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

1.1. Product identifier
   Product Name: Hollow Glass Microspheres
   CAS No: Not applicable

1.2. Relevant identified uses of the substance or mixture and uses advised against
   Recommended Use: Agent for reducing oil cement slurry, thermal insulation coating additives, composite filler
   Uses advised against: No information available

1.3. Details of the supplier of the safety data sheet
   Supplier: Anhui Technology I/E Co. LTD
   Address: 459 Changjiang West Road, Hefei, China
   Postal Code: 230031
   Phone: +86-13003057851
   E-mail: chem609@gmail.com

1.4. Emergency telephone number
   +86-13003057851

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
   Classification according to Regulation (EC) No. 1272/2008 [CLP]
   Not classified
   Classification according to Directive 67/548/EEC or 1999/45/EC
   Not classified

2.2. Label elements
   Symbols/Pictograms: None
   Signal word: None
   Hazard Statements: Not applicable
   Precautionary Statements: Not applicable

2.3. Other hazards
   No information available

SECTION 3: Composition/information on ingredients

3.1 Article

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>EC No</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>Classification according to Directive 67/548/EEC or 1999/45/EC</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon Dioxide - hydrated</td>
<td>231-545-4</td>
<td>7631-86-9</td>
<td>70</td>
<td>Not classified</td>
<td>Not classified</td>
</tr>
<tr>
<td>Calcium oxide</td>
<td>215-138-9</td>
<td>1305-78-8</td>
<td>12</td>
<td>Not classified</td>
<td>Not classified</td>
</tr>
<tr>
<td>Sodium oxide (Na2O)</td>
<td>215-208-9</td>
<td>1313-59-3</td>
<td>10</td>
<td>R14 C: R34</td>
<td>Skin Corr. 1B (H314) Eye Dam. 1 (H318)</td>
</tr>
<tr>
<td>Boron oxide</td>
<td>215-125-8</td>
<td>1303-86-2</td>
<td>8</td>
<td>Repr. Cat. 2; R60 . Cat. 2; R61</td>
<td>Repr. 1B (H360)</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures
4.1. Description of first aid measures

General advice
No hazards which require special first aid measures. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Inhalation
Not an expected route of exposure. Immediate medical attention is not required.

Skin Contact
No special technical protective measures are necessary. Immediate medical attention is not required.

Eye contact
Not an expected route of exposure. Eyes contact can lead to mechanical irritation.

Ingestion
Not an expected route of exposure IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

4.2. Most important symptoms and effects, both acute and delayed
No information available

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

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
No information available

5.2. Special hazards arising from the substance or mixture
No information available

5.3. Advice for firefighters
Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation, especially in confined areas
ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area)
Avoid contact with eyes

6.2. Environmental precautions
Should not be released into the environment

6.3. Methods and material for containment and cleaning up
Pick up and transfer to properly labeled containers

6.4. Reference to other sections
See Section 7 for more information
See section 8 for more information
See section 13 for more information

SECTION 7: Handling and storage
7.1. Precautions for safe handling
Handle in accordance with good industrial hygiene and safety practice
Ensure adequate ventilation, especially in confined areas
Avoid contact with eyes
When using do not eat, drink or smoke

7.2. Conditions for safe storage, including any incompatibilities
Keep containers tightly closed in a dry, cool and well-ventilated place
Keep away from heat
Keep locked up and out of reach of children
Keep away from food, drink and animal feeding stuffs
Store in accordance with local regulations

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Australia</th>
<th>Austria</th>
<th>Belgium</th>
<th>Denmark</th>
<th>European Union</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon Dioxide - hydrated (CAS #: 7631-86-9)</td>
<td>2 mg/m³</td>
<td>TWA: 4 mg/m³</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Calcium oxide (CAS #: 1305-78-8)</td>
<td>2 mg/m³</td>
<td>STEL 4 mg/m³</td>
<td>TWA: 2 mg/m³</td>
<td>-</td>
<td>TWA: 2 mg/m³</td>
</tr>
<tr>
<td>Boron oxide (CAS #: 1303-86-2)</td>
<td>10 mg/m³</td>
<td>STEL 75 mg/m³</td>
<td>TWA: 15 mg/m³</td>
<td>-</td>
<td>TWA: 10 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Norway</th>
<th>United Kingdom</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium oxide (CAS #: 1305-78-8)</td>
<td>-</td>
<td>-</td>
<td>TWA: 2 mg/m³</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Boron oxide (CAS #: 1303-86-2)</td>
<td>-</td>
<td>-</td>
<td>TWA: 10 mg/m³</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Derived No Effect Level (DNEL)
No information available.

Predicted No Effect Concentration (PNEC)
No information available.

8.2. Exposure controls

Engineering Controls
Ensure adequate ventilation, especially in confined areas. Remove all sources of ignition.

Personal protective equipment
Eye/face protection Avoid contact with eyes
Hand Protection No special technical protective measures are necessary
Skin and body protection No special technical protective measures are necessary
Respiratory protection Ensure adequate ventilation, especially in confined areas

Environmental exposure controls
Do not allow into any sewer, on the ground or into any body of water

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Appearance Solid
Color white
Odor Odorless
Odor Threshold: Not determined
pH: Not determined
Melting point/freezing point: 625°C
Boiling point / boiling range: 1000°C
Flash point: Not applicable
Evaporation rate: Not determined
Flammability (solid): Not flammable
Flammability Limit in Air: Not applicable
Vapor Pressure: Not determined
Vapor density: Not applicable
Density: 0.25-0.6 g/cm³
Relative density: 0.25-0.6
Specific gravity: Not determined
Water solubility: Insoluble in water
Partition coefficient (LogPow): Not determined
Autoignition temperature: Not applicable
Decomposition temperature: Not determined
Kinematic viscosity: Not determined
Dynamic viscosity: Not determined
Explosive properties: Not an explosive
Oxidizing properties: Not determined

9.2. Other information
No information available

SECTION 10: Stability and reactivity

10.1. Reactivity
No information available.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
None under normal processing.

10.4. Conditions to avoid
Heat, flames and sparks

10.5. Incompatible materials
No information available.

10.6. Hazardous decomposition products
None under normal use conditions

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity
No data available.

Skin corrosion/irritation
Non-irritating to the skin.

Serious eye damage/eye irritation
No eye irritation.
Sensitization
No sensitization responses were observed.

Germ cell mutagenicity
No information available.

Carcinogenicity
No information available

Reproductive toxicity
No information available.

STOT - single exposure
No information available.

STOT - repeated exposure
No information available.

Aspiration hazard
No information available.

SECTION 12: Ecological information

12.1. Toxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants EC50</th>
<th>Fish LC50</th>
<th>Crustacea EC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon Dioxide - hydrated (CAS #: 7631-86-9)</td>
<td>440: 72 h Pseudokirchneriella subcapitata mg/L EC50</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
No information available.

12.3. Bioaccumulative potential
No information available.

12.4. Mobility in soil
No information available.

12.5. Results of PBT and vPvB assessment
PBT/vPvB assessment information is not available as chemical safety assessment not conducted.

12.6. Other adverse effects
No information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
- Waste from residues/unused products: Disposal should be in accordance with applicable regional, national and local laws and regulations
- Contaminated packaging: Disposal should be in accordance with applicable regional, national and local laws and regulations

SECTION 14: Transport information

14.1  UN Number
Not regulated
14.2 Proper shipping name  
Not regulated

14.3 Hazard Class  
Not regulated

14.4 Packing Group  
Not regulated

14.5 Environmental hazards  
Non-marine pollutant

14.6 Special precautions  
No information available

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  
Not applicable

SECTION 15: Regulatory information

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

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work
Take note of Directive 94/33/EC on the protection of young people at work
Take note of Directive 92/85/EC on the protection of pregnant and breastfeeding women at work

International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL/NDSL</th>
<th>EINECS/ELINCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>KECL</th>
<th>PICCS</th>
<th>AICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon Dioxide - hydrated 7631-86-9 (70)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Expect</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Calcium oxide 1305-78-8 (12)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Sodium oxide (Na2O) 1313-59-3 (10)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Boron oxide 1303-86-2 (8)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

"." Not Listed
"X" Listed

15.2 Chemical safety assessment

No information available

SECTION 16: Other Information

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

Issue Date: 17-Feb-2015
Revision date: 17-Feb-2015
Revision Note: Not applicable

Key or legend to abbreviations and acronyms used in the safety data sheet

TWA - TWA (time-weighted average)
STEL - STEL (Short Term Exposure Limit)
Ceiling - Maximum limit value
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

**Full text of H-Statements referred to under section 3**
H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H360 - May damage fertility or the unborn child

**Full text of R-phrases referred to under sections 2 and 3**
R14 - Reacts violently with water
R34 - Causes burns
R60 - May impair fertility
R61 - May cause harm to the unborn child

**Disclaimer**
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

------- End of Safety Data Sheet -------