

EXHIBIT 9

DigitalFire.Com Library, Ball Clay

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## REFERENCE LIBRARY



Oxides | Minerals | Materials | Recipes | Articles | Glossary | **Hazards** | Videos | Properties | Schedules | Temperatures | Tests | Troubles

Alumina Toxicology  
 Ammonia and Latex Toxicity  
 Antimony Oxide  
 Arsenic Oxide  
 Asbestos: A Difficult-to-Replace Material

### Ball Clay

BARIUM and COMPOUNDS / Toxicology  
 Barium in Materials and Fired Glazes  
 Bentonite Toxicity  
 Beryllium Monoxide Toxicology  
 Bismuth Trioxide Toxicology  
 Boron Compounds and Their Toxicity  
 Brown Stain  
 Cadmium: Prevention/Screening Strategy  
 Calcium Carbonate Toxicology  
 Carbon Monoxide Toxicity  
 Cesium Toxicology  
 Chromium Compounds Toxicology  
 Cobalt Oxide and Carbonate  
 Cobalt Toxicology  
 Copolymer Latex Precautions  
 Copper Compounds Toxicology  
 Copper Oxide and Carbonate  
 Cristobalite Toxicity  
 Cryolite and Ceramics  
 Dealing With Dust in Ceramics  
 Diatomaceous Earth Toxicology  
 Dioxins in Clays  
 Epsom Salts  
 Eye Injuries Due to Radiation  
 Feldspar  
 Fighting Micro-organisms in Ceramics  
 Fluorine Gas  
 Gallium Oxide Toxicology  
 Hafnium Oxide Toxicity  
 Hydrofluoric Acid Toxicity  
 Iron oxide and Hematite  
 Kaolin



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- The secret to cool bodies and glazes is a lot of testing.
- The secret to know what to test is material and chemistry knowledge.
- The secret to learning from testing is documentation.
- The place to test, do the chemistry and document is an account at <https://insight-live.com>
- The place to get the knowledge is <https://digitalfire.com>

Sign-up at <https://insight-live.com> today.

## Ball Clay

Ball clays are hydrous aluminum silicates of approximate formula  $Al_2O_3 \cdot 2SiO_2 \cdot 2H_2O$ . They are inert (insoluble, non-flammable, non-decomposing, non-polymerizing) and non-toxic by ingestion. See 'Silica' for more information.

Ball clays contain free quartz, in some cases up to 25%. Do not breathe dust. Prolonged inhalation even at low levels

Lead and Ceramics  
 Lead Chromate  
 Lead in Ceramic Glazes: What Did We Learn?  
 Lead in Frits: The Hazards  
 Lithium Carbonate Toxicity  
 Lithium in Ceramics  
 Man-Made Vitreous Fibers  
 Manganese and Parkinsons by Jane Watkins  
 Manganese in Clay Bodies  
 Manganese Inorganic Compounds Toxicology  
 Manganese Toxicity by Elke Blodgett  
 Manganese: Creativity and Illness by Dierdre O'Reilly  
 Molybdenum Compounds Toxicology  
 New Record  
 Nickel Compounds Toxicity  
 Niobium Oxide Toxicity  
 Occupational Dermatoses  
 Overview of Material Safety by Gavin Stairs  
 Paraffin Toxicology  
 Perlite  
 Plant Ash Toxicity  
 Poly Rubber  
 Potassium Carbonate Toxicity  
 Pregnancy and Ceramics  
 Propane Toxicology  
 Quartz Toxicity on Clayart  
 Quartz, Crystalline Silica Toxicity  
 Rare Earth Compounds Toxicity  
 Refractory Ceramic Fibers  
 Rubidium and Cesium Toxicology  
 Rutile Toxicology  
 Silicosis and Screening  
 Silver Compounds Toxicology  
 Sodium Azide Toxicology  
 Sodium Carbonate Toxicology  
 Sodium Silicate Powder Toxicology  
 Stannous Chloride Toxicity  
 Strontium Carbonate Toxicity Note  
 Sulfur Dioxide Toxicity  
 Talc Hazards Overview  
 Talc Toxicology  
 Thallium Oxide Toxicology  
 The Use of Barium in Clay Bodies  
 Thorium Dioxide Toxicity  
 Tin and Inorganic Compounds  
 Titanium Dioxide  
 Tungsten Compounds Toxicology  
 Understanding Acronyms on MSDS's  
 Uranium and Ceramics  
 Vanadium and Compounds Toxicology  
 Zeolite  
 Zinc Compounds  
 Zirconium Compounds Toxicity

may cause delayed lung injury (silicosis).  
 Follow guidelines for Crystalline Silica  
 (Quartz).

IARC Monograph Volume 42, 1987  
 concludes that "there is a limited  
 evidence for the carcinogenicity of  
 crystalline silica in humans". IARC  
 classification 2A. The NTP Sixth Annual  
 Report on Carcinogens, 1991, has added  
 crystalline silica to its list of substances  
 that are "reasonably anticipated to be  
 carcinogens".

### Out Bound Links

- (Hazards) Dioxins in Clays  
DIOXINS in Clays used in ceramics, what are the dangers?
- (Hazards) Quartz, Crystalline Silica Toxicity  
Overview of quartz hazards in the ceramic industry and process

### In Bound Links

- (Materials) Ball Clay - Highly Plastic Fine Particle Clay
- (Hazards) Bentonite Toxicity  
The hazards of bentonite clay in the ceramic process

By *Tony Hansen*



Zirconium Encapsulated Stains

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## Feedback, Suggestions

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