure limit values:
Occupational exposure figures have been set for some of the components of this preparation based on GESTIS International Limit Values or manufacturers' recommendation.

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Country</th>
<th>Limit value - 8 hours</th>
<th>Limit value - short term</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ppm</td>
<td>mg/m³</td>
</tr>
<tr>
<td>Graphite (7440-44-0) Inhalable dust</td>
<td>UK</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Graphite (7440-44-0) Respirable dust</td>
<td>UK</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Graphite (7782-42-5) Inhalable dust</td>
<td>Germany (DFG)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Graphite (7782-42-5) Respirable dust</td>
<td>Sweden</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Graphite (7782-42-5) Respirable dust</td>
<td>Germany (DFG)</td>
<td>1.5</td>
<td></td>
</tr>
</tbody>
</table>

Data obtained from EH40.

Data obtained from GESTIS International Limit Values.

Note: Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit should be used.
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Derived No Effect Level (DNEL) – Activated Carbon

<table>
<thead>
<tr>
<th>End User</th>
<th>Exposure Route</th>
<th>Exposure Time</th>
<th>Effects</th>
<th>DNEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worker</td>
<td>Inhalation</td>
<td>Long term</td>
<td>Systemic</td>
<td>No hazard identified.</td>
</tr>
<tr>
<td>Worker</td>
<td>Inhalation</td>
<td>Long term</td>
<td>Local</td>
<td>1.84 mg/m³</td>
</tr>
</tbody>
</table>

**Note:** The Derived No Effect Level (DNEL) is an estimated safe level of exposure that is derived from toxicity data in accordance with specific guidance within the European REACH regulation. The DNEL may differ from an Occupational Exposure Limit (OEL) for the same chemical. OELs may be recommended by an individual company, a government regulatory body or an expert organization, such as the Scientific Committee for Occupational Exposure Limits (SCOEL) or the American Conference of Governmental Industrial Hygienists (ACGIH). OELs are considered to be safe exposure levels for a typical worker in an occupational setting for an 8-hour work shift, 40 hour work week, as a time weighted average (TWA) or a 15 minute short-term exposure limit (STEL). While also considered to be protective of health, OELs are derived by a process different from that of REACH.

**Predicted No Effect Concentration (PNEC)**

<table>
<thead>
<tr>
<th>Environment</th>
<th>Activated Carbon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water - Fresh Water</td>
<td>No data available: testing technically not feasible</td>
</tr>
<tr>
<td>Water - Marine Water</td>
<td>No data available: testing technically not feasible</td>
</tr>
<tr>
<td>Water - Intermittent release</td>
<td>No data available: testing technically not feasible</td>
</tr>
<tr>
<td>Sediment - Fresh water</td>
<td>No data available: testing technically not feasible</td>
</tr>
<tr>
<td>Sediment - Marine water</td>
<td>No data available: testing technically not feasible</td>
</tr>
<tr>
<td>Soil</td>
<td>10 mg/kg soil dw</td>
</tr>
<tr>
<td>Sewage Treatment plant</td>
<td>No data available: testing technically not feasible</td>
</tr>
</tbody>
</table>

**8.2 Exposure controls:**
Concentrations of product dusts in the working atmosphere must be kept as low as is reasonably practicable. Exposure should be minimised by the use of appropriate containment, engineering control and ventilation measures. Where this is not possible, personal protective equipment should be worn as indicated below where appropriate.

**Appropriate engineering controls:** Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limits are not exceeded.

**Personal protection equipment:**

**Eye and face protection:** Safety glasses with side-shields conforming to EN166.

**Skin protection - hand:** Use chemical resistant gloves. Protective gloves conforming to EN374.

**Skin protection – other:** Wear chemical resistant overalls if skin contact is likely. The type of protective equipment must be selected according to the concentration and amount of dangerous substance at the specific workplace.

**Respiratory protection:** Use a dust mask Type P1 (EN143) in confined or unventilated areas.

**Thermal hazards:** Not applicable.

**Environmental exposure controls:** Avoid any release to the environment.
SECTION 9  PHYSICAL & CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:
Appearance: Black granules
Odour: None.
Odour threshold: N/A
pH: 8 - 11
Melting point/freezing point: No data available.
Initial boiling point and boiling range: No data available.
Flash point (PMCC): No data available.
Evaporation rate (BuAC = 100): No data available.
Flammability (solid, gas) (Limits in air): No data available.
Upper/lower flammability or explosive limits:
Vapour pressure: No data available.
Vapour density (Air = 1): No data available.
Relative density: 0.48 g/cm³
Solubility: Insoluble.
Partition coefficient: n-octanol/water: No data available.
Auto-ignition temperature: > 680 °C (Goldberg-Greenwald oven)
Decomposition temperature: No data available.
Viscosity (ASTM D445): No data available.
Explosive properties: Under normal conditions no danger of explosion.
Oxidising properties: No data available.

Note: properties relate to the bulk product only unless otherwise stated.

9.2 Other information:
No other information.

SECTION 10  STABILITY & REACTIVITY

10.1 Reactivity: No data available.
10.2 Chemical stability Stable.
10.3 Possibility of hazardous reactions: No data available.
10.4 Conditions to avoid: Keep away from sources of ignition, hot surfaces and direct sun light.
10.5 Incompatible materials: Strong oxidising agents. Combustible materials.
10.6 Hazardous decomposition materials: Smoke, soot and oxides of carbon on combustion.

SECTION 11  TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects: based on data for component materials.
Acute toxicity - oral: Based on the available data the classification criteria are not met.
Acute toxicity – dermal: Data lacking.
Acute toxicity – inhalation: Based on the available data the classification criteria are not met.
Skin corrosion/irritation: Based on the available data the classification criteria are not met.
Serious eye damage/irritation: Based on the available data the classification criteria are not met.
Respiratory sensitisation: Data lacking.
Skin sensitisation: Based on the available data the classification criteria are not met.
Germ cell mutagenicity: Based on the available data the classification criteria are not met.
Carcinogenicity: Data lacking.
Reproductive toxicity: Data lacking.
STOT single exposure: Data lacking.
STOT repeated exposure: Data lacking.
Aspiration hazard: Data lacking.

Information on likely Routes of Exposure and Potential Health Effects:

Inhalation: Inhalation of the dry product may be irritating to the respiratory tract. May be harmful if inhaled.
Ingestion: May be harmful if swallowed.
Eye contact: May produce eye irritation.
Skin contact: Frequent or prolonged contact with the product may irritate skin. May be harmful if absorbed through skin.

Toxicity Test Results: Based on data for component materials, where available.

Activated Carbon

<table>
<thead>
<tr>
<th>Acute Toxicity – oral</th>
<th>LD50 (rat)</th>
<th>&gt; 2000 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity – dermal</td>
<td>LD50 (rabbit)</td>
<td>No data available.</td>
</tr>
<tr>
<td>Acute Toxicity – inhalation</td>
<td>LC50 (rat)</td>
<td>&gt; 8.5 mg/l</td>
</tr>
</tbody>
</table>

Other Information: No other information.

SECTION 12 ECOLOGICAL INFORMATION

Based on data for component materials

12.1 Toxicity: No data available.
12.2 Persistence and degradability: Not relevant - activated Carbon consists of Carbon only and therefore can be considered as inorganic.
12.3 Bioaccumulative potential: Not expected to be bioaccumulating.
12.4 Mobility in soil: This product is insoluble in water.
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12.5 Results of PBT and vPvB assessment: This mixture does not contain any substances that are assessed to be a PBT or vPvB.

12.6 Other adverse effects: No data available.

### SECTION 13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

<table>
<thead>
<tr>
<th>Product/packing disposal:</th>
<th>Empty containers may contain residues. Do NOT remove labels.</th>
</tr>
</thead>
</table>

Waste codes/waste designations according to LoW:

- 06 13 02* - spent activated carbon

**NOTE:** Waste codes are assigned based upon the most common uses for this material and may not reflect contaminants resulting from actual use. Waste producers need to assess the actual process used when generating the waste and its contaminants in order to assign the proper waste code(s).

**Waste treatment – relevant information:** Dispose of waste and residues in accordance with local authority requirements. Seek the advice of an approved waste disposal contractor for disposal at a licensed facility in accordance with national legislation.

**Sewage disposal – relevant information:** Do not empty down the drain.

**Other disposal recommendations:** No other information.

### SECTION 14 TRANSPORT INFORMATION

14.1 UN number:

- ADR/RID: UN1362
- IMDG: UN1362
- IATA: UN1362

14.2 UN proper shipping name:

- ADR/RID: Not classified as hazardous under special regulation 646: steam activated carbon.
- IMDG: Not classified as hazardous under special regulation 925: steam activated carbon.
- IATA: Not classified as hazardous.

14.3 Transport hazard class(es):

- ADR/RID: -
- IMDG: -
- IATA: -

14.4 Packing group:

- ADR/RID: -
- IMDG: -
- IATA: -

14.5 Environmental hazards:

- ADR/RID: -
- IMDG: -
- IATA: -

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.
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SECTION 15 REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:
EU Regulations:
This data sheet complies with the requirements of Regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures.
Safety data sheet as required by EU Regulations 1907/2006 and REACH Annex II Amendment (EU) No. 2015/830.
Information according to 2013/10/EU and 2008/47/EC amendment of the aerosol directive 75/324/EEC.
Not applicable - this product is not an aerosol.

National regulations (Germany):
Wassergefahrgdungsklasse (water hazard class):
TechnischeAnleitungLuft (TA-Luft):

15.2 Chemical safety assessment:
No chemical safety assessment has been carried out for this substance by the supplier.

SECTION 16 OTHER INFORMATION

(i) Indication of changes:
Version 18.3 updated in Section 1.3.
Vertical lines on the left hand side indicate an amendment from the previous version.

(ii) Abbreviations and acronyms:
ADR European Agreement concerning the International Carriage of Dangerous Goods by Road (Accord européen relatif au transport international des marchandises dangereuses par Route)
CAS No. Chemical Abstracts Service number
CEN European Committee for Standardisation
CLP Classification, Labelling Packaging Regulation; Regulation (EC) No 1272/2008
ECHA European Chemicals Agency
EC50 Half Maximal Effective Concentration
EC number EINECS and ELINCS number
EINECS European Inventory of Existing Commercial Substances
ELINCS European List of notified Chemical Substances
GHS Globally Harmonized System
IATA International Air Transport Association
IMDG International Maritime Dangerous Goods
LC50 Lethal Concentration to 50% of a test population
LD50 Lethal Dose to 50% of a test population
MPI Magnetic Particle Inspection
NDT Non-Destructive Testing
OEL Occupational Exposure Limit
PBT Persistent, Bioaccumulative and Toxic Substance
PMCC Pensky-Martens closed cup method
PPE Personal Protection Equipment
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation EC (No) 1907/2006
RID Regulations concerning the International Carriage of Dangerous Goods by Rail (Reglement International concernant le transport des marchandises dangereuses par chemin de fer)
SDS Safety Data Sheet
STOT RE Specific Target Organ Toxicity, Repeat Exposure
STOT SE  Specific Target Organ Toxicity, Single Exposure
TA-Luft  Technical Instructions on Air Quality Control (Technische Anleitung zur
Reinhaltung der Luft)
vPvB  Very Persistent and Very Bioaccumulative
WEL  Workplace Exposure Limit
WGK  German Water Hazard Class (Wassergefährdungsklasse)

(iii) Key literature and sources of data:
- Supplier’s safety data sheets for components listed in Section 3.
- Occupational Exposure Limits EH40/2005.
- Control of Substances Hazardous to Health Regulations 2002.
- IFA Database on Hazardous Substances: http://www.dguv.de/ifa/Gefahrstoffdatenbanken/GESTIS-Stoffdatenbank/index-2.jsp

(iv) Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 (CLP):
This material does not contain any substances which meet the classification criteria according to CLP.

(v) Hazard statements (number and full text):
EUH210: Safety data sheet available on request.

Relevant precautionary statements (number and full text):
Not applicable.

(vi) Training advice:
Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS),
Personal Protective Equipment (PPE) and hygiene. Chemical hazard risk assessment.
Provide adequate information, instruction and training to operators.

DISCLAIMER

The information and recommendations contained herein are based upon data believed to be up-to-date and correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information and recommendations contained herein. We accept no responsibility and
disclaim all liability for any harmful effects that may be caused by (incorrect) use, handling, purchase, resale, or exposure to our product. Customers and users of our product must comply with all applicable health and safety laws, regulations, and orders. In particular, they are under an obligation to carry out a risk assessment for the particular work places and to take adequate risk management measures in accordance with the national implementation legislation of EU Directives 89/391/EEC and 98/24/EC amended by Directive 2014/27/EU.

Revision summary:
This SDS is valid from the Revision Date. If you require a SDS for the product manufactured before the revision date please contact us at support.eu@magnaflux.com

<table>
<thead>
<tr>
<th>Revision Date</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>22.08.2018</td>
<td>18.2</td>
</tr>
</tbody>
</table>