SECTION 1: IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

1.1 Product identifiers
Product Name: ACS Material Si/C Composite Anode Material
Brand: ACS Material LLC
CAS-No.: 7440-21-3 (Silicon), 7782-42-5 (Graphite)

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Laboratory chemicals, Manufacturing of substances

1.3 Details of the supplier of the safety data sheet
Company: ACS MATERIAL LLC
959 E Walnut Street, Suite 100
Pasadena, CA 91106
USA
Telephone: +1 (866)-227-0656
Fax: +1 (781)-518-0284

1.4 Emergency telephone number
Emergency Phone #: +1 (866)-227-0656

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Not a hazardous substance or mixture.

2.2 GHS Label elements, including precautionary statements
Not a hazardous substance or mixture.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS – none

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
Substance name: Si/C Composite Anode Material
CAS-No: 7440-21-3 (Silicon), 7782-42-5 (Graphite)
EC-No.: 231-130-8 (Silicon), 231-955-3 (Graphite)
Linear formula: Si : C = x : y
Hazardous ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>Concentration</th>
<th>CAS No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Si</td>
<td></td>
<td>7440-21-3</td>
</tr>
<tr>
<td>C</td>
<td></td>
<td>7782-42-5</td>
</tr>
</tbody>
</table>

For the full text of the phrases mentioned in this Section, see Section 16.

Hazardous impurities: None known.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact
Wash off with soap and plenty of water.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water.

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
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
No data available

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Avoid dust formation. Avoid breathing vapours, mist or gas.
For personal protection see section 8.

6.2 Environmental precautions
No special environmental precautions required.

6.3 Methods and materials for containment and cleaning up
Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling
Suitable extinguishing media
Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Keep in a dry place.

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
Components with workplace control parameters
Contains no substances with occupational exposure limit values.

8.2 Exposure controls
Appropriate engineering controls
General industrial hygiene practice

8.3 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).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection
Impervious clothing recommended. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific

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workplace.

**Respiratory protection**
Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of environmental exposure**
No special environmental precautions required.

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

9.1 **Information on basic physical and chemical properties**

1) **Appearance**
   - Form: powder
2) **Odour**
   - Colour: black gray
3) **Odour Threshold**
   - No data available
4) **pH**
   - No data available
5) **Melting point/freezing point**
   - No data available
6) **Initial boiling point and boiling range**
   - No data available
7) **Flash point**
   - Not applicable
8) **Evaporation rate**
   - No data available
9) **Flammability (solid, gas)**
   - No data available
10) **Upper/lower flammability or explosive limits**
    - No data available
11) **Vapour pressure**
    - No data available
12) **Vapour density**
    - No data available
13) **Relative density**
    - No data available
14) **Water solubility**
    - No data available
15) **Partition coefficient: n-octanol/water**
    - No data available
16) **Auto-ignition temperature**
    - No data available
17) **Decomposition temperature**
    - No data available
18) **Viscosity**
    - No data available
19) **Explosive properties**
    - No data available
20) **Oxidizing properties**
    - No data available

9.2 **Other safety information**

No data available

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**SECTION 10: STABILITY AND REACTIVITY**

10.1 **Reactivity**

No data available

10.2 **Chemical stability**
Stable under recommended storage conditions

10.3 **Possibility of hazardous reactions**
No data available

10.4 **Conditions to avoid**
No data available

10.5 **Incompatible materials**
Strong oxidizing agents

10.6 **Hazardous decomposition products**
Hazardous decomposition products formed under fire conditions - silicon oxides.
Other decomposition products - No data available
In the event of fire: see section 5.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 **Information on toxicological effects**

**Acute toxicity**
No data available
Inhalation: No data available
Dermal: No data available
No data available

**Skin corrosion/irritation**
No data available

**Serious eye damage/eye irritation**
No data available

**Respiratory or skin sensitisation**
No data available

**Germ cell mutagenicity**
No data available

**Carcinogenicity**
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**
No data available

**Specific target organ toxicity - single exposure**
No data available

**Specific target organ toxicity - repeated exposure**
No data available

**Aspiration hazard**
No data available

**Additional Information**
RTECS: Not available
Shortness of breath. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### SECTION 12: ECOLOGICAL INFORMATION

12.1 **Toxicity**
No data available

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**
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 **Other adverse effects**
No data available

### SECTION 13: DISPOSAL CONSIDERATIONS

13.1 **Waste treatment methods**

   **Product**
   Offer surplus and non-recyclable solutions to a licensed disposal company.

   **Contaminated packaging**
   Dispose of as unused product.

### SECTION 14: TRANSPORT INFORMATION

**DOT (US)**
Not dangerous goods

**IMDG**
Not dangerous goods

**IATA**
Not dangerous goods
SECTION 15: REGULATORY INFORMATION

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

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
No SARA Hazards

15.2 Chemical safety assessment stance
For this product a chemical safety assessment was not carried out.

SECTION 16: OTHER INFORMATION

HMIS Rating
Health hazard: 0
Chronic Health Hazard:
Flammability: 0
Physical Hazard: 0

NFPA Rating
Health hazard: 0
Fire Hazard: 0
Reactivity Hazard: 0

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