



## MATERIAL SAFETY DATA SHEET

### Berkseal W

#### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

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|---------------------|--|
| Product name:       | Berkseal W   |
| Product Label Name: | Hydrated Alumino Silicate  |
| Intended Use        | Sealant clay for landfill sites.   |
| Supplier            | Castle Chemicals Ltd, Peak House<br>6 Oxford Road, Altrincham, Cheshire WA14 2DY<br>Tel: +44 161 608 8800 Fax: +44 161 608 1910<br>Email: <a href="mailto:Info@castlechemicals.com">Info@castlechemicals.com</a> |

#### 2. HAZARD IDENTIFICATION

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|   |  |
|---|--|
| Classification                            | These products are not dangerous preparations according to Directive 1999/45/EC. Constituents / compounds not listed in Annex VI of the Regulation (EC) 1982/2008.   |
| Potential Adverse Human Health Effects    | This product may generate dust during handling and use. As any natural occurring mineral, bentonite may contain quartz (crystalline silica). Long term overexposure to crystalline silica dust may cause silicosis.  |
| Potential Adverse Effects for Environment | No specific adverse effects are known Target Organs Eyes and Skin (irritation risk). Pulmonary System (irritation and chronic risk)  |
| Protective Measures                       | In case of exposure to high level of airborne dust, it is recommended the use of safety glasses and approved dust respirator. Use in well ventilated areas. Avoid breathing dust and contact with eyes. It is recommended the use of latex or chemical resistant gloves in handling. |

### 3. COMPOSITION INFORMATION ON INGREDIENTS

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|                      |           |
|----------------------|-----------|
| Name                 | Bentonite |
| EINECS #             | 215-108-5 |
| CAS #                | 1302-78-9 |
| EC Annex I/Annex VI* | N/C       |
| % wt                 | 100       |
| Symbols              |           |
| REACH Number         | Exempted  |
| R-Phrases            |           |

Asbestos free

N/C: Not Classified

Bentonite may contain crystalline silica (not listed in Annex I of Directive 67/548/EEC, not listed in Annex VI of Regulation (EC) 1272/2008\*) in quantity up to 3%.

Bentonite is not listed as dangerous substance in the Annex I of Directive 67/548/EEC, not listed in Annex VI of Regulation (EC) 1272/2008 as amended

Bentonite is an exemption from the obligation to register in compliance with Annex V of Regulation (EC) 1907/2006

### 4. FIRST AID MEASURES

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|                             |   |
|-----------------------------|---|
| Emergency Medical Treatment | No special instructions are required  |
| Special Provisions          | No special requirements   |
| FIRST AID                   |   |
| Eye Contact                 | Flush with plenty of flowing water. Seek medical attention if irritation persists.  |
| Skin Contact                | Wash off with water.  |
| Inhalation                  | Allow resting in a well-ventilated area if high concentration is inhaled and mechanical irritation or discomfort occurs. Seek medical attention if irritation persists. |
| Ingestion                   | Provide symptomatic treatment and seek medical attention.   |
| SYMPTOMS AND EFFECTS        |   |
| Eye Contact                 | May cause irritation  |
| Skin Contact                | None expected in normal conditions  |
| Inhalation                  | Mechanical Irritation   |
| Ingestion                   | None expected in normal conditions  |

### 5. FIREFIGHTING MEASURES

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|                        |   |
|------------------------|---|
| General Advice         | Non flammable, non explosive.   |
| Extinguishing Media    | Suitable: All extinguishing media can be used<br>Not to be used: None known |
| Products of Combustion | Not applicable  |
| Protection for firemen | No special requirements   |
| Special risks          | No hazardous releases in case of fire are expected                          |

## 6. ACCIDENTAL RELEASE MEASURES

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|                           |   |
|---------------------------|---|
| Personal Precautions      | Avoid dust formation. Avoid breathing dust and contact with eyes Use safety glasses and respiratory protection in case of high level airborne |
| Environmental Precautions | This product is based on natural clay and no special precautions are required   |
| Spill Procedures          | Soil: Scoop up or vacuum soil spillages, if appropriated, use gentle water spray to wet down.<br>Water: Clean up any spillage.                |
| Disposal                  | Place in a closed container prior to disposal. Can be landfilled in compliance with local regulations   |

## 7. HANDLING AND STORAGE

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|                                     |   |
|-------------------------------------|---|
| Precautions in handling and storage | Use good housekeeping practices to avoid generating airborne dust. Do not breathe dust. Avoid contact with eyes |
| <b>HANDLING</b>                     |   |
| Technical Measures                  | No special requirements   |
| Fire/Explosion Controls             | No special requirements   |
| Advice for Safe Handling            | Handle in accordance with good industrial hygiene and safety procedures   |
| Incompatible Products               | None expected   |
| <b>STORAGE</b>                      |   |
| Suitable storage                    |   |
| Circumstances                       | Store in dry area   |
| Storage – away from                 | No special requirements   |
| Recommended packing materials       | No special requirements   |

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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Respect regulatory provisions for dust (inhalable and respirable). This product has no specific Occupational Exposure Limit (OEL). A non-intentional substance (quartz) in the composition of this product has not community OEL but in some Member States are regulated as follows:

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|--|--|
|  | Austria : 0,15 (Maximale Arbeitspaltz Konzentration)   |
|  | Belgium : 0,1  |
|  | Denmark : 0,1 (Threshold Limit Value)  |
|  | Finland : 0,2 (Occupational Exposure Standard)   |
|  | France : 0,1 (Valeur limite de Moyenne d'Exposition)   |
| Exposure Limit Values (for Respirable Crystalline silica) (mg/m3), (January, 2006) | Germany : There are no OELs for crystalline silica since 2005; instead of an OEL there is a workers health protection system |
|  | Greece : 0,1 (Legislation for mining activities)   |
|  | Ireland : 0,05 (2002 Code of Practice for the Safety, Health & Welfare at Work)  |

Italy : 0,05 (Threshold Limit Value)  
 Luxemburg : 0,15 (Grenzwert nach TRGS 900)  
 The Netherlands : 0,075 (Maximaal Aanvarde Concentratie)  
 Norway: 0,1 (Administrative Nomer (8hTWA) for Forurensing I Arbeldsmilljöet)  
 Portugal : 0,1 (Threshold Limit Value)  
 Spain : 0,1 (Valores límite, INSHT)  
 Sweden : 0,1 (Yrkeshygieniska Gränsvärden)  
 Switzerland : 0,15 (Valeur limite de Moyenne d'Exposition)  
 United Kingdom : 0,3 (Workplace Exposure Limit, HSE)

Exposure Controls

General ventilation  
 Local exhaust ventilation is recommended to keep airborne levels below exposure limits.

Personal Protection

Respiratory: Use air-purifying dust respirator if airborne concentration levels are above exposure limits.  
 Hands: No special hands protection is required in normal conditions but the use of gloves is recommended.  
 Skin: No special skin protection is required in normal conditions. Wash skin if mechanical irritation is experienced.

Industrial Hygiene

Eyes: Use safety glasses with side shields if large amounts of product that could cause dust is handled.  
 Wash hands and other exposed areas with mild soap and water before eating, drinking, smoking and when leaving work. Keep the working area as clean and tidy as possible.

Environmental Exposure Controls

Do not allow product to reach sewage system or any watercourse.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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|                           |   |
|---------------------------|---|
| Appearance                | Grey free flowing powder                                |
| Odour                     | None  |
| pH (10% in water)         | 9.5 ± 0.5   |
| Boiling Point             | Not applicable  |
| Flash Point               | Not applicable  |
| Flammability              | Non-flammable   |
| Explosive Properties      | None  |
| Oxidising Properties      | None  |
| Vapour pressure           | Not applicable  |
| Relative Density          | 2.7 (Water = 1)   |
| Solubility                | Insoluble in water. Insoluble in fats                   |
| Partition Coefficient     | Not applicable  |
| Viscosity                 | Not applicable  |
| Vapour density            | Not applicable  |
| Evaporation rate          | Not applicable  |
| Melting/Sublimation Point | Not available / Not applicable                          |
| Auto-Ignition Temperature | Not applicable  |
| Other information         | Wet bentonite on floors presents a high slipping hazard |

## 10. STABILITY AND REACTIVITY

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|   |   |
|---|---|
| Stability Data                          | This product is stable in normal conditions             |
| Hazard reactions                        | None expected   |
| Conditions to avoid                     | No special requirements                                 |
| Materials to avoid<br>(Incompatibility) | None known  |
| Hazardous Decomposition                 | No hazardous decomposition or by-products are expected. |

## 11. TOXICOLOGICAL INFORMATION

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|---------------------------------|--|
| Routes of Entry                 | Inhalation. Ingestion. Eye/skin contact  |
| EFFECTS OF ACUTE EXPOSURE       |  |
| Eye contact                     | Mild irritant to eyes (according to the modified Kay & Calandra criteria)  |
| Skin contact                    | Minor skin irritation may result from physical contact.  |
| Sensitisation                   | No adverse effects are known   |
| Ingestion                       | No adverse effects are known   |
| Inhalation                      | Inhalation of high concentrations of dust may cause slight mechanical irritation   |
| Additional Remarks              | No additional remarks  |
| EFFECTS OF CHRONIC OVEREXPOSURE |  |
| Main Effects                    | As any natural occurring mineral, bentonite may contain quartz (crystalline silica). In 1997, IARC concluded that the respirable fraction of crystalline silica inhaled from occupational sources can cause lung cancer in humans. However, it pointed out that not all industrial circumstances, nor all crystalline silica types, were to be incriminated (IARC Monographs, Vol 68)<br>In June 2003, the EU Scientific Committee on Occupational Exposure Limits (SCOEL) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis. Therefore preventing the onset of silicosis will also reduce the cancer risk...". (SCOEL SUM Doc 94-final, July 2003) |
| Other Effects                   | No mutagenic, teratogenic or developmental toxicity effects are known  |
| Additional Remarks              | There is body of evidence supporting the fact that increased cancer risk would be limited to people already suffering from silicosis. According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits.   |

## 12. ECOLOGICAL INFORMATION

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|                               |                                       |
|-------------------------------|---------------------------------------|
| Ecotoxicity                   | No specific adverse effects are known |
| Mobility                      | No data available                     |
| Persistence and Degradability | No data available                     |
| Bioaccumulative Potential     | No data available                     |
| Other adverse effects         | None known                            |

## 13. DISPOSAL CONSIDERATIONS

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|                       |   |
|-----------------------|---|
| Methods of disposal   | Dispose of in a safe manner in accordance with local/national regulations |
| Contaminated Packages | Dispose of in a safe manner in accordance with local/national regulations |

## 14. TRANSPORT INFORMATION

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|                          |   |
|--------------------------|---|
| Shipping Name            | Not regulated   |
| Transport Classification | ADR: Not classified<br>IMDG: Not classified<br>ICAO/IATA: Not classified<br>RID: Not classified |

## 15. REGULATORY INFORMATION

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|                     |                       |
|---------------------|-----------------------|
| Trade Name          | BERKSEAL W            |
| EEC Labelling       | Not classified        |
| Symbol(s)           | None                  |
| Contains            | None                  |
| R-Phrases           | None                  |
| S-Phrases           | None                  |
| Annex I Number      | Not applicable        |
| EEC Number(s)       | Not applicable        |
| Protective Clothing | Wear Goggles and Mask |

## 16. OTHER INFORMATION

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This information only concerns the above mentioned product and does not need to be valid if used with other product(s) or in any process. The information is to our best present knowledge correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.

R-Phrases Text (section 3)      None

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