

MATERIAL SAFETY DATA SHEET

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COUNTY OF HAYS HAZARDOUS MATERIALS DIVISION 512-393-840
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Section 1 -PRODUCT IDENTIFICATION

Product Code: Bettermud-KHDPS
Chemical Name: Proprietary mixture containing no hazardous ingredients

SECTION 2- PHYSICAL DATA

Appearance:	Syrupy Liquid	Specific Gravity:	1.134
Color:	Clear to hazy white	% Volatiles by Volume:	0
Odor:	Odorless or musty odor	Solubility in Water:	Miscible
Boiling Point:	212 Degrees F	Vapor Pressure:	Unknown
Composition:	Modified Sodium Silicate		

SECTION 3-FIRE & EXPLOSION DATA

Flash Point:	Non-Flammable
pH (% solution):	Approximate 11.3
Extinguishing Media:	Non- Applicable
Special Firefighting Procedures:	Non- Applicable
Flammability or Explosive Limits:	Non-Applicable

SECTION 4- HEALTH HAZARD DATA

Contains no hazardous materials as defined by OSHA and ACGIH

Emergency Overview: Clear to hazy, colorless, odorless liquid. May cause eye, skin and digestive tract irritation. High pH is harmful to aquatic life until drying. Noncombustible. Spills are slippery. Reacts with acids, ammonium salts, reactive metals and some organics.

Eye Contact: Causes irritation

Skin Contact: Causes irritation

Inhalation: Spray mist irritating to respiratory system

Ingestion: May cause irritation to mouth, esophagus and stomach

Chronic Hazards: No known chronic hazards. Not listed by NTP, IARC or OSHA as a carcinogen

Physical Hazards: Dries to form glass film which can easily cut skin. Spilled material is very slippery. Can etch glass if not promptly removed before drying.

SECTION 5 – FIRST AID MEASURES

- Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 Minutes. Get medical attention.
- Skin: In case of contact, immediately flush with plenty of water. Remove contaminated clothing and shoes. Get medical attention.
- Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
- Ingestion: If swallowed, DO NOT induce vomiting. Get medical attention immediately. If victim is fully conscious, give cup of water. Never give anything by mouth to an unconscious person.

SECTION 6 – FIRE FIGHTING MEASURES

- Flammable Limits: This material is nonflammable.
- Extinguishing Media: This material is compatible with all extinguishing media.
- Hazards to Firefighters: See Section 4 for information hazards when this material is present in the area of a fire.
- Fire Fighting Equipment: The following protective equipment for fire fighters is recommended when this material is present in the area of a fire: Chemical goggles, body covering. Protective clothing, chemical resistant gloves and rubber boots.

SECTION 7 - ACCIDENTAL RELEASE MEASURES

- Personal Protection: Wear chemical goggles, body-covering protective clothing, chemical resistant gloves and rubber boots. See section 8.
- Environmental Hazards: Sinks and mixes with water. High pH of this material is harmful to aquatic life until dry.
- Small Spill Cleanup: Mop up and neutralize liquid, then discharge to a sewer in accordance with federal, state and local regulations or permits.
- Large Spill Cleanup: Keep unnecessary people away, isolate hazard area and deny entry. Do not touch or walk through spilled material. Stop leak if you can do without risk. Prevent runoff from entering into storm sewers and ditches that lead to natural waterways. Isolate, dike and store discharged material if possible. Use sand or earth to contain spill area. If containment is impossible, neutralize contaminated area and flush with large quantities of water.
- CERCLA RQ: There is no CERCLA Reportable Quantity for this material. If a spill goes off site, notification of state and local authorities is recommended.

SECTION 8 – HANDLING AND STORAGE

- Handling: Avoid contact with eyes, skin and clothing. Avoid breathing spray mix. Keep container closed. Promptly clean residue from closures with cloth dampened with water.

Promptly clean up spills.

Storage: Keep containers closed. Store in clean steel or plastic containers separate from acids, reactive metals and ammonium salts. Storage temperature 0-95 degrees C. Loading temperature is 45-95 degrees C. Do not store in aluminum, fiberglass, copper, brass, zinc or galvanized containers.

SECTION 9 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use with adequate ventilation. Keep containers closed. Clean water should be accessible.

Respiratory Protection: Use a NIOSH-approved dust and mist respirator where spray mist occurs. Observe OSHA regulations for respirator use (29 C.F.R. & 1910.134).

Skin Protection: Wear body-covering protective clothing and gloves.

Eye Protection: Wear chemical goggles.

SECTION 10 – STABILITY AND REACTIVITY

Stability: This material is stable under all conditions of use and storage.

Conditions to Avoid: None

Materials to Avoid: Gels and generates heat when mixed with acid. May react with ammonium salts resulting in evolution of ammonia gas. Flammable hydrogen gas may be produced on contact with aluminum, tin, lead and zinc.

Hazardous Decomposition

Products: Hydrogen

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute Data: When tested for primary eye irritation potential according to OECD Guideline Section 405, this material produced corneal, iridal and conjunctival irritation. Some eye irritation was still present 14 days after treatment, although the average primary irritation score has declined from 19.7 after 1 day to 4.0 after 14 days. When tested for primary skin irritation index of 3 to abraded skin and 0 to intact skin. Human experience confirms that irritation occurs when this material gets on clothes at the collar, cuffs or other areas where abrasion may occur. The acute oral toxicity of this product has not been tested. When sodium silicates were tested on a 100% solids basis, there single dose acute oral LD50 in rats ranged from 1500 mg/kg to 3200 mg/kg. The acute oral lethality resulted from nonspecific causes.

Sub-chronic Data: In a study a study of rats fed sodium silicate in drinking water for three months, at 200, 600 and 1800ppm, changes were reported in blood chemistry of some animals, but no specific changes to the organs of the animals due to the sodium silicate administration were observed in any of the dosage groups. Another study reported adverse effects to the kidney of dogs fed sodium silicate in their diet at 2.4/kg day for 4 weeks, whereas rats fed the same dosage did not develop any treatment-related effects. Decreased number of births and survival to weaning was reported for rats fed sodium silicate in their drinking water at 600 and 1200ppm.

Special Studies: Sodium silicate was not mutagenic to the bacterium E. Coli when tested in a mutagenicity bioassay. There are no known reports of carcinogenicity of silicates. Frequent ingestion over extended periods of time of gram quantities of silicates is associated with the formation of kidney stones and other siliceous urinary calculi in humans. Sodium silicate is not listed by IARC, NTP or OSHA as a carcinogen.

SECTION 12 – ECOLOGICAL INFORMATION

Eco Toxicity: The following data is reported for sodium silicates on a 100% solids basis. A 96 hour medium tolerance for fish (*Gambusia affinis*) of 2320 ppm; a 96 hour medium tolerance for snail eggs (*Lymnea*) of 623 ppm; and a 96 hour.

Environmental Fate: This material is not persistent in aquatic systems, but its high pH when undiluted or un-neutralized is acutely harmful to aquatic life. Diluted material rapidly depolymerizes to yield dissolved silica in a form that indistinguishable from natural dissolved silica. It does not contribute to BOD. This material does not bioaccumulate except in species that use silicate as a structural material such diatoms and siliceous sponges. Where normally low natural silica concentrations exist (less than 0.1 ppm), dissolved silica may be limiting nutrient for diatoms and a few other aquatic algal species. However, the addition of excess dissolved silica over the limiting concentration will not stimulate the growth of diatom populations; their growth rate is independent of silica concentration of once the limiting concentrations is exceeded. Neither silica nor sodium will appreciably bioconcentrate up the food chain.

Physical /Chemical: Sinks and mixes with water. Only water will evaporate from this material.

SECTION 13 – DISPOSAL CONSIDERATIONS

Classification: Disposal material is not a hazardous waste.
Disposal Method: Neutralize and landfill solids in accordance with federal, state and local regulations and permits.

SECTION 14– TRANSPORT INFORMATION

DOTUN Status: This material is not regulated hazardous material for transportation.

SECTION 15– REGULATORY INFORMATION

CERCLA: No CERCLA Reportable Quantity has been established for this material.
SARA TITLE 111: Not an extremely Hazardous Substance under &302. Not a toxic chemical under &313.
Hazardous Categories Under &311/312: Acute
TSCA: All ingredients of this material are listed on the TSCA inventory.
FDA: The use of sodium silicate is authorized by FDS as a boiler water

additive for the production of steam that will contact food pursuant to 21 CFR & 82.173.310 as a component of zinc silicon dioxide matrix coatings on food contact surfaces pursuant to 21 CFR & 175.390; as a GRAS substance when migrating from cotton fabric used in dry food packaging pursuant to 21 CFR & 182.70 and as a GRAS substance when migrating from food from paper and paperboard products pursuant to 21 CFR & 182.90.

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