Section 1 - Identification of the Substance and of the Company

<table>
<thead>
<tr>
<th>Product Name:</th>
<th>Chemical Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloisite ® 20A</td>
<td>Ditallowdimethylammonium salts with Bentonite</td>
</tr>
</tbody>
</table>

Product Uses:
[ Cloisites ® are used as plastics additives

Company Identification:

Contact:  
Rockwood Additives Limited  
PO Box 2, Moorfield Road  
 Widnes, U.K.  
Tel: +44 (0) 151 495 2222

Emergency Telephone Number:
+44 (0) 151-424-5555

Section 2 - Chemical Composition/Information on Ingredients:

[ Chemical nature: Organically modified bentonite clay

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS No.</th>
<th>EINECS No.</th>
<th>Content % by wt</th>
<th>“R” phrase</th>
<th>Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ditallowdimethylammonium salt of bentonite</td>
<td>68953-58-2</td>
<td>273-219-4</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total crystalline silica as quartz (present as naturally occurring in bentonite)</td>
<td>14808-60-7</td>
<td>238-878-4</td>
<td>&lt; 0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respirable content of crystalline silica in whole product</td>
<td>14808-60-7</td>
<td>238-878-4</td>
<td>≈ 50% of total quartz level</td>
<td>R40</td>
<td>Xn</td>
</tr>
</tbody>
</table>
Section 3 - Hazards Identification:

| Hazard designation: | None. This product is not classified as hazardous according to EC Directive 1999/45/EC |
| Potential issues: | IARC classified crystalline silica as a human carcinogen in 1997. Although no causal role for silica has been proved, experts generally agree that those people suffering from silicosis are at a higher risk of developing lung cancer. It is therefore sensible to ensure that long term dust exposure is minimised in line with the OES – see section 8 |

| Skin Contact: | May cause drying of the skin in some individuals |
| Eye Contact: | Irritation or soreness from dust particles |
| Inhalation: | May cause irritation of nose and mouth due to dust |
| Ingestion: | May cause gastric irritation in some individuals |

CHIP/RISK/SAFETY Classification

RISK PHRASES associated with the product | None |
SAFETY PHRASES associated with the product | S22 Do not breathe dust. S31 Use only in well ventilated areas |

Section 4 - First Aid Measures:

| General Information: | No special measures required |

| Skin Contact: | Wash off with copious amounts of soapy water |
| Eye Contact: | Flush with tepid water for 15 minutes. If irritation or pain persists seek medical attention. |

| Inhalation: | Remove person to fresh air. Seek medical attention if shortness of breath or irritation persists. |
| Ingestion: | If large amounts are ingested seek medical attention |

Section 5 - Fire-Fighting Measures:

Lower Explosive Limit: Airborne dust concentrations of greater than 50g/m³ may ignite at 470°C.

Known or anticipated hazardous products of combustion: Nitrogen oxides, carbon monoxide, hydrogen chloride

Basic fire fighting guidance: Normal precautions for organic dusts should be provided. Avoid high dust concentrations and ensure all equipment is properly grounded to prevent static discharges.

Extinguishing media: Water mist/fog, dry chemical, foam, carbon dioxide. AVOID water jets.

Section 6 - Accidental Release Measures:

Wear suitable protective clothing (see Section 8)
For large spills wet with water to reduce dusting and sweep up and dispose off in accordance with Local Regulations.
Product is slippery when wet.
If vacuum system is used the system must be flame-proofed. Remove ignition and static electricity sources if large amounts of airborne dust are present.
### Section 7 - Handling and Storage:

**Handling:**
Handle in well-ventilated areas using methods that minimise dust generation. Do not allow dust to collect on surfaces, in order to prevent explosion hazards.
Earth equipment in order to avoid static discharges.
Ensure adequate ventilation at point of use. Use dust mask if dust levels are above the Occupational Exposure Limit (see Section 8).

**Storage:**
Store in closed containers in a dry place. Do not store near ignition sources, open flames and excessive heat. Avoid storage with non-compatible materials which may decompose on contamination with dust e.g. peroxides.

[ Specific use:
These products are designed to aid in viscosity enhancement and are not specific for any particular application or use.

### Section 8 - Exposure Controls/Personal Protection:

**Hand Protection:**
Use PVC or rubber gloves

**Eye Protection:**
Use safety glasses or chemical goggles EN 166 to prevent particles entering the eye

**Skin Protection:**
Normal workwear

**Respiratory Protection:**
Air purifying respirator (EN149FFP2) required if dust levels exceed the Occupational Exposure Limit.

**Occupational Exposure Limit:**
The OES defined for this product is for dust with an 8 hr TWA for Total inhalable dust of 10 mg/m³ and 4 mg/m³ for respirable dust. The product contains quartz and in the UK is subject to a mandatory maximum exposure limit of 0.3 mg/m³ respirable quartz on 8 hour time weighted average. Dust extraction systems should operate below these limits.

[ Environmental Exposure Controls:
There is no reported ecotoxicity for these products

### Section 9 - Physical and Chemical Properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance:</strong></td>
<td>Cream powder</td>
</tr>
<tr>
<td><strong>Odour:</strong></td>
<td>Mid</td>
</tr>
<tr>
<td><strong>pH:</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Boiling Point:</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Melting Point:</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Flash Point:</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Flammability:</strong></td>
<td>Dust clouds containing more than 50g/m³ may ignite at 470°C</td>
</tr>
<tr>
<td><strong>Explosive Properties:</strong></td>
<td>Lower explosives limit in air 50g/m³</td>
</tr>
<tr>
<td></td>
<td>Upper explosive limit is not determined</td>
</tr>
<tr>
<td><strong>Oxidising Properties:</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Vapour Pressure:</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Bulk Density/Specific Gravity:</strong></td>
<td>1.7 - 1.9 g/cc</td>
</tr>
<tr>
<td><strong>Solubility:</strong></td>
<td>Solubility in water negligible</td>
</tr>
</tbody>
</table>
Section 10 - Stability and Reactivity:

<table>
<thead>
<tr>
<th>Conditions to Avoid:</th>
<th>Materials to Avoid:</th>
<th>Hazardous Decomposition Products:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stable under normal storage and handling</td>
<td>Avoid contact with strongly oxidising materials, and products subject to catalytic decomposition by dust e.g. peroxide</td>
<td>Can liberate nitrogen oxides and carbon monoxide on combustion. Organic decomposition onset temp detected at 200°C</td>
</tr>
</tbody>
</table>

Section 11 - Toxicology Information:

- **Ingestion:** Mixture is orally non toxic. LD₅₀ rat >5000 mg/kg
- **Inhalation:** LC₅₀ rat >200mg/l
- **Eye Contact:** Irritant only due to physical abrasion effects of powder
- **Skin Contact:** Non-irritant - non skin sensitizer (guinea pig)

Possible silicosis due to quartz if the MEL is exceeded (see Section 16).

Long term exposure to dust in excess of the OEL may cause fibrosis of the lung tissue. The presence of quartz may lead to silicosis if the Maximum Exposure Limit is persistently exceeded over a long period of time.

Section 12 - Ecological Information:

- Not fully tested. The following information is to the best of our knowledge
- **Water Hazard classification = NWG.** (self assessment) no hazard to waters. Product is insoluble in water
- **Degradability** – the organic portion of the product is biologically degradable. The bentonite portion will not degrade but is a naturally occurring mineral.
- Other adverse effects – none known or anticipated.

Section 13 - Disposal Considerations:

Unused material should be considered as "special waste".
Disposal in accordance with Local and National regulations using approved waste disposal contractor.

Section 14 - Transport Information:

- **UN Number/Description**
  - Not classified, not a transport hazard.
Section 15 – Regulatory Information

These regulations do not apply to this product and therefore the product does not need to be labelled in accordance with EC directives or respective national laws

Information on the label:
S22 Do not breathe dust.
S51 Use only in well ventilated areas

National Regulations: Control of Substances Hazardous to Health (COSHH) Regulations 1999 – these regulations apply.
CHIP 3 Regulations 2002 – this product is not on the ASL (Approved Supply List) and is not required to be labelled according to the ACLG (Approved Classification and Labelling Guide)

Other Regulations: Water Hazard classification = NWG. (self assessment) no hazard to waters. Product is insoluble in water

Section 16 – Other Information:
The reference to crystalline silica (quartz, cristobalite) in Sections 2, 3, 8 and 11 is for information and to assist in decisions made about the safe handling of this product. At levels below 1% of the whole product, there is no requirement in 1999/45/EC, 2nd amendment, to specify this component. However, it is good practice as with any nuisance dust to reduce the levels of exposure as far as possible and in any event in compliance with Community workplace exposure limits. Exposure to respirable dust can only be accurately measured by personal dust monitoring.

The risk phrase associated with respirable crystalline silica is R40 – Possible risk of irreversible effects.
Crystalline silica when inhaled is known to cause silicosis, a lung disease. The link with possible human lung cancer is not proven but there is some evidence that those people who have silicosis are more prone to developing this disease.

Recommended restrictions on use: Based on current knowledge, these products have not been approved for use as direct food additives.

Sources of key data: HSE EH40

Revision of SDS Information: The data presented in this SDS is based on our current knowledge. It is believed to be accurate but is not warranted.
An asterisk (*) noted against a specific section in the SDS indicates an amendment from the previous version.