Technical Data Sheet

ACS Material MCM-48
(Type A and Type B)

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Revision: 020917
1. Preparation Method
Hydrothermal Method

2. Composition & Information on Ingredients
Synonym: MCM-48, Porous Silica, Silicon dioxide
CAS Number 7631-86-9
Linear Formula SiO₂
Molecular Weight 60.08
EC Number 231-545-4

3. Characterization & Analysis

<table>
<thead>
<tr>
<th>Type: Characterization &amp; Analysis</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade: Reagent Grade</td>
<td>Reagent Grade</td>
<td></td>
</tr>
<tr>
<td>Appearance: White Powder</td>
<td>White Powder</td>
<td></td>
</tr>
<tr>
<td>Particle Size: 200-400 nm</td>
<td>200-500 nm</td>
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</tr>
<tr>
<td>Shape: Spherical</td>
<td>Flower</td>
<td></td>
</tr>
<tr>
<td>BET surface area (m²/g): &gt;800 m²/g</td>
<td>&gt;800 m²/g</td>
<td></td>
</tr>
<tr>
<td>Pore Volume(cm³/g): 0.6-0.75</td>
<td>0.5-0.8</td>
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</tr>
<tr>
<td>Average Pore Size: About 2.7 nm</td>
<td>About 2.7 nm</td>
<td></td>
</tr>
<tr>
<td>bp: 2230 °C(lit.)</td>
<td>2230 °C(lit.)</td>
<td></td>
</tr>
<tr>
<td>mp: &gt;1600 °C(lit.)</td>
<td>&gt;1600 °C(lit.)</td>
<td></td>
</tr>
</tbody>
</table>

BET Analysis of ACS Material MCM-48 (Type A)
SEM Image of ACS Material MCM-48 (Type A)

SEM Image of ACS Material MCM-48 (Type B)
TEM Image of ACS Material MCM-48 (Type A)

XRD Analysis of ACS Material MCM-48 (Type A)
4. Application Fields

Mesoporous silicas are inorganic materials having porous structures and find applications in chromatography, catalysis, drug delivery and imaging.

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