

# Material Safety Data Sheet

Geopol A

## 1. Product and company identification

<b>Product name</b>	Geopol A
<b>MSDS Number</b>	300000010829
<b>Product Type</b>	Silicate
<b>Product use</b>	Foundry Core and Mold/Mould Applications
<b>Manufacturer, Importer, Supplier</b>	HA International, LLC 630 Oakmont Lane Westmont, IL 60559
<b>Print date</b>	01-FEB-2010
<b>Telephone</b>	<b>For Emergency Medical Assistance</b> Call Health & Safety Information Services, 1-866-303-6949  <b>For Emergency Transportation Information</b> CHEMTREC US Domestic (800) 424-9300 CHEMTREC International (703) 527-3887 CANUTEC CA Domestic (613) 996-6666

For additional health and safety or regulatory information, call (630)575-5722, or (630)575-5705.

## 2. Hazards identification

<b>Form</b>	Liquid
<b>Odor</b>	Odorless/Odourless
<b>OSHA/HCS status</b>	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
<b>Emergency overview</b>	WARNING ! HARMFUL IF SWALLOWED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.

### Potential acute health effects

<b>Inhalation</b>	Severely irritating to the respiratory system.
<b>Ingestion</b>	Harmful if swallowed.
<b>Skin</b>	Severely irritating to the skin.
<b>Eyes</b>	Severely irritating to eyes. Risk of serious damage to eyes.

### Potential chronic health effects

<b>Chronic effects</b>	Contains material that may cause target organ damage, based on animal data.
<b>Carcinogenicity</b>	No known significant effects or critical hazards.
<b>Mutagenicity</b>	No known significant effects or critical hazards.

<b>Teratogenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.
<b>Target organs</b>	Review Section 2 and 11 for any additional assessments.

**Over-exposure signs/symptoms**

<b>Inhalation</b>	Adverse symptoms may include the following: respiratory tract irritation, coughing,
<b>Ingestion</b>	No specific data.
<b>Skin</b>	Adverse symptoms may include the following: irritation, redness,
<b>Eyes</b>	Adverse symptoms may include the following: pain or irritation, watering, redness,
<b>Medical conditions aggravated by over-exposure</b>	Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See section 11 for more detailed information on health effects and symptoms.

### **3. Composition/Information on ingredients**

<b><u>Ingredient name</u></b>	<b><u>CAS number</u></b>	<b><u>%</u></b>
Sodium Silicate	1344-09-8	30.0 - 50.0
Aluminum Oxide	1344-28-1	5.0 - 10.0

*\*\* Any applicable Canadian trade secret numbers will be listed in Section 15.*

### **4. First aid measures**

<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention. Chemical burns must be treated promptly by a physician.
<b>Skin contact</b>	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Inhalation</b>	Move exposed person to fresh air. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention.
<b>Ingestion</b>	Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

<b>Protection of first aid personnel</b>	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
<b>Notes to physician</b>	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

See section 11 for more detailed information on health effects and symptoms.

## 5. Fire-fighting measures

<b>Flammability of the product</b>	In a fire or if heated, a pressure increase will occur and the container may burst.
<b>Extinguishing media</b>	
<b>Suitable</b>	Use an extinguishing agent suitable for the surrounding fire.
<b>Not suitable</b>	None known.
<b>Special exposure hazards</b>	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
<b>Hazardous combustion products</b>	Decomposition products may include the following materials: metal oxide/oxides,
<b>Special protective equipment for fire-fighters</b>	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6. Accidental release measures

<b>Personal precautions</b>	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
<b>Environmental precautions</b>	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
<b>Large spill</b>	Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.
<b>Small spill</b>	Stop leak if without risk. Move containers from spill area. Use chemically inert sorbent materials and place in an appropriate waste disposal container. Contaminated absorbent material may pose the

same hazard as the spilled product. Dispose of via a licensed waste disposal contractor.

## 7. Handling and storage

### Handling

Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container.

### Storage

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Separate from acids. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## 8. Exposure controls/personal protection

### Ingredient name

Sodium Silicate

### Occupational exposure limits

#### **ACGIH TLV 8-hr TWA**

10 mg/m<sup>3</sup>

(Inhalable particulates , Particles (Insoluble or Poorly Soluble) Not Otherwise Specified)

#### **OSHA PEL 8-hr TWA**

5 mg/m<sup>3</sup>

(respirable particulate)

#### **OSHA PEL 8-hr TWA**

15 mg/m<sup>3</sup>

(total dust)

Aluminum Oxide

#### **ACGIH TLV 8-hr TWA**

1 mg/m<sup>3</sup>

(respirable fraction)

#### **OSHA PEL 8-hr TWA**

15 mg/m<sup>3</sup>

(total dust)

#### **OSHA PEL 8-hr TWA**

5 mg/m<sup>3</sup>

(respirable fraction)

**Consult local authorities for acceptable exposure limits.**

### **Recommended monitoring procedures**

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to

determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

**Engineering measures**

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Respiratory**

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Hands**

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

**Eyes**

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

**Skin**

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Environmental exposure controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**9. Physical and chemical properties**

<b>Form</b>	Liquid
<b>Flash point</b>	Non-flammable.
<b>Auto-ignition temperature</b>	Not applicable
<b>Flammable limits</b>	
<b>Lower:</b>	Not applicable
<b>Upper:</b>	Not applicable
<b>Color</b>	Brown.
<b>Odor</b>	Odorless/Odourless
<b>pH</b>	Approx. 13
<b>Boiling point</b>	100 °C(212 °F)
<b>Relative density</b>	1.5
<b>Vapor pressure</b>	Not available
<b>Viscosity</b>	Dynamic- 300 cPs Brookfield
<b>Solubility</b>	Complete
<b>Partition coefficient: n-octanol/water</b>	Not available

Evaporation rate Not available  
Vapor density Not available

## 10. Stability and reactivity

**Stability** The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.

**Conditions to avoid** Do not freeze.

**Materials to avoid** Gels when mixed with acids. Reactive or incompatible with the following materials: acids, phenol, organic materials, acid anhydrides, alcohols. May produce hydrogen gas on prolonged contact with metals. Attacks chemically active metals. May react with ammonium salts resulting in evolution of ammonia gas.

**Hazardous decomposition products** Decomposition products may include the following materials: hydrogen,

## 11. Toxicological information

### Acute toxicity

#### Ingredient name

Sodium Silicate

LD50 Oral Rat 1,960 mg/kg

### Other Toxicological Information

#### Carcinogenicity

##### Classification

##### Ingredient name

Sodium Silicate

ACGIH Not classified  
IARC Not classified  
NTP Not listed  
OSHA Not regulated

Aluminum Oxide

ACGIH Not classifiable as to its carcinogenicity to humans.  
IARC Not classified  
NTP Not listed  
OSHA Not regulated

## 12. Ecological information

### **Environmental effects**

The high pH of this product is acutely harmful to aquatic life. This product is not persistent in aquatic systems. This product does not contribute to BOD. Only water vapor will evaporate from this product.

### Other adverse effects

No known significant effects or critical hazards.

## 13. Disposal considerations

### **Waste disposal**

If discarded this product is classified as D002 Corrosive waste under US federal hazardous waste regulations. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Containers that are not completely empty must also be managed as hazardous waste. Normal means of emptying containers (pouring,

pumping, draining) may be sufficient to render them as non-hazardous under US Federal hazardous waste rules. However, container residues may still pose a general safety hazard. Use appropriate precautions when handling empty containers to prevent injury, such as use of protective equipment and avoiding contact with residues. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. The generation of waste should be avoided or minimized wherever possible.

## 14. Transportation

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

### International transport regulations

Regulatory information	UN number	Proper shipping name	Classes/*PG	Reportable Quantity (RQ)
CFR		Non-regulated		
TDG		Non-regulated		
IMO/IMDG		Non-regulated		
IATA (Cargo)		Non-regulated		

\*PG : Packing group

## 15. Regulatory information

### US regulations

#### **HCS Classification**

Irritating material, Target organ effects

#### **U.S. Federal regulations**

**SARA 311/312 Classification** Immediate (acute) health hazard, Delayed (chronic) health hazard

#### **SARA 313 - Supplier Notification**

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.

Aluminum Oxide - 1344-28-1 ( 6.00%),

**SARA 302 Extremely Hazardous Substances** None required.

#### **State regulations**

**Massachusetts RTK Substances** The following components are listed: Aluminum Oxide,

**New Jersey RTK Hazardous Substances** The following components are listed: Aluminum Oxide,

**Pennsylvania RTK Hazardous Substances** The following components are listed: Aluminum Oxide,

**California Prop. 65:** None required.

### Canada

#### **WHMIS (Canada)**

Class D-2B: Material causing other toxic effects (Toxic).  
Class E: Corrosive material

#### **Canadian lists**

**Canadian NPRI:** The following components are listed: Aluminum Oxide,

**International regulations**  
**Chemical inventories**

Europe inventory All components are listed or exempted.  
Japan inventory (ENCS) All components are listed or exempted.  
China inventory (IECSC) All components are listed or exempted.  
Australia inventory (AICS) All components are listed or exempted.  
Japan inventory (ISHL) Not determined.  
New Zealand Inventory of Chemicals (NZIoC) Not determined.  
Philippines inventory (PICCS) All components are listed or exempted.  
Korea inventory (KECI) All components are listed or exempted.  
United States inventory (TSCA 8b) All components are listed or exempted.  
Canada inventory All components are listed or exempted.

## 16. Other information

<b>Hazardous Material Information System III (U.S.A.)</b>	Health : 2 Flammability: 0 Physical hazards : 0 Chronic : *
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Caution: HMIS<sup>®</sup> ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS<sup>®</sup> ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS<sup>®</sup> ratings are to be used with a fully implemented HMIS<sup>®</sup> program. HMIS<sup>®</sup> is a registered mark of the National Paint & Coatings Association (NPCA). HMIS<sup>®</sup> materials may be purchased exclusively from J. J. Keller (800) 327-6868. The customer is responsible for determining the PPE code for this material.

<b>Prepared by</b>	Product Safety & Compliance Group, (630)575-5722, or (630)575-5705
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