



SAFETY DATA SHEET

1. Identification

Product identifier	Bakal Modal Plaster
Other means of identification	
SDS number	52000000028
Synonyms	Dental Plaster
Recommended use	Dental Plaster or Dental Stone.
Recommended restrictions	Use in accordance with manufacturer's recommendations.

Manufacturer/Importer/Supplier/Distributor information

Company name	United States Gypsum Company
Address	550 West Adams Street Chicago, Illinois 60661-3637
Telephone	1-800-874-4968
Website	www.usg.com
Emergency phone number	1-800-507-8899

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1
	Sensitization, skin	Category 1
	Carcinogenicity	Category 1A

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. May cause cancer.

Precautionary statement

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/clothing and eye/face protection.

Response

If exposed or concerned: Get medical advice/attention. If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Storage

Store locked up.

Disposal

Dispose of in accordance with local, state, and federal regulations.

Hazard(s) not otherwise classified (HNOC)

None known.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1)	26499-65-0	> 90
Portland Cement	65997-15-1	< 5

Impurities

Chemical name	CAS number	%
Crystalline silica (Quartz)	14808-60-7	< 0.5

Composition comments

All concentrations are in percent by weight unless ingredient is a gas.

Raw materials in this product contain respirable crystalline silica as an impurity. The weight percent of respirable crystalline silica found in this product is < 0.5%. Exposures to respirable crystalline silica during the normal use of this product must be determined by workplace hygiene testing.

4. First-aid measures

Inhalation

Dust irritates the respiratory system, and may cause coughing and difficulties in breathing. Move injured person into fresh air and keep person calm under observation. Get medical attention if symptoms persist.

Skin contact

Contact with wet or dry product: Wash area with cold running water immediately. Open sores or cuts should be thoroughly flushed and covered with suitable dressings.

Eye contact

Dust in eyes: Flush with cold tap water for at least 15 minutes. If irritation persists, seek medical attention immediately.

Ingestion

Plaster of Paris hardens and if ingested may result in stomach and intestinal blockage. Drinking gelatin solutions or large volumes of water may delay setting. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Dust may irritate throat and respiratory system and cause coughing. May cause serious chemical burns to the skin. May cause chemical eye burns. Permanent eye damage including blindness could result.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically.

General information

Ensure that medical personnel are aware of the material(s) involved.

5. Fire-fighting measures

Suitable extinguishing media

Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media

Not applicable.

Specific hazards arising from the chemical

Not a fire hazard.

Special protective equipment and precautions for firefighters

Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting equipment/instructions

Use standard firefighting procedures and consider the hazards of other involved materials.

Specific methods

Cool material exposed to heat with water spray and remove it if no risk is involved.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

See Section 8 of the SDS for Personal Protective Equipment.

Methods and materials for containment and cleaning up

Vacuum up the spilled material. Vacuums used for this purpose should be equipped with HEPA filters. Containers must be labeled. Collect in approved containers and seal securely. For waste disposal, see Section 13 of the SDS.

Environmental precautions

Avoid discharge to drains, sewers, and other water systems.

7. Handling and storage

Precautions for safe handling

Wear appropriate personal protective equipment (See Section 8). Do not get in eyes and avoid contact with skin and clothing. Avoid inhalation of dust. Minimize dust production when mixing, or opening and closing bags. Use with adequate dust control and local ventilation. Wear appropriate NIOSH respirator when ventilation is inadequate and occupational exposure limits are exceeded. Wash hands thoroughly after handling. Use a non-alkaline soap such as Neutralite Safety Solution or Mason's Hand Rinse.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated place. Store away from incompatible materials. Avoid contact with acids, water, and moisture.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)	PEL	5 mg/m ³	Respirable fraction.
Portland Cement (CAS 65997-15-1)	PEL	15 mg/m ³ 5 mg/m ³	Total dust. Respirable fraction.
		15 mg/m ³	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Portland Cement (CAS 65997-15-1)	TWA	50 mppcf	
Impurities	Type	Value	Form
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	0.3 mg/m ³ 0.1 mg/m ³ 2.4 mppcf	Total dust. Respirable. Respirable.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)	TWA	10 mg/m ³	Inhalable fraction.
Portland Cement (CAS 65997-15-1)	TWA	1 mg/m ³	Respirable fraction.
Impurities	Type	Value	Form
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	0.025 mg/m ³	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)	TWA	5 mg/m ³	Respirable.
Portland Cement (CAS 65997-15-1)	TWA	10 mg/m ³ 5 mg/m ³	Total Respirable.
Impurities	Type	Value	Form
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	10 mg/m ³ 0.05 mg/m ³	Total Respirable dust.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Provide sufficient ventilation for operations causing dust formation. Observe occupational exposure limits and minimize the risk of exposure.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear approved safety goggles.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear long-sleeved shirts, pants and rubber boots.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with respirator manufacturer to determine respirator selection, use, and limitations. Use positive pressure, air-supplied respirator for uncontrolled releases or when air purifying respirator limitations may be exceeded. Follow respirator protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use.
Thermal hazards	None.
General hygiene considerations	During work avoid kneeling in fresh mortar or concrete wherever possible. If kneeling is absolutely necessary, then appropriate waterproof personal protective equipment must be worn. Do not eat, drink or smoke when working with cement to avoid contact with skin or mouth. Immediately after working with cement or cement-containing materials, workers should wash or shower. Remove contaminated clothing, footwear, watches, etc, and clean thoroughly before re-use.

9. Physical and chemical properties**Appearance**

Physical state	Solid.
Form	Powder.
Color	White to off-white.
Odor	Low to no odor.
Odor threshold	Not applicable.
pH	11 - 13
Melting point/freezing point	Not applicable.
Initial boiling point and boiling range	Not applicable.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not applicable.
Flammability limit - lower (%) temperature	Not applicable.
Flammability limit - upper (%)	Not applicable.
Flammability limit - upper (%) temperature	Not applicable.
Explosive limit - lower (%)	Not applicable.
Explosive limit - lower (%) temperature	Not applicable.
Explosive limit - upper (%)	Not applicable.
Explosive limit - upper (%) temperature	Not applicable.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	2.96 (H2O = 1)
Solubility(ies)	
Solubility (water)	0.15 - 0.4 g/100g (in water)
Partition coefficient (n-octanol/water)	Not applicable.

Auto-ignition temperature	Not applicable.
Decomposition temperature	2642 °F (1450 °C)
Viscosity	Not applicable.
Other information	
Bulk density	55 - 70 lb/ft³
Flammability	Not applicable.
VOC (Weight %)	0 g/l

10. Stability and reactivity

Reactivity	Not available.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials. Exposure to moisture. When mixed with water this product can become very hot. Encasing or making moulds of any body part can cause serious burns that may require surgical removal of affected tissue and even amputation of encased body part.
Incompatible materials	Acids. Exposure to water and acids must be supervised because the reactions are vigorous and produce large amounts of heat. Crystalline silica in contact with powerful oxidizing agents, such as fluorine, chlorine trifluoride and oxygen difluoride, may cause fires. Crystalline silica will dissolve in hydrofluoric acid and produce a corrosive gas, silicon tetrafluoride.
Hazardous decomposition products	Calcium oxides. Sulfur oxides.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Ingestion may cause irritation and stomach discomfort.
Inhalation	Inhalation of dusts may cause respiratory irritation. Prolonged and repeated exposure to airborne respirable crystalline silica can cause silicosis and/or lung cancer.
Skin contact	Exposure to dry product may cause drying of the skin and mild irritation, or more significant effects from the aggravation of other conditions. Wet product is caustic (pH ≥ 12) and dermal exposure may cause more severe skin effects, including thickening, cracking or fissuring of the skin. Prolonged exposure can cause severe skin damage in the form of chemical (caustic) burns. Some individuals who are exposed to wet or dry product may exhibit an allergic response, which can result in symptoms ranging from mild rashes to severe skin ulcers.
Eye contact	Exposure to airborne dust may cause immediate or delayed irritation of the eyes. Depending on the level of exposure, effects may range from redness to chemical burns and blindness.
Symptoms related to the physical, chemical and toxicological characteristics	Dust may irritate throat and respiratory system and cause coughing. May cause serious chemical burns to the skin. May cause chemical eye burns. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity	Not expected to be a hazard under normal conditions of intended use.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye damage.
Respiratory or skin sensitization	
Respiratory sensitization	Not classified but possible due to skin sensitization effect.
Skin sensitization	Trace amounts of Cr(VI) compounds from Portland Cement may cause allergic skin reaction even after one exposure.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Repeated and prolonged exposures to high levels of respirable crystalline silica may cause cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Crystalline silica (Quartz) (CAS 14808-60-7) 1 Carcinogenic to humans.

NTP Report on Carcinogens

Crystalline silica (Quartz) (CAS 14808-60-7) Known To Be Human Carcinogen.

Reproductive toxicity	Not expected to be a reproductive hazard.
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Specific target organ toxicity - single exposure	No data available, but none expected.
Specific target organ toxicity - repeated exposure	Not classified. For detailed information, see section 16.
Aspiration hazard	Due to the physical form of the product it is not an aspiration hazard.
Chronic effects	Prolonged and routine inhalation of high levels of respirable crystalline silica particles can lead to the lung disease known as silicosis. Some studies show excess numbers of cases of scleroderma, connective tissue disorders, lupus, rheumatoid arthritis, chronic kidney diseases and end-stage kidney disease in workers exposed to respirable crystalline silica. Pre-existing skin and respiratory conditions including dermatitis, asthma and chronic lung disease might be aggravated by exposure. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled. May cause eczema-like skin disorders (dermatitis).

12. Ecological information

Ecotoxicity	The product is not expected to be hazardous to the environment. Large amounts of the product may affect the pH-factor in water with possible risk of harmful effects to aquatic organisms.
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Components	Species	Test Results
Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)		
Aquatic		
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>) > 1970 mg/l, 96 hours
Persistence and degradability	No data available.	
Bioaccumulative potential	Bioaccumulation is not expected.	
Mobility in soil	No data available.	
Other adverse effects	None expected.	

13. Disposal considerations

Disposal instructions	Dispose in accordance with applicable federal, state, and local regulations. Recycle responsibly.
Local disposal regulations	Dispose of in accordance with local regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Dispose of in accordance with local regulations.

14. Transport information

DOT	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	Not regulated.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not listed.
CERCLA Hazardous Substance List (40 CFR 302.4)	Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
 Delayed Hazard - Yes
 Fire Hazard - No
 Pressure Hazard - No
 Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations WARNING: This product contains chemicals known to the State of California to cause cancer.

US. Massachusetts RTK - Substance List

Crystalline silica (Quartz) (CAS 14808-60-7)
Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)
Portland Cement (CAS 65997-15-1)

US. New Jersey Worker and Community Right-to-Know Act

Crystalline silica (Quartz) (CAS 14808-60-7)
Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)
Portland Cement (CAS 65997-15-1)

US. Pennsylvania Worker and Community Right-to-Know Law

Crystalline silica (Quartz) (CAS 14808-60-7)
Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)
Portland Cement (CAS 65997-15-1)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Crystalline silica (Quartz) (CAS 14808-60-7)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 02-May-2014
Revision date -
Version # 01

Further information

Crystalline silica: Raw materials in this product may contain respirable crystalline silica. Exposures to respirable crystalline silica are not expected during the normal use of this product. However, actual levels must be determined by workplace hygiene testing. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer.

Plaster of Paris: Is classified as a hazardous substance but is generally considered a safe material for routine use. When plaster of Paris is used responsibly it is not considered as a dangerous material. However, when mixed with water this product can become very hot. DO NOT attempt to make a cast enclosing any part of the body. Encasing any body part can cause serious burns and even amputation of the encased body part.

OSHA's "Preventing Skin Problems from Working with Portland Cement" provides excellent guidance and can be downloaded at: <https://www.osha.gov/dsg/guidance/cement-guidance.html>

NFPA Ratings:

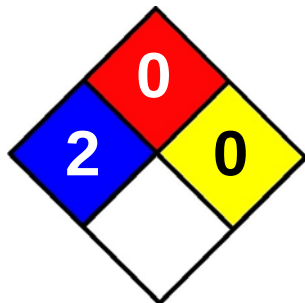
Health: 2

Flammability: 0

Physical hazard: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

NFPA Ratings



Disclaimer

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.