



1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: ZEOBEST® Product Number:
 Synonyms: Hydrated Potassium, Calcium sodium aluminosilicate or silicoaluminat, clinoptilolite (clino), natural zeolite.
 CAS Number: 1318-02-1 Formula: $(Na^+, K^+, Ca^{++}, Mg^+) [(AlO_2)^6(SiO_2)_{30}]^6 24H_2O$

Company Identification: Northern Filter Media Web: www.northernfiltermedia.com
 2509 Pettibone Ave., Muscatine, IA 52761 www.zeobest.com
 (563) 263-2711 (For product information)
 1-202-483-7616 (For emergencies - Chemtrec)

2. COMPOSITION / INFORMATION ON INGREDIENTS:

CONTAINING: HAZARDOUS AND/OR REGULATED COMPONENTS

<u>Chemical Name</u>	<u>Amount</u>	<u>CAS Number</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Zeolite	90% (+/- 5%)	1318-02-1	10 mg/m3	10 mg/m3
Particulates Not Otherwise Classified or Regulated			15 mg/m3 respirable	

COMPOSITION COMMENT: may contain free silica, route of entry inhalation.

California Prop 65: This product does contain an ingredient which is known to the state of California to cause cancer, birth defects, or other reproductive harm. SiO2, Silicon Dioxide from long term inhalation. See Section 15.

HAZARDS DISCLOSURE: This product contains known hazardous materials in reportable levels as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200 except as listed above. As defined under Sara 311 and 312, this product contains known hazardous materials.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Excessive inhalation of crystalline silica is a serious health concern.

HMIS/NFPA Rating:
 Health - 1, Flammability - 0, Reactivity - 0, Personal Protection Index - t
 NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme
 Protective Equipment: t = Dust respirator under dust generating conditions.

POTENTIAL HEALTH EFFECTS

INHALATION:
 Acute, short term exposure; mild and temporary discomfort to respiratory tract. Similar to nuisance dust. Excessive inhalation of crystalline silica is a serious health concern.

INGESTION: Not Listed.

SKIN CONTACT: No hazard known or expected.

EYE CONTACT: Dust may cause mechanical irritation, redness, pain, and corneal damage if not flushed out promptly.



CHRONIC EXPOSURE: Chronic, long term exposure (10 years - 30 years), may result in pulmonary fibrosis (silicosis). Aggravates bronchitis, asthma and emphysema.

CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Bronchitis, Emphysema and Asthma. Smoking is known to aggravate the effects of exposure. Persons with silicosis may develop tuberculosis. Exposure to crystalline silica may also result in scleroderma and/or kidney disease.

4. FIRST AID MEASURES

INHALATION FIRST AID:

If a respiratory problem develops from dust. Remove victim to fresh air and provide oxygen if breathing is difficult. Get medical attention. If the victim has difficulty breathing or tightness of the chest, is dizzy, vomiting or unresponsive, give 100% oxygen with rescue breathing or CPR as required and transport to the nearest medical facility. Normally all that is required will be to bring victim to fresh clean air.

SKIN CONTACT FIRST AID: Wash with water.

EYE CONTACT FIRST AID:

If dust comes into contact with eyes, immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

INGESTION FIRST AID: First aid procedures not normally required.

STATEMENT OF PRACTICAL TREATMENT: Always have plenty of water available for first aid. Get medical attention if any symptoms develop or persist.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:	Not flammable.
FLAMMABLE LIMITS IN AIR, % by Volume:	Not applicable
AUTO IGNITION TEMPERATURE:	Not available

EXTINGUISHING MEDIA: Water, dry chemical, alcohol foam, or carbon dioxide. Material floats on water. Water spray may be used to keep exposed material cool. Do not allow water runoff to enter sewers or waterways.

FIRE & EXPLOSION HAZARDS: NONE

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Physical form requires no obvious personal protective equipment when cleaning up spills. Wear a dust mask if particulate count exceeds limits.

SPILLS PROCEDURE: Material may be wetted with water to reduce dust and collected for reprocessing or disposal.

ENVIRONMENTAL PRECAUTIONS: None.

7. HANDLING AND STORAGE

RECOMMENDED STORAGE CONDITIONS: Avoid conditions of extreme humidity.

SHELF LIFE: Indefinite if stored properly.

HANDLING (PERSONNEL): Handle in accordance with good hygiene and safety procedures. Avoid breathing dust if present. Wash thoroughly after handling.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

AIRBORNE EXPOSURE LIMITS: See Section 2 above.

VENTILATION SYSTEM: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

PERSONAL RESPIRATORS (NIOSH APPROVED): If the respirable particulate exposure limit is exceeded, wear a NIOSH approved dust mask.

SKIN PROTECTION: wear protective gloves and clothing to prevent skin contact.

EYE PROTECTION: When mechanically working this product, safety glasses with side shields or coverall goggles are recommended for airborne dust exposures in excess of the applicable limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

FORM: Pale Green Solid

ODOR: odorless

SOLUBILITY IN WATER: <0.01%

MELTING/FREEZING POINT: Not available

Auto ignition Temperature: Not available

Flash Point & Method: Not applicable – non-flammable

VOC = None

COLOR: Pale Green Granuals

BOILING POINT: 1800 F

SPECIFIC GRAVITY: 1.6 g/cm³

Evaporation Rate: Not applicable

pH: Not applicable

VAPOR PRESSURE: @ 72 F 0 mm Hg

10. STABILITY AND REACTIVITY

STABILITY: The material is stable.

CONDITIONS TO AVOID: Contact with incompatibles, see below. Avoid moisture, hydroscopic.

POLYMERIZATION: Polymerization will not occur.

INCOMPATIBILITY: Strong acids, Strong oxidizing agents.

DECOMPOSITION PRODUCTS: None.

11. TOXICOLOGICAL INFORMATION

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.



Eye Contact: May cause eye irritation.

Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

TARGET ORGAN(S) OR SYSTEM(S): Lungs.

SIGNS AND SYMPTOMS OF EXPOSURE: Prolonged exposure can cause: Damage to the lungs.

TOXICITY DATA:

Oral	Rat	> 10,000 mg/kg	LD50	
Skin	Rabbit	> 2,000 mg/kg	LD50	4 H
Inhalation	Rat	> 5,300 mg/m3	LC50	1 H
Inhalation	Rat	2,400 - 18,300 mg/m3	LC50	

IRRITATION DATA

Skin	Rabbit	Remarks: Mild irritation effect
Skin	Human	Remarks: No irritation effect
Eyes	Rabbit	Remarks: Mild irritation effect
Eyes	Human	Remarks: No irritation effect

CHRONIC EXPOSURE - MUTAGEN

Species: Human	Dose: 50 MG/L	Cell Type: lymphocyte
Mutation test: Cytogenetic analysis	Species: Mouse	
Route: Intraperitoneal	Dose: 50 MG/KG	Mutation test: Cytogenetic analysis

12. ECOLOGICAL INFORMATION

No Data Available.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

CONTAMINATED MATERIALS: Wash contaminated clothing before reuse.

14. TRANSPORTATION INFORMATION

Domestic (Land, D.O.T.), International (Water, I.M.O.), International (Air, I.C.A.O.)	
PRODUCT LABEL: ZEOBEST®	UN NUMBER: Non-Regulated material
PACKAGE CLASS: 50	D.O.T. HAZARD CLASS: NA
D.O.T. PROPER SHIPPING NAME: Not regulated	PACKING GROUP: NA
PRODUCT RQ (LBS): None	

15. REGULATORY INFORMATION - FEDERAL REGULATORY STATUS

OSHA Classification: Product is hazardous according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200. As a respirable dust only.

This product is also regulated by the Mine Safety Health Administration (MSHA).

Carcinogenicity: by IARC?: Yes (X) No () by NTP?: Yes (X) No ()

IARC classifies crystalline silica in Group 2A, "probably carcinogenic to humans."

NTP classifies respirable crystalline silica in a category of substances which may "reasonably be anticipated to be carcinogens."

California Prop 65: Yes (X) No ()

Silica, crystalline (airborne particles of respirable size), is cited in 90 California Reg. Notice 984, Safe Drinking Water and Enforcement Act of 1986, as known to the state of California to cause cancer.

Not on the 302 list of SARA reportable quantities.

Poison Schedule: None allocated.

WHMIS: This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

This material or all of its components are listed on the Inventory of Existing Chemical Substances under the Toxic Substance Control Act (TSCA). This material or all of its components are listed on the Canadian Domestic Substances List (DSL). This material or all of its components are listed (or considered as having been notified) on the European Inventory of Existing Chemical Substances (EINECS). Other inventory lists: ENCS (Japan), Korea, Australia, China (Draft), PICCS (Philippines), Japan (ENCS).

16. OTHER INFORMATION

Prepared By.....: Donato Polignone
Approved By.....: Donato Polignone
Approval Date.....: January 18, 2005

Part Number.....:
Title.....: MSDS Coordinator
Supersedes Date...: January 10, 2005

ADDITIONAL INFORMATION:

The data in this Material Safety Data Sheet relates only to the specific material designated herein. It does not relate to use in combination with any other material or in any process. This Material Safety Data Sheet (MSDS) has been reviewed to fully comply with the guidance contained in the ANSI MSDS standard (ANSI Z400.1-1998)

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Northern Gravel Company. The data on this sheet are related only to the specific material designated herein. Northern Gravel Company assumes no legal responsibility for use or reliance upon these data.

END OF MSDS