



# SIL-BIND 4

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 05/07/2015 Version: 1.0

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture  
Product name : SIL-BIND 4  
Product code : 93430  
Other means of identification : Sodium silicate solution

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : No-bake Binder

#### 1.3. Details of the supplier of the safety data sheet

United Erie, Division of Interstate Chemical Company, Inc.

1432 Chestnut Street

Erie, 16502 - United States

T 1-800-377-7561 - F 1-814-454-8996

[herm-eh&s@interstatechemical.com](mailto:herm-eh&s@interstatechemical.com) - [www.unitederie.com](http://www.unitederie.com)

#### 1.4. Emergency telephone number

Emergency number : For 24-Hour Emergency Information Call Chemtrec: +1 (800) 424-9300

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS-US)

Not classified

#### 2.2. Label elements

##### GHS-US labeling

No labeling applicable

#### 2.3. Other hazards

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Sodium Silicate, Aqueous Solution	(CAS No) 1344-09-8	85 - 100	Not classified
ethylene glycol	(CAS No) 107-21-1	< 2	Acute Tox. 4 (Oral), H302

Full text of H-phrases: see section 16

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).  
First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.  
First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.  
First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.  
First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

#### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

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### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.  
Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

No additional information available

### 5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.  
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.  
Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Incompatible materials. Keep container closed when not in use.  
Incompatible products : Strong bases. Strong acids.  
Incompatible materials : Sources of ignition. Direct sunlight.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

SIL-BIND 4		
ACGIH	Not applicable	
OSHA	Not applicable	
Sodium Silicate, Aqueous Solution (1344-09-8)		
ACGIH	Not applicable	
OSHA	Not applicable	
ethylene glycol (107-21-1)		
ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	100 mg/m <sup>3</sup>

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ethylene glycol (107-21-1)		
ACGIH	Remark (ACGIH)	URT & eye irr
OSHA	Not applicable	

### 8.2. Exposure controls

Personal protective equipment	:	Avoid all unnecessary exposure.
Hand protection	:	Wear protective gloves.
Eye protection	:	Chemical goggles or safety glasses.
Respiratory protection	:	Wear appropriate mask.
Other information	:	Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Color	:	Colourless, May turn pink
Odor	:	characteristic
Odor threshold	:	No data available
pH	:	> 10
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	212 °F
Flash point	:	(Not Applicable)
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	No data available
Explosion limits	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Vapor pressure	:	No data available
Relative density	:	1.5
Relative vapor density at 20 °C	:	No data available
Solubility	:	Water: 100 %
Log Pow	:	No data available
Log Kow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Not established.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

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### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

#### Sodium Silicate, Aqueous Solution (1344-09-8)

LD50 oral rat	> 2000 mg/kg (Rat)
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#### ethylene glycol (107-21-1)

LD50 oral rat	> 5000 mg/kg (Rat; Literature study)
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ATE US (oral)	500.000 mg/kg body weight
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Skin corrosion/irritation : Not classified  
pH: > 10

Serious eye damage/irritation : Not classified  
pH: > 10

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### 12.1. Toxicity

#### Sodium Silicate, Aqueous Solution (1344-09-8)

LC50 fish 1	2320 mg/l (96 h; Gambusia affinis; Pure substance)
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EC50 Daphnia 1	216 mg/l (96 h; Daphnia magna; Pure substance)
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LC50 fish 2	3185 mg/l (96 h; Brachydanio rerio; Pure substance)
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EC50 Daphnia 2	247 mg/l (100 h; Daphnia magna; Pure substance)
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TLM fish 1	2320 ppm (96 h; Gambusia affinis; Pure substance)
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#### ethylene glycol (107-21-1)

LC50 fish 1	53000 mg/l (96 h; Pimephales promelas; Static system)
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EC50 Daphnia 1	> 10000 mg/l (24 h; Daphnia magna)
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LC50 fish 2	40761 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Static system)
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Threshold limit algae 1	> 10000 mg/l (168 h; Scenedesmus quadricauda)
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Threshold limit algae 2	2000 mg/l (192 h; Microcystis aeruginosa)
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### 12.2. Persistence and degradability

#### SIL-BIND 4

Persistence and degradability	Not established.
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#### Sodium Silicate, Aqueous Solution (1344-09-8)

Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the components available.
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Biochemical oxygen demand (BOD)	Not applicable
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Chemical oxygen demand (COD)	Not applicable
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<b>Sodium Silicate, Aqueous Solution (1344-09-8)</b>	
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
<b>ethylene glycol (107-21-1)</b>	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil.
Biochemical oxygen demand (BOD)	0.47 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	1.24 g O <sub>2</sub> /g substance
ThOD	1.29 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.36 % ThOD

### 12.3. Bioaccumulative potential

<b>SIL-BIND 4</b>	
Bioaccumulative potential	Not established.
<b>Sodium Silicate, Aqueous Solution (1344-09-8)</b>	
Bioaccumulative potential	Not bioaccumulative.
<b>ethylene glycol (107-21-1)</b>	
BCF fish 1	10 (72 h; Leuciscus idus)
BCF other aquatic organisms 1	0.21 - 0.6 (Procambarus sp.; Chronic)
BCF other aquatic organisms 2	190 (24 h; Algae)
Log Pow	-1.34 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

### 12.4. Mobility in soil

<b>ethylene glycol (107-21-1)</b>	
Surface tension	0.048 N/m (20 °C)

### 12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Not regulated for transport

### Additional information

Other information : No supplementary information available.

### ADR

No additional information available

### Transport by sea

No additional information available

### Air transport

No additional information available

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

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### ethylene glycol (107-21-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory  
Listed on United States SARA Section 313

RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
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### 15.2. International regulations

#### CANADA

No additional information available

#### EU-Regulations

No additional information available

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

No additional information available

#### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

#### National regulations

No additional information available

### 15.3. US State regulations

### ethylene glycol (107-21-1)

U.S. - Massachusetts - Right To Know List

## SECTION 16: Other information

Other information : None.

Full text of H-phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
H302	Harmful if swallowed

SDS US (GHS HazCom 2012)

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