



# TRI-CHEM

## Aqua Block

### 2. Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (GHS):

Hazard class	Hazard category	Route of exposure
Short-term (acute) aquatic hazard	Category 2	
Long-term (chronic) aquatic hazard	Category 3	

#### 2.2 Label elements

##### Labelling (GHS):

Signal Word: Exempt

H-Code	Hazard Statements
H401	Toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

  

P-Code	Precautionary Statements
P273	Avoid release to the environment.
P501	Dispose of contents/container to waste disposal.

#### 2.3 Other hazards

The product hydrolyses under formation of ethanol (CAS-Nr. 64-17-5). Ethanol is classified concerning both physical and health hazards. The hydrolysis rate and consequently the relevance for the hazard profile of the product is strongly dependent on the specific conditions.

### 3. Composition/information on ingredients

#### 3.1 Chemical characterization (preparation)

Chemical characteristics
Alkoxy silanes+siloxane+water



### 3.2 Information on ingredients:

Type	CAS No.	Substance	Content [wt. %]		Note
			Lower	Upper	
INHA	919-30-2	$\beta$ -Aminopropyltriethoxysilane		<0.5	

**Type:** HYD - by-product upon hydrolysis, INHA - ingredient, NEBE - by-product, MONO - residual monomer, VERU - impurity, VUL - by-product upon vulcanization. \*\*\* **Note:** C1 - IARC carcinogen, C2 - NTP carcinogen, C3 - OSHA carcinogen, NH - non-hazardous, R - reproductive toxin.

Substances listed in the Subsections "HAPS" and "California Proposition 65 Carcinogens / Reproductive Toxins" that are not listed in this section are only present at quantities below 0.1% for California Proposition 65 listed toxins or below 1% for non-carcinogenic HAPS or they are inextricably bound in the product. Specific chemical identities and/or exact percentage (concentration) of the composition may have been withheld as a trade secret.

This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57) in amounts above  $\geq 0.1\%$ .

## 4. First-aid measures

### 4.1 General information:

Get medical attention if irritation occurs or if breathing becomes difficult.

### 4.2 After inhalation

If inhaled, remove to fresh air.

### 4.3 After contact with the skin

For skin contact, immediately wipe away excess material. Wash with soap and water.

### 4.4 After contact with the eyes

If contact with eyes, immediately hold eyelids apart and flush with plenty of water for at least 15 min.

### 4.5 After swallowing

If swallowed, rinse mouth with water. Induce drinking plenty of water in small portions.

### 4.6 Advice for the physician

Treat symptomatically.

## 5. Fire-fighting measures

### 5.1 Flammable properties:

Property:	Value:	Method:
Flash point.....	> 100 °C (> 212 °F)	(ISO 3679)
Sustained combustibility.....	not applicable	
Boiling point / boiling range .....	100 °C (212 °F)	
Lower explosion limit (LEL).....	no data available	
Upper explosion limit (UEL).....	no data available	
Ignition temperature .....	395 °C (743 °F)	
NFPA Hazard Class (comb./flam.liquid).....	IIIB	

### 5.2 Fire and explosion hazards:

This material does not present any unusual fire or explosion hazards.

### 5.3 Recommended extinguishing media:

Use extinguishing measures appropriate to the source of fire. water-mist, carbon dioxide, dry chemical or foam-type extinguishing media.

### 5.4 Unsuitable extinguishing media:

sharp water jet.



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## 5.5 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases

Hazardous combustion products: silicon dioxide , formaldehyde , carbon dioxide , carbon monoxide and incompletely burnt hydrocarbons .

## 5.6 Fire fighting procedures:

Fire fighters should wear full protective clothing including a self-contained breathing apparatus. Cool endangered containers with water.

## 6. Accidental release measures

### 6.1 Precautions:

Secure the area. Wear personal protection equipment (see section 8). Keep unprotected persons away. If material is released indicate risk of slipping. Do not walk through spilled material.

**HAZWOPER PPE Level:** D

### 6.2 Containment:

Prevent material from entering surface waters, drains or sewers and soil. Close leak if possible without risk. Contain any fluid that runs out using suitable material (e.g. earth). Retain contaminated water/extinguishing water. Dispose of in prescribed marked containers. Inform authorities if substance leaks into surface waters, sewerage or ground.

Spills of material which could reach surface waters must be reported to the United States Coast Guard National Response Center's toll free phone number (800) 424-8802.

### 6.3 Methods for cleaning up

Take up mechanically and dispose of according to local/state/federal regulations. Do not flush away with water. For small amounts: Absorb with a neutral (non-acidic / non-basic) liquid binding material such as diatomaceous earth and dispose of according to government regulations. For large amounts: Liquids may be recovered using suction devices or pumps. If flammable, only air driven or properly rated electrical equipment should be used. Clean any slippery coating that remains using a detergent / soap solution or another biodegradable cleaner. Silicone fluids are slippery; spills are a safety hazard. Apply sand or other inert granular material to improve traction.

### 6.4 Further information:

Exhaust vapours. Eliminate all sources of ignition. Consider explosion protection. Observe notes under section 7.

## 7. Handling and storage

### 7.1 General information:

Always stir well before use.

### 7.2 Handling

#### Precautions for safe handling:

Ensure adequate ventilation. Must be syphoned off in situ. Avoid formation of aerosols. In case of aerosol formation special protective measures are required (exhausting by suction, respiratory protection). Spilled substance increases risk of slipping. Keep away from incompatible substances in accordance with section 10. Observe information in section 8.

#### Precautions against fire and explosion:

Product may release ethanol. Flammable vapors may accumulate and form explosive mixtures with air in containers, process vessels, including partial, empty and uncleaned containers and vessels, or other enclosed spaces. Keep away from sources of ignition and do not smoke. Take precautionary measures against electrostatic charging. Cool endangered containers with water.

### 7.3 Storage

#### Conditions for storage rooms and vessels:

Observe local/state/federal regulations.

#### Advice for storage of incompatible materials:

Observe local/state/federal regulations.

#### Further information for storage:

Store in a dry and cool place. Protect against sun. Protect against frost. Store container in a well ventilated place.

**Minimum temperature allowed during storage and transportation:** 0 °C (32 °F)

Do not allow this material to freeze.



Maximum temperature allowed during storage and transportation: 40 °C (104 °F)

## 8. Exposure controls and personal protection

### 8.1 Engineering controls

#### Ventilation:

Use with adequate ventilation.

#### Local exhaust:

If spraying or other aerosol generating operations are performed, local exhaust ventilation designed to capture mists and sprays, such as a paint spray booth, is recommended.

### 8.2 Associate substances with specific control parameters such as limit values

#### Maximum airborne concentrations at the workplace:

CAS No.	Substance	Type	mg/m <sup>3</sup>	ppm	Dust fract.
64-17-5	Ethanol	OSHA PEL	1,900.0	1,000.0	

Re Ethanol (CAS no. 64-17-5): STEL is 1000 ppm; carcinogenicity: A3 (ACGIH).

none known

### 8.3 Personal protection equipment (PPE)

#### Respiratory protection:

Respiratory protection is not normally required.

#### Hand protection:

Any liquid-tight rubber or vinyl gloves.

#### Eye protection:

Safety glasses with side shields.

#### Other protective clothing or equipment:

Additional protective clothing or equipment is not normally required. Provide eye bath and safety shower.

### 8.4 General hygiene and protection measures:

Follow standard industrial hygiene practices when using this material.

## 9. Physical and chemical properties

### 9.1 Appearance

Physical state .....: liquid  
Form .....: Emulsion  
Colour .....: white  
Odour .....: faint

### 9.2 Safety parameters

Property:	Value:	Method:
Melting point / melting range .....	-1 °C (30 °F)	
Boiling point / boiling range .....	100 °C (212 °F)	
Flash point.....	> 100 °C (> 212 °F)	(ISO 3679)
Sustained combustibility.....	not applicable	
Ignition temperature .....	395 °C (743 °F)	
Lower explosion limit (LEL) .....	no data available	
Upper explosion limit (UEL).....	no data available	
Vapour pressure.....	23 hPa / 20 °C (68 °F)	
Density .....	0.95 g/cm <sup>3</sup>	
Water solubility / miscibility.....	completely miscible	
pH-Value .....	approx. 5 - 8 at 25 °C (100 %)	(Indicator strips)
Viscosity (dynamic).....	ca. 12 mPa.s at 25 °C (77 °F)	

### 9.3 Further information

Explosion Limits: Explosion limits for released ethanol: 3.5 - 15%(V).



Odour limit..... : no data available

## 10. Stability and reactivity

### 10.1 General information:

If stored and handled in accordance with standard industrial practices no hazardous reactions are known.

### 10.2 Conditions to avoid

Heat, open flames, and other sources of ignition.

### 10.3 Materials to avoid

Reacts with: basic substances and acids . Reaction causes the formation of: ethanol .

### 10.4 Hazardous decomposition products

By hydrolysis: ethanol . The following applies for the silicone content of the substance: Measurements have shown the formation of small amounts of formaldehyde at temperatures above about 150 °C (302 °F) through oxidation.

### 10.5 Further information:

Hazardous polymerization cannot occur.

## 11. Toxicological information

### 11.1 Information on toxicological effects

#### 11.1.1 Acute toxicity

##### Assessment:

For similar products no indications for a specific hazard due to aerosol inhalation were identified in animal tests. However, inhalation of respirable aerosol should be avoided.

##### Product details:

Route of exposure	Result/Effect	Species/Test system	Source
Oral	LD50: > 2000 mg/kg The assessment is made under consideration of relevant data on ingredients.	Rat	Conclusion by analogy

#### 11.1.2 Skin corrosion/irritation

##### Assessment:

For this endpoint no toxicological test data is available for the whole product.

#### 11.1.3 Serious eye damage / eye irritation

##### Assessment:

For this endpoint no toxicological test data is available for the whole product.

#### 11.1.4 Respiratory or skin sensitization

##### Assessment:

For this endpoint no toxicological test data is available for the whole product.

#### 11.1.5 Germ cell mutagenicity

##### Assessment:

For this endpoint no toxicological test data is available for the whole product.

#### 11.1.6 Carcinogenicity

##### Assessment:

For this endpoint no toxicological test data is available for the whole product.



#### 11.1.7 Reproductive toxicity

**Assessment:**

For this endpoint no toxicological test data is available for the whole product.

#### 11.1.8 Specific target organ toxicity (single exposure)

**Assessment:**

For this endpoint no toxicological test data is available for the whole product.

#### 11.1.9 Specific target organ toxicity (repeated exposure)

**Assessment:**

For this endpoint no toxicological test data is available for the whole product.

#### 11.1.10 Aspiration hazard

**Assessment:**

For this endpoint no toxicological test data is available for the whole product.

#### 11.1.11 Further toxicological information

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Other information: Hydrolysis product / impurity: Ethanol (64-17-5) is readily absorbed at all exposure routes. Ethanol may cause irritation of eyes and mucosa, trigger dysfunction of the central nervous system and cause nausea as well as dizziness. Chronic exposure to high amounts of ethanol may cause damage to liver and central nervous system.

## 12. Ecological information

### 12.1 Toxicity

**Assessment:**

According to current knowledge adverse effects on water purification plants are not expected.

### 12.2 Persistence and degradability

**Assessment:**

Contact with water liberates ethanol and silanol- and/or siloxanol-compounds. Silicone content: biologically not degradable. Elimination by adsorption to activated sludge. The hydrolysis product (Ethanol) is readily biologically degradable.

**Data on substances:**

**Product of hydrolysis (Ethanol):**

Ethanol is readily biodegradable.

### 12.3 Bioaccumulative potential

**Assessment:**

Bioaccumulation is not expected to occur.

### 12.4 Mobility in soil

**Assessment:**

Silicone content: Absorbed by floating particles. Separation by sedimentation.

### 12.5 Results of PBT and vPvB assessment

No data available.

### 12.6 Other adverse effects

none known



**13. Disposal considerations**

**13.1 Product disposal**

Recommendation:  
Material that cannot be used, reprocessed or recycled should be disposed of in accordance with Federal, State, and local regulations at an approved facility. Depending on the regulations, waste treatment methods may include, e.g., landfill or incineration.

**13.2 Packaging disposal**

Recommendation:  
Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local/state/federal regulations. Uncleaned packaging should be treated with the same precautions as the material.

**14. Transport information**

**14.1 US DOT & CANADA TDG SURFACE**

Valuation .....: Not regulated for transport  
Other Information .....: Protect from freezing, when exposed to cold temperatures approaching 0 °C (32 °F) or below.

**14.2 Transport by sea IMDG-Code**

Valuation .....: Not regulated for transport

**14.3 Air transport ICAO-TI/IATA-DGR**

Valuation .....: Not regulated for transport

**15. Regulatory information**

**15.1 U.S. Federal regulations**

**TSCA inventory status and TSCA information:**

This material or its components are listed on or are in compliance with the requirements of the TSCA Chemical Substance Inventory.

**TSCA 12(b) Export Notification:**

This material does not contain reportable amounts of any TSCA 12(b) listed chemicals.

**CERCLA Regulated Chemicals:**

This material does not contain any CERCLA regulated chemicals.

**SARA 302 EHS Chemicals:**

This material does not contain any SARA extremely hazardous substances.

**SARA 311/312 Hazard Class:**

This product does not present any SARA 311/312 hazards.

**SARA 313 Chemicals:**

This material does not contain any SARA 313 chemicals above de minimus levels.

**HAPS (Hazardous Air Pollutants):**

CAS No.	Chemical	Upper limit wt. %
67-56-1	Methanol	<=0.0029

**15.2 U.S. State regulations**

**California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):**

This material does not contain any chemicals known to the State of California to cause cancer.

**California Proposition 65 Reproductive Toxins:**

67-56-1                      Methanol

**Massachusetts Substance List:**

This material contains no listed components.



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## **New Jersey Right-to-Know Hazardous Substance List:**

This material contains no listed components.

## **Pennsylvania Right-to-Know Hazardous Substance List:**

This material contains no listed components.

### **15.3 Details of international registration status**

Relevant information about individual substance inventories, where available, is given below.

Japan .....	<b>ENCS</b> (Handbook of Existing and New Chemical Substances): This product is listed in, or complies with, the substance inventory.
New Zealand .....	<b>NZIoC</b> (New Zealand Inventory of Chemicals): This product is listed in, or complies with, the substance inventory. (For a correct interpretation of the New Zealand status, additional information like GHS classification or Group Standard is required.)
Australia .....	<b>AICS</b> (Australian Inventory of Chemical Substances): This product is listed in, or complies with, the substance inventory.
China .....	<b>IECSC</b> (Inventory of Existing Chemical Substances in China): This product is listed in, or complies with, the substance inventory.
Canada .....	<b>DSL</b> (Domestic Substance List): This product is listed in, or complies with, the substance inventory.
Philippines .....	<b>PICCS</b> (Philippine Inventory of Chemicals and Chemical Substances): This product is listed in, or complies with, the substance inventory.
United States of America (USA) .....	<b>TSCA</b> (Toxic Substance Control Act Chemical Substance Inventory): All components of this product are listed as active or are in compliance with the substance inventory.
Taiwan .....	<b>TCSI</b> (Taiwan Chemical Substance Inventory): This product is listed in, or complies with, the substance inventory. General note: The Taiwanese chemicals regulation requires a phase 1 registration for TCSI-listed or TCSI-compliant substances if imports to Taiwan or manufacturing in Taiwan exceed the trigger quantity of 100 kg/a (for mixtures to be calculated per each ingredient). It is the duty of the importing/manufacturing legal entity to take care of this obligation.
European Economic Area (EEA) .....	<b>REACH</b> (Regulation (EC) No 1907/2006): General note: the registration obligations for substances imported into the EEA or manufactured within the EEA by the supplier mentioned in section 1 are fulfilled by the said supplier. The registration obligations for substances imported into the EEA by customers or other downstream users must be fulfilled by the latter.
South Korea (Republic of Korea) .....	<b>AREC</b> (Act on Registration and Evaluation of Chemicals; "K-REACH"): General note: in case of registration obligations for substances or polymers imported into Korea or manufactured within Korea these are fulfilled by the supplier mentioned in section 1. The registration obligations for substances or polymers imported into Korea by customers or other downstream users must be fulfilled by the latter.

## **16. Other information**

### **16.1 Additional information:**

This Safety Data Sheet (SDS) meets the requirements of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200). This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief accurate and reliable as of the date compiled. However, no representation, warranty or guarantee expressed or implied, is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information. Nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending a license under valid patents. This SDS provides selected regulatory information on this product, including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws relating to the product being used.

Vertical lines in the left-hand margin indicate changes compared with the previous version.





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## 16.2 Glossary of Terms:

ACGIH - American Conference of Governmental Industrial Hygienists	ppm - Parts per Million
DOT - Department of Transportation	SARA - Superfund Amendments and Reauthorization Act
hPa - Hectopascals	STEL - Short Term Exposure Limit
mPa*s - Milli Pascal-Seconds	TSCA - Toxic Substances Control Act
OSHA - Occupational Safety and Health Administration	TWA - Time Weighted Average
PEL - Permissible Exposure Limit	WHMIS - Canadian Workplace Hazardous Materials Identification System
<b>Flash point determination methods</b> .....	<b>Common name</b>
ASTM D56.....	Tagliabue (Tag) closed cup
ASTM D92, DIN 51376, ISO 2592 .....	Cleveland open cup
ASTM D93, DIN 51758, ISO 2719 .....	Pensky-Martens closed cup
ASTM D3278, DIN 55680, ISO 3679 .....	Setaflash or Rapid closed cup
DIN 51755.....	Abel-Pensky closed cup

## 16.3 Conversion table:

Pressure:.....	1 hPa * 0.75 = 1 mm Hg = 1 torr; 1 bar = 1000 hPa
Viscosity:.....	1 mPa*s = 1 centipoise (cP)