

Continuing a Legacy of  
Customer Focus and Innovation  
functional anhydrous and hydrous aluminum silicates

*Burgess Pigment*

**MATERIAL SAFETY DATA SHEET**

Date Of Revision  
19 May 2008

Burgess KE, Burgess KEH, Burgess KSM  
Calcined Kaolin (surface modified)

**SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** Burgess KE, Burgess KEH, Burgess KSM

**Synonyms:** Calcined China Clay (surface modified), Anhydrous Aluminum Silicate (surface modified)  
**Product Use:** Mineral pigment extender, filler or binding aid used in rubber and plastic formulations.

**Manufacturer:** Burgess Pigment Company, 525 Beck Boulevard, P.O. Box 349, Sandersville, Georgia 31082 U.S.A.  
**Prepared by:** Safety, Health & Environmental Manager- Daytime Phone 800-841-8999 or 478-552-2544

**Emergency Phone:** Call Chemtrec in the United States at 1-800-424-9300

**SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS**

| Component(s) (chemical & common name(s))      | CAS Registry No. | EINECS No. | % (Approx.) |
|---|------------------|------------|-------------|
| Calcined Kaolin (Anhydrous Aluminum Silicate) | 92704-41-1       | 296-473-8  | 100         |

Note- this mineral has been surface modified for use in blending applications.

The following R and S phrases are suggested for conservative safety programs.  
This substance is not classified as dangerous according to Directive 67/548/EEC.

R phrases: R36/37, R66      S phrases: S24/25, S37/39, S38

**SECTION 3 - HAZARDS IDENTIFICATION**

**POTENTIAL HEALTH EFFECTS**

**Short-Term (acute):**

**Eye Contact:** Direct contact with dust may cause irritation by mechanical abrasion.

**Skin Contact:** Direct contact may cause irritation by mechanical abrasion.

**Inhalation:** Dusts may irritate the nose, throat, and respiratory tract by mechanical abrasion. Coughing, sneezing, and shortness of breath may occur following exposures in excess of appropriate limits.

**Ingestion:** Expected to be practically non-toxic. Ingestion of large amounts may cause gastrointestinal irritation and blockage.

**POTENTIAL HEALTH EFFECTS**

**Long-Term (chronic):**

Calcined kaolin is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the Occupational Safety and Health Administration (OSHA).

Prolonged and repeated inhalation of respirable dust in excess of appropriate exposure limits has caused pneumoconiosis, a lung disease. Not all individuals with pneumoconiosis will exhibit symptoms (signs) of the disease. However, pneumoconiosis can be progressive and symptoms can appear at any time, even years after the exposure has ceased. Symptoms of pneumoconiosis may include but are not limited to the following: shortness of breath; difficulty breathing with or without exertion; coughing; diminished work capacity; diminished chest expansion; reduction of lung volume.

**SECTION 4 - FIRST AID MEASURES**

**Eyes:** Immediately flush eye(s) with plenty of clean water for at least 15 minutes, while holding the eyelid(s) open. Occasionally lift the eyelid(s) to ensure thorough rinsing. Beyond flushing, do not attempt to remove material from the eye(s). Contact a physician if irritation persists or later develops.

**Skin:** Wash with soap and water. Contact a physician if irritation persists or later develops.

Continuing a Legacy of  
Customer Focus and Innovation  
functional anhydrous and hydrous aluminum silicates

*Burgess Pigment*

**MATERIAL SAFETY DATA SHEET**

Date Of Revision  
19 May 2008

Burgess KE, Burgess KEH, Burgess KSM  
Calcined Kaolin (surface modified)

**SECTION 4 - FIRST AID MEASURES (continued)**

**Ingestion:** If person is conscious, give large quantity of water and induce vomiting; however, never attempt to make an unconscious person drink or vomit. Get immediate medical attention.

**Inhalation:** Remove to fresh air. Dust in the throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or later develops.

**SECTION 5 - FIRE FIGHTING MEASURES**

**Physical Hazard:** Non-combustible

**Flammable Limits In Air:** Not flammable

**Flashpoint:** Not flammable

**Autoignition Temperature:** Not flammable

**Extinguishing Agents:** None required

**Explosion Data:** Non-explosive

**Unusual Fire And Explosion Hazards:** None known

**Sensitivity to Static Discharge:** Not applicable

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Care should be taken to avoid dusting while sweeping up spilled product. Cleanup personnel should use appropriate NIOSH/MSHA approved respirators if exposures are expected above the limits listed in Section 8. Water should be used with great care as it creates a slipping hazard when mixed with this product. This product is generally non-toxic to aquatic systems but may cause high turbidity in storm water. Refer to Section 13 for disposal information.

No components in this product are subject to the reporting requirements of Title III of SARA, 1986, and 40 CFR 372.

**SECTION 7 - HANDLING AND STORAGE**

**Handling:** Appropriate personal protection should be used when handling (refer to Section 8). Use care when dispensing to avoid dust generation. Fold and flatten empty bags carefully to reduce dust generation. Wash hands thoroughly after handling.

**Storage:** Best if kept under dry conditions. Not generally affected by hot or cold storage

**Specific Uses:** Mineral pigment extender (or filler) used in paper coatings, paints, rubber and plastic formulations

**SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure limit values:** No exposure limits have been published for calcined kaolin products. We recommend using the limits published for kaolin (cas# 1332-58-7)

| Exposure Limits:    | Value                                 | Limit         | Reference     |
|---------------------|---------------------------------------|---------------|---------------|
| Kaolin<br>1332-58-7 | 2 mg/m <sup>3</sup> (Respirable dust) | TWA (8 hour)  | ACGIH TLV-A4* |
|                     | 15 mg/m <sup>3</sup> (Total dust)     | TWA (8 hour)  | OSHA PEL      |
|                     | 5 mg/m <sup>3</sup> (Respirable dust) | TWA (8 hour)  | OSHA PEL      |
|                     | 10 mg/m <sup>3</sup> (Total dust)     | TWA (10 hour) | NIOSH REL     |
|                     | 5 mg/m <sup>3</sup> (Respirable dust) | TWA (10 hour) | NIOSH REL     |

Notes- (-A4) This indicates that kaolin is "Not Classifiable as a Human Carcinogen" by ACGIH.



Continuing a Legacy of  
Customer Focus and Innovation  
functional anhydrous and hydrous aluminum silicates

*Burgess Pigment*

**MATERIAL SAFETY DATA SHEET**

Date Of Revision  
19 May 2008

**Burgess KE, Burgess KEH, Burgess KSM**  
Calcined Kaolin (surface modified)

---

**SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**

**Exposure Controls:** Respirable dust levels should be monitored regularly. Dust levels in excess of appropriate exposure limits should be reduced by all feasible engineering controls, including (but not limited to) wet suppression, ventilation, process enclosure, and enclosed employee work stations.

**Occupational exposure controls:** For respirable dust levels that exceed or are likely to exceed and 8hr-TWA of 2 mg/m<sup>3</sup>, a NIOSH/MSHA approved HEPA filter respirator must be worn. Respirator use must comply with applicable MSHA or OSHA standards which include provisions for a user training program, respirator repair and cleaning, respirator fit testing and other requirements. For hand protection any type of glove that reduces skin contact with the material is acceptable. For eye protection any type of ANSI approved glasses, goggles or face shield that reduces potential particle contact with the eyes is acceptable. No additional skin protection is required. Care should be given to reduce or eliminate dust accumulation in personal clothing.

**Environmental exposure controls:** Care should be given to reduce dust generation. Refer to Sections 7 and 13.

---

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

**General Information:** Appearance and Odor: Off-white dry powder

**Important Health, Safety and Environmental Information:** pH in Water (20% solids suspension): 7.0 - 8.0  
**Boiling Point:** N/A (Solid)    **Melting Point:** >1700° C    **Flash Point:** N/A    **Flammability:** N/A  
**Explosive Properties:** N/A    **Oxidizing Properties:** N/A    **Vapor Pressure (mm Hg):** No Vapor  
**Specific Gravity (H<sub>2</sub>O=1):** 2.6    **Solubility in Water:** Insoluble    **Vapor Density (Air=1):** No Vapor

---

**SECTION 10 - STABILITY AND REACTIVITY**

**Conditions to Avoid:** This product is stable under normal storage, handling and environmental conditions.  
**Materials to Avoid:** None known. This product is stable when used as intended by the manufacturer.  
**Hazardous Decomposition Products:** None known. This product is stable in water

---

**SECTION 11 - TOXICOLOGICAL Information**

Calcined kaolin is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA). The American Conference of Governmental Industrial Hygienists (ACGIH) lists kaolin as- Not Classifiable as a Human Carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.

This product contains less than 0.1% crystalline silica (quartz) based on testing using NIOSH method 7500.

---

**SECTION 12 - ECOLOGICAL INFORMATION**

**Ecotoxicity:** No adverse ecological effects are expected. May affect turbidity of water if discharged in large quantities to lakes or streams. See Section 15, Foreign Regulations  
**Mobility:** This product is insoluble in water  
**Persistence and Degradability:** This product is made from a naturally occurring, abundant, innocuous mineral.  
**Bioaccumulative Potential:** No data available. This product is not expected to accumulate in biota.

---

**SECTION 13 - DISPOSAL CONSIDERATIONS**

Pickup and reuse clean materials, avoiding dust generation. Dispose of waste materials only in accordance with applicable federal, state, and local laws and regulations. This product is not hazardous as a waste. Check with local landfills before disposing in trash. Dispose of in closed containers to avoid dusting.

Continuing a Legacy of  
Customer Focus and Innovation  
functional anhydrous and hydrous aluminum silicates

*Burgess Pigment*

**MATERIAL SAFETY DATA SHEET**

Date Of Revision  
19 May 2008

Burgess KE, Burgess KEH, Burgess KSM  
Calcined Kaolin (surface modified)

**SECTION 14 - TRANSPORTATION INFORMATION**

DOT Hazard Classification: None

Placard Required: None

Label Required: Use original label including all warnings. When disposing of this material in its pure form use a DOT "Non-Hazardous Waste" label.

**SECTION 15 - REGULATORY INFORMATION**

**U.S. Federal Regulations**

FDA: Kaolin (aluminum silicate, china clay, clay) is acceptable for several specific uses. See 21 CFR 73, 82, 175, 176, 177, 178, 186, 310, 335, 346, 347 and 872.

SARA Title III (EPCRTKA) Section 302: This product does not contain any extremely hazardous substances subject to the reporting requirements of 40 CFR Part 355.

SARA Title III (EPCRTKA) Section 311/312: This product is made from **kaolin**, listed in Table Z-1 of 29 CFR 1910.1000 "Air Contaminants" and is subject to the reporting requirements of 40 CFR Part 370 (threshold quantity of 10,000 lbs)

SARA Title III (EPCRTKA) Section 313: This product does not contain substances subject to the reporting requirements of 40 CFR Part 372.

TSCA: This product or its components are listed in or exempt from the TSCA inventory requirements. This product does not contain substances subject to export notification under Section 12(b) of TSCA.

**North American Regulations**

Several states, provinces and territories specifically list **kaolin** and regulate dust exposure. **USA:** Alaska, Arizona, California, Idaho, Indiana, Massachusetts, Michigan, Minnesota, North Carolina, Oregon, Pennsylvania, Rhode Island, Tennessee, Texas, Vermont, and Washington. **Canada:** Alberta, British Columbia, Manitoba, New Brunswick, Northwest Territories, Nova Scotia, Nunavut, Ontario, Quebec, Saskatchewan, and Yukon. WHIMS classification: N/A (contains less than 0.1% crystalline silica). **Mexico:** see national exposure limits. **For the most current regulatory information please contact the appropriate agencies in the state, province or territory where the product is used.**

**Foreign Regulations**

CAS# 92704-41-1 can be found in the following registries: China Inventory, DSL (Canada), ECL (Korea), EINECS (Europe), ENCS (Japan), NZIoC (New Zealand), PICCS (Philippines). German Water Classification - Annex 1: Non-Hazardous (ID No. 765)

**SECTION 16 - OTHER INFORMATION**

Calcined kaolin is a man-made product with the following chemical formula -  $Al_2Si_2O_7$

R phrases:

R36/37, R66 Irritating to eyes and respiratory system. Repeated exposure may cause skin dryness or cracking.

S phrases:

S24/25, S37/39, S38 Avoid contact with skin and eyes. Wear suitable gloves and eye/face protection. In case of insufficient ventilation wear suitable respiratory equipment.

Hazard Communication or "Right-to-know" information-

Hazardous Materials Identification System (HMIS III) Ratings:

|                                     |   |
|-------------------------------------|---|
| Health = 1 *                        | Potential lung effects from chronic over-exposure to dust |
| Flammability = 0                    | Non-flammable   |
| Physical Hazard = 0                 | Non-reactive  |
| Personal Protection Equipment = E** |   |

\*Review and abide by suggested exposure limits. Monitor work area for potential over-exposure.

\*\*Use NIOSH approved dust mask for dusty conditions.

Revised on 19 May 2008: Changed CAS # and Component name, corrected German Water Classification.