



Be Right™

# SAFETY DATA SHEET

Issue Date 31-01-2020

Revision Date 26-Jan-2024

Version 2.9

Page 1 / 17

## 1. IDENTIFICATION

### Product identifier

**Product Name** StablCal® Standard, 0.50 NTU

### Other means of identification

**Product Code(s)** 2698042

**Safety data sheet number** M01404

### Recommended use of the chemical and restrictions on use

**Recommended Use** Laboratory Use. Standard solution.

**Uses advised against** Consumer use.

**Restrictions on use** For Laboratory Use Only.

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

#### **Manufacturer Address**

Hach Company, P.O.Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

#### **Emergency telephone number**

+1(303) 623-5716 - 24 Hour Service

## 2. HAZARDS IDENTIFICATION

### Classification

#### **Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Respiratory sensitization	Category 1
Skin sensitization	Category 1

#### **Hazards not otherwise classified (HNOC)**

Not applicable

#### **Label elements**

#### **Signal word**

Danger



#### **Hazard statements**

EN / AGHS

Page 1 / 17

H317 - May cause an allergic skin reaction

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

#### Precautionary statements

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P285 - In case of inadequate ventilation wear respiratory protection

P304 + P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing

P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

P501 - Dispose of contents/ container to an approved waste disposal plant

P272 - Contaminated work clothing should not be allowed out of the workplace

P280 - Wear protective gloves, protective clothing, eye protection, and face protection

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

P363 - Wash contaminated clothing before reuse

#### Other Hazards Known

None

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Substance

Not applicable

#### Mixture

##### Chemical Family

Mixture.

##### Chemical nature

Organic solvents and additives.

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No	Percent Range	HMRIC #
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane	100-97-0	<10%	-
Sodium sulfate	7757-82-6	<1%	-
Formaldehyde	50-00-0	<0.1%	-
Diammonium sulfate	7783-20-2	<0.01%	-

### 4. FIRST AID MEASURES

#### Description of first aid measures

##### General advice

Show this safety data sheet to the doctor in attendance.

##### Inhalation

May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Get immediate medical advice/attention.

##### Eye contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

##### Skin contact

Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.

##### Ingestion

May produce an allergic reaction. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

##### Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or

clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing. Itching. Rashes. Hives.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** May cause sensitization in susceptible persons. Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** Caution: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical** May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer. May cause sensitization by skin contact.

**Hazardous combustion products** This material will not burn.

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**6. ACCIDENTAL RELEASE MEASURES**

**U.S. Notice** Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Other Information** Refer to protective measures listed in Sections 7 and 8.

**Environmental precautions**

**Environmental precautions** Prevent further leakage or spillage if safe to do so.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Provide extract ventilation to points where emissions occur. Remove contaminated clothing and shoes. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

**Flammability class** Not applicable

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane CAS#: 100-97-0	dermal sensitizer TWA: 1 mg/m <sup>3</sup> inhalable fraction and vapor	NDF	NDF
Formaldehyde CAS#: 50-00-0	dermal sensitizer;respiratory sensitizer STEL: 0.3 ppm TWA: 0.1 ppm	TWA: 0.75 ppm (vacated) TWA: 3 ppm (vacated) STEL: 10 ppm (vacated) Ceiling: 5 ppm STEL: 2 ppm	IDLH: 20 ppm Ceiling: 0.1 ppm 15 min TWA: 0.016 ppm

### Appropriate engineering controls

**Engineering Controls** Showers  
 Eyewash stations  
 Ventilation systems.

### Individual protection measures, such as personal protective equipment

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**Hand Protection** Wear suitable gloves.

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin and body protection** Wear suitable protective clothing. Wash contaminated clothing before reuse.

**General Hygiene Considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

**Environmental exposure controls** Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.

**Thermal hazards** None under normal processing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Product Code(s) 2698042  
Issue Date 31-01-2020  
Version 2.9

Product Name StablCal® Standard, 0.50 NTU  
Revision Date 26-Jan-2024  
Page 5 / 17

**Information on basic physical and chemical properties**

Physical state Liquid  
Appearance aqueous solution  
Odor Odorless  
Color colorless  
Odor threshold Not applicable

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Molecular weight	Not applicable	
pH	No data available	
Melting point / freezing point	-5 °C / 23 °F	
Initial boiling point and boiling range	101 °C / 213.8 °F	
Evaporation rate	0.98 (water = 1)	
Vapor pressure	24.002 mm Hg / 3.2 kPa at 25 °C / 77 °F	
Relative vapor density	0.7	
Specific gravity - VALUE 1	1.01	
Partition coefficient	No data available	
Soil Organic Carbon-Water Partition Coefficient	No data available	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Dynamic viscosity	No data available	
Kinematic viscosity	No data available	

**Solubility(ies)**

**Water solubility**

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Soluble	> 1000 mg/L	25 °C / 77 °F

**Solubility in other solvents**

<u>Chemical Name</u>	<u>Solubility classification</u>	<u>Solubility</u>	<u>Solubility Temperature</u>
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F

**Other information**

**Metal Corrosivity**

Steel Corrosion Rate No data available  
Aluminum Corrosion Rate No data available

**Volatile Organic Compounds (VOC) Content**

See ingredients information below

<u>Chemical name</u>	<u>CAS No</u>	<u>Volatile organic compounds (VOC) content</u>	<u>CAA (Clean Air Act)</u>
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]de	100-97-0	Not applicable	X

Chemical name	CAS No	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
cane			
Sodium sulfate	7757-82-6	No data available	-
Formaldehyde	50-00-0	No data available	X
Diammonium sulfate	7783-20-2	No data available	-

#### Explosive properties

Upper explosion limit Not applicable  
Lower explosion limit Not applicable

#### Flammable properties

Flash point No data available

#### Flammability Limit in Air

Upper flammability limit: No data available  
Lower flammability limit: No data available

#### Oxidizing properties

No data available.

#### Bulk density

Not applicable

## 10. STABILITY AND REACTIVITY

#### Reactivity

Not applicable.

#### Chemical stability

Stable under normal conditions.

#### Explosion data

Sensitivity to Mechanical Impact None.  
Sensitivity to Static Discharge None.

#### Possibility of hazardous reactions

None under normal processing.

#### Hazardous polymerization

Hazardous polymerization does not occur.

#### Conditions to avoid

None known based on information supplied.

#### Incompatible materials

Strong oxidizing agents, strong acids, and strong bases.

#### Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Ammonia. Formaldehyde. Nitrogen oxides.

## 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

#### Product Information

**Inhalation** May cause sensitization in susceptible persons.

**Eye contact** No known effect based on information supplied.

**Skin contact** May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

**Ingestion** May cause additional affects as listed under "Inhalation".

**Symptoms** Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/ or wheezing. Itching. Rashes. Hives.

**Acute toxicity**  
 Based on available data, the classification criteria are not met

**Mixture**  
 No data available.

**Ingredient Acute Toxicity Data**  
 Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Rat LD <sub>50</sub>	100 mg/kg	None reported	None reported	GESTIS
Diammonium sulfate (<0.01%) CAS#: 7783-20-2	Rat LD <sub>50</sub>	2840 mg/kg	None reported	None reported	GESTIS

**Dermal Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Rabbit LD <sub>50</sub>	270 mg/kg	None reported	None reported	GESTIS

**Inhalation (Dust/Mist) Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Rat LC <sub>50</sub>	0.578 mg/L	4 hours	None reported	LOLI

**Unknown Acute Toxicity**  
 0% of the mixture consists of ingredient(s) of unknown toxicity.

**Acute Toxicity Estimations (ATE)**

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	No information available
ATEmix (dermal)	No information available
ATEmix (inhalation-dust/mist)	No information available

<b>ATEmix (inhalation-vapor)</b>	No information available
<b>ATEmix (inhalation-gas)</b>	No information available

**Skin corrosion/irritation**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Skin Corrosion/Irritation Data**

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	OECD Test 404: Acute Dermal Corrosion/Irritation	Rabbit	500 mg	4 hours	Not corrosive or irritating to skin	ECHA
Sodium sulfate (<1%) CAS#: 7757-82-6	Standard Draize Test	Rabbit	500 mg	4 hours	Not corrosive or irritating to skin	ECHA
Formaldehyde (<0.1%) CAS#: 50-00-0	Standard Draize Test	Human	0.150 mg	72 hours	Corrosive to skin	RTECS
Diammonium sulfate (<0.01%) CAS#: 7783-20-2	Standard Draize Test	Rabbit	800 mg	20 hours	Not corrosive or irritating to skin	ECHA

**Serious eye damage/irritation**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Eye Damage/Eye Irritation Data**

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	OECD Test 405: Acute Eye Corrosion/Irritation	Rabbit	100 mg	24 hours	Not corrosive or irritating to eyes	ECHA
Sodium sulfate (<1%) CAS#: 7757-82-6	Standard Draize Test	Rabbit	90 mg	24 hours	Not corrosive or irritating to eyes	ECHA
Formaldehyde (<0.1%) CAS#: 50-00-0	Rinse Test	Human	1 ppm	6 minutes	Corrosive to eyes	RTECS
Diammonium sulfate (<0.01%) CAS#: 7783-20-2	Standard Draize Test	Rabbit	0.050 mL	None reported	Not corrosive or irritating to eyes	ECHA

**Respiratory or skin sensitization**

May cause sensitization by inhalation. May cause sensitization by skin contact.

**Mixture**

No data available.



**Ingredient Sensitization Data**

Test data reported below.

**Skin Sensitization Exposure Route**

Chemical name	Test method	Species	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	OECD Test No. 406: Skin Sensitization	Guinea pig	Confirmed to be a skin sensitizer	ECHA
Sodium sulfate (<1%) CAS#: 7757-82-6	OECD Test No. 406: Skin Sensitization	Guinea pig	Not confirmed to be a skin sensitizer	HSDB
Formaldehyde (<0.1%) CAS#: 50-00-0	Patch test	Human	Confirmed to be a skin sensitizer	ERMA

**Respiratory Sensitization Exposure Route**

Chemical name	Test method	Species	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	Based on human experience	Human	Confirmed to be a respiratory sensitizer	HSDB
Formaldehyde (<0.1%) CAS#: 50-00-0	IgE Specific Immune Response Test	Guinea pig	Confirmed to be a respiratory sensitizer	CICAD

**STOT - single exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Single Exposure Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Human LD <sub>Lo</sub>	70 mg/kg	None reported	<b>Gastrointestinal Kidney, Ureter, or Bladder Liver</b> Other changes Ulcerated stomach Other changes	RTECS
Diammonium sulfate (<0.01%) CAS#: 7783-20-2	Man TD <sub>Lo</sub>	1500 mg/kg	None reported	<b>Gastrointestinal Gas</b>	RTECS

**STOT - repeated exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Repeat Exposure Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	Rat NOAEL	80 mg/kg	None reported	None reported	Vendor SDS

**Inhalation (Dust/Mist) Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	Rat TC <sub>Lo</sub>	350 mg/m <sup>3</sup>	21 days	<b>Kidney, Ureter, or Bladder</b> Urine volume decreased or anuria <b>Nutritional and Gross Metabolic</b> Weight loss or decreased weight gain <b>Biochemical</b> Enzyme inhibition, induction, or change in blood or tissue levels (true cholinesterase)	RTECS

**Inhalation (Vapor) Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Human TC <sub>Lo</sub>	0.017 mg/L	0.5 days	<b>Eye</b> <b>Lungs, Thorax, or Respiration</b> Lacrimation Other changes	RTECS

**Carcinogenicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Carcinogenicity Data**

Test data reported below.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane	100-97-0	-	-	-	-
Sodium sulfate	7757-82-6	-	-	-	-
Formaldehyde	50-00-0	A1	Group 1	Known	X
Diammonium sulfate	7783-20-2	-	-	-	-

**Legend**

<b>ACGIH (American Conference of Governmental Industrial Hygienists)</b>	A2 - Suspected Human Carcinogen
<b>IARC (International Agency for Research on Cancer)</b>	Group 1 - Carcinogenic to Humans
<b>NTP (National Toxicology Program)</b>	Known - Known Carcinogen
<b>OSHA</b>	X - Present

**Inhalation (Vapor) Exposure Route**

**Product Code(s)** 2698042  
**Issue Date** 31-01-2020  
**Version** 2.9

**Product Name** StablCal® Standard, 0.50 NTU  
**Revision Date** 26-Jan-2024  
**Page** 11 / 17

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Rat	15 mg/L	78 weeks	Olfaction Tumors	RTECS

#### **Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

#### **Mixture invitro Data**

No data available.

#### **Substance invitro Data**

Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	Cytogenetic analysis	Human HeLa Cell	1 mmol/L	None reported	Positive test result for mutagenicity	RTECS

#### **Mixture invivo Data**

No data available.

#### **Substance invivo Data**

Test data reported below.

#### **Oral Exposure Route**

Chemical name	Test	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	Dominant lethal test	Mouse	25000 mg/kg	None reported	Positive test result for mutagenicity	RTECS

#### **Inhalation (Vapor) Exposure Route**

Chemical name	Test	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Micronucleus test	Human	.000985 mg/L	8.5 years	Positive test result for mutagenicity	RTECS

#### **Reproductive toxicity**

Based on available data, the classification criteria are not met.

#### **Mixture**

No data available.

#### **Ingredient Reproductive Toxicity Data**

Test data reported below.

#### **Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
---------------	---------------	---------------	---------------	-----------------------	--

Sodium sulfate (<1%) CAS#: 7757-82-6	Mouse TD <sub>Lo</sub>	14000 mg/kg	4 days	<b>Effects on Newborn</b> Other neonatal measures or effects	RTECS
--	---------------------------	-------------	--------	---	-------

**Inhalation (Vapor) Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Rat TC <sub>Lo</sub>	40 mg/L	14 days	<b>Effects on Embryo or Fetus</b> Fetotoxicity (except death e.g. stunted fetus)	RTECS

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Based on available data, the classification criteria are not met.

**Unknown aquatic toxicity**

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

**Mixture**

**Aquatic Acute Toxicity**

No data available.

**Aquatic Chronic Toxicity**

No data available.

**Substance**

**Aquatic Acute Toxicity**

Test data reported below.

**Fish**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium sulfate (<1%) CAS#: 7757-82-6	96 hours	None reported	LC <sub>50</sub>	56 mg/L	IUCLID
Formaldehyde (<0.1%) CAS#: 50-00-0	96 hours	<i>Morone saxatilis</i>	LC <sub>50</sub>	6.7 mg/L	PEEN
Diammonium sulfate (<0.01%) CAS#: 7783-20-2	96 hours	<i>Oncorhynchus mykiss</i>	LC <sub>50</sub>	36.7 mg/L	GESTIS

**Crustacea**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium sulfate (<1%) CAS#: 7757-82-6	48 Hours	<i>Daphnia magna</i>	EC <sub>50</sub>	3150 mg/L	IUCLID
Formaldehyde (<0.1%) CAS#: 50-00-0	48 Hours	<i>Daphnia pulex</i>	EC <sub>50</sub>	5.8 mg/L	PEEN
Diammonium sulfate (<0.01%)	48 Hours	None reported	LC <sub>50</sub>	14 mg/L	GESTIS

Product Code(s) 2698042  
Issue Date 31-01-2020  
Version 2.9

Product Name StablCal® Standard, 0.50 NTU  
Revision Date 26-Jan-2024  
Page 13 / 17

CAS#: 7783-20-2					
-----------------	--	--	--	--	--

**Aquatic Chronic Toxicity**  
No data available.

**Persistence and degradability**

**Mixture**  
No data available.

**Mixture**  
No data available.

**Partition coefficient** No data available

**Mobility**

**Soil Organic Carbon-Water Partition Coefficient** No data available

**Other adverse effects**  
No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

**US EPA Waste Number** U122

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Formaldehyde 50-00-0	U122	Included in waste streams: K009, K010, K038, K040, K156, K157	-	U122

**Special instructions for disposal** Dilute material with excess water making a weaker than 5% solution. If permitted by regulation. Open cold water tap completely, slowly pour the material to the drain. Flush system with plenty of water. Check with local municipal and state authorities and waste contractors for pertinent local information regarding the proper disposal of chemicals.

**14. TRANSPORT INFORMATION**

**DOT** Not regulated

**TDG** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**Note:** No special precautions necessary.

**Additional information**

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies. If the item is part of a reagent set or kit the classification would change to the following:

**Product Code(s)** 2698042  
**Issue Date** 31-01-2020  
**Version** 2.9

**Product Name** StablCal® Standard, 0.50 NTU  
**Revision Date** 26-Jan-2024  
**Page** 14 / 17

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.  
If the item is not regulated, the Chemical Kit classification does not apply.

## 15. REGULATORY INFORMATION

### National Inventories

**TSCA** Complies  
**DSL/NDSL** Complies

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

### International Inventories

**EINECS/ELINCS** Complies  
**ENCS** Does not comply  
**IECSC** Complies  
**KECL** Complies  
**PICCS** Does not comply  
**TCSI** Complies  
**AICS** Complies  
**NZIoC** Complies

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**TCSI** - Taiwan Chemical Substances Inventory  
**AICS** - Australian Inventory of Chemical Substances  
**NZIoC** - New Zealand Inventory of Chemicals

### US Federal Regulations

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	SARA 313 - Threshold Values %
Formaldehyde (CAS #: 50-00-0)	0.1
Diammonium sulfate (CAS #: 7783-20-2)	1.0

#### **SARA 311/312 Hazard Categories**

**Acute health hazard** Yes  
**Chronic Health Hazard** No  
**Fire hazard** No  
**Sudden release of pressure hazard** No  
**Reactive Hazard** No

#### **CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Formaldehyde 50-00-0	100 lb	-	-	X

#### **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Product Code(s) 2698042  
 Issue Date 31-01-2020  
 Version 2.9

Product Name StablCal® Standard, 0.50 NTU  
 Revision Date 26-Jan-2024  
 Page 15 / 17

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Formaldehyde 50-00-0	100 lb	100 lb	RQ 100 lb final RQ RQ 45.4 kg final RQ

**U.S. - Department of Homeland Security - Chemical Facility Anti-Terrorism Standards (CFATS) - Security Issues**

Chemical name	U.S. - Department of Homeland Security - Chemical Facility Anti-Terrorism Standards (CFATS) - Security Issues
Formaldehyde (<0.1%) CAS#: 50-00-0	Release - Toxic (solution)

**US State Regulations**

**California Proposition 65**

This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
Formaldehyde (CAS #: 50-00-0)	Carcinogen



**WARNING:** This product can expose you to chemicals including Formaldehyde, which is known to the State of California to cause cancer.

For more information, go to <http://www.P65Warnings.ca.gov>

**IMERC:** Not applicable

**U.S. State Right-to-Know Regulations**

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane 100-97-0	X	-	-
Sodium sulfate 7757-82-6	-	X	X
Formaldehyde 50-00-0	X	X	X
Diammonium sulfate 7783-20-2	-	X	X

**U.S. EPA Label Information**

Chemical name	FIFRA	FDA
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane	180.0910	-
Sodium sulfate	-	21 CFR 186.1797
Diammonium sulfate	180.0910	21 CFR 184.1143

**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

**Special Comments**

None

**Additional information**

**Global Automotive Declarable Substance List (GADSL)**

Chemical name	Global Automotive Declarable Substance List Classifications	Global Automotive Declarable Substance List Thersholds
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane 100-97-0	Declarable Substance (FI)	0.1 %
Formaldehyde 50-00-0	Prohibited Substance (FI) Prohibited Substance (LR) Declarable Substance (LR) Declarable Substance (FI)	0.1 %

**NFPA and HMIS Classifications**

NFPA	Health hazards - 2	Flammability - 0	Instability - 0	Physical and chemical properties -
HMIS	Health hazards - 2 - *	Flammability - 0	Physical hazards - 0	Personal protection - X - I

**Key or legend to abbreviations and acronyms used in the safety data sheet**

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)
CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	EPA (Environmental Protection Agency)
ERMA	ERMA (New Zealand's Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)

**Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only



**Product Code(s)** 2698042  
**Issue Date** 31-01-2020  
**Version** 2.9

**Product Name** StablCal® Standard, 0.50 NTU  
**Revision Date** 26-Jan-2024  
**Page** 17 / 17

binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.

SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

**Prepared By** Hach Product Compliance Department

**Issue Date** 31-01-2020

**Revision Date** 26-Jan-2024

**Revision Note** None

**Disclaimer**

**USER RESPONSIBILITY:** Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

**THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.**

HACH COMPANY©2023

**End of Safety Data Sheet**



Be Right™

# SAFETY DATA SHEET

Issue Date 25-Jan-2021

Revision Date 26-Jan-2024

Version 8.2

Page 1 / 17

## 1. IDENTIFICATION

### Product identifier

**Product Name** StablCal® Standard, 1.0 NTU

### Other means of identification

**Product Code(s)** 2659842

**Safety data sheet number** M01360

### Recommended use of the chemical and restrictions on use

**Recommended Use** Laboratory Use. Standard solution.

**Uses advised against** Consumer use.

**Restrictions on use** For Laboratory Use Only.

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

#### **Manufacturer Address**

Hach Company, P.O.Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

#### **Emergency telephone number**

+1(303) 623-5716 - 24 Hour Service

## 2. HAZARDS IDENTIFICATION

### Classification

#### **Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Respiratory sensitization	Category 1
Skin sensitization	Category 1

#### **Hazards not otherwise classified (HNOC)**

Not applicable

### Label elements

#### **Signal word**

Danger



### **Hazard statements**

EN / AGHS

Page 1 / 17

H317 - May cause an allergic skin reaction

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

#### Precautionary statements

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P285 - In case of inadequate ventilation wear respiratory protection

P304 + P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing

P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

P501 - Dispose of contents/ container to an approved waste disposal plant

P272 - Contaminated work clothing should not be allowed out of the workplace

P280 - Wear protective gloves, protective clothing, eye protection, and face protection

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

P363 - Wash contaminated clothing before reuse

#### Other Hazards Known

None

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Substance

Not applicable

#### Mixture

#### Chemical Family

Mixture.

#### Chemical nature

Aqueous solution of organic salts and polymers.

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No	Percent Range	HMRIC #
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane	100-97-0	<10%	-
Sodium sulfate	7757-82-6	<1%	-
Formaldehyde	50-00-0	<0.1%	-
Diammonium sulfate	7783-20-2	<0.01%	-

### 4. FIRST AID MEASURES

#### Description of first aid measures

#### General advice

Show this safety data sheet to the doctor in attendance.

#### Inhalation

May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Get immediate medical advice/attention.

#### Eye contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

#### Skin contact

Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.

#### Ingestion

May produce an allergic reaction. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

#### Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or

clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing. Itching. Rashes. Hives.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** May cause sensitization in susceptible persons. Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** Caution: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical** Product is or contains a sensitizer. May cause sensitization by inhalation and skin contact. May cause sensitization by skin contact.

**Hazardous combustion products** This material will not burn. Ammonia. Carbon monoxide. Formaldehyde. Nitrogen oxides (NOx).

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**6. ACCIDENTAL RELEASE MEASURES**

**U.S. Notice** Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Other Information** Refer to protective measures listed in Sections 7 and 8.

**Environmental precautions**

**Environmental precautions** Prevent further leakage or spillage if safe to do so.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Provide extract ventilation to points where emissions occur. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Take off contaminated clothing and wash before reuse.

### Conditions for safe storage, including any incompatibilities

#### Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

#### Flammability class

Not applicable

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane CAS#: 100-97-0	dermal sensitizer TWA: 1 mg/m <sup>3</sup> inhalable fraction and vapor	NDF	NDF
Formaldehyde CAS#: 50-00-0	dermal sensitizer;respiratory sensitizer STEL: 0.3 ppm TWA: 0.1 ppm	TWA: 0.75 ppm (vacated) TWA: 3 ppm (vacated) STEL: 10 ppm (vacated) Ceiling: 5 ppm STEL: 2 ppm	IDLH: 20 ppm Ceiling: 0.1 ppm 15 min TWA: 0.016 ppm

### Appropriate engineering controls

#### Engineering Controls

Showers  
Eyewash stations  
Ventilation systems.

### Individual protection measures, such as personal protective equipment

#### Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. Wear breathing apparatus if exposed to vapors/dusts/aerosols.

#### Hand Protection

Wear suitable gloves. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374-1:2016.

#### Eye/face protection

Wear safety glasses with side shields (or goggles).

#### Skin and body protection

Wear suitable protective clothing.

#### General Hygiene Considerations

Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

#### Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained. Do not allow

into any sewer, on the ground or into any body of water.

**Thermal hazards** None under normal processing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid	<b>Color</b>	Milky white
<b>Appearance</b>	Turbid solution	<b>Odor threshold</b>	Not applicable
<b>Odor</b>	Odorless		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>Molecular weight</b>	Not applicable	
<b>pH</b>	8.14	@ 20 °C
<b>Melting point / freezing point</b>	0 °C / 32 °F	
<b>Initial boiling point and boiling range</b>	100 °C / 212 °F	
<b>Evaporation rate</b>	1 (water = 1)	
<b>Vapor pressure</b>	17.477 mm Hg / 2.33 kPa at 20 °C / 68 °F	
<b>Relative vapor density</b>	0.62	
<b>Specific gravity - VALUE 1</b>	1.02	
<b>Partition coefficient</b>	No data available	
<b>Soil Organic Carbon-Water Partition Coefficient</b>	No data available	
<b>Autoignition temperature</b>	No data available	
<b>Decomposition temperature</b>	No data available	
<b>Dynamic viscosity</b>	No data available	
<b>Kinematic viscosity</b>	No data available	

### Solubility(ies)

#### **Water solubility**

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

#### **Solubility in other solvents**

Chemical Name	Solubility classification	Solubility	Solubility Temperature
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F

### Other information

#### **Metal Corrosivity**

<b>Steel Corrosion Rate</b>	No data available
<b>Aluminum Corrosion Rate</b>	No data available

#### **Volatile Organic Compounds (VOC) Content**

No information available See ingredients information below

Chemical name	CAS No	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane	100-97-0	Not applicable	X
Sodium sulfate	7757-82-6	No data available	-
Formaldehyde	50-00-0	No data available	X
Diammonium sulfate	7783-20-2	No data available	-

#### Explosive properties

Upper explosion limit Not applicable  
Lower explosion limit Not applicable

#### Flammable properties

Flash point No data available

#### Flammability Limit in Air

Upper flammability limit: No data available  
Lower flammability limit: No data available

#### Oxidizing properties

No data available.

#### Bulk density

Not applicable

## 10. STABILITY AND REACTIVITY

#### Reactivity

Not applicable.

#### Chemical stability

Stable under normal conditions.

#### Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

#### Possibility of hazardous reactions

None under normal processing.

#### Hazardous polymerization

Hazardous polymerization does not occur.

#### Conditions to avoid

None known based on information supplied.

#### Incompatible materials

Strong oxidizing agents, strong acids, and strong bases.

#### Hazardous decomposition products

Ammonia. Carbon monoxide. Formaldehyde. Nitrogen oxides. Sodium oxides. Sulfur oxides.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

<b>Inhalation</b>	May cause sensitization in susceptible persons.
<b>Eye contact</b>	No known effect based on information supplied.
<b>Skin contact</b>	Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May cause sensitization by skin contact.
<b>Ingestion</b>	May cause additional affects as listed under "Inhalation".

#### Symptoms

Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/ or wheezing. Itching. Rashes. Hives.

#### Acute toxicity

Based on available data, the classification criteria are not met

#### Mixture

No data available.

#### Ingredient Acute Toxicity Data

Test data reported below.

#### Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Rat LD <sub>50</sub>	100 mg/kg	None reported	None reported	GESTIS
Diammonium sulfate (<0.01%) CAS#: 7783-20-2	Rat LD <sub>50</sub>	2840 mg/kg	None reported	None reported	GESTIS

#### Dermal Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Rabbit LD <sub>50</sub>	270 mg/kg	None reported	None reported	GESTIS

#### Inhalation (Dust/Mist) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Rat LC <sub>50</sub>	0.578 mg/L	4 hours	None reported	LOLI

#### Unknown Acute Toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity.

#### Acute Toxicity Estimations (ATE)

The following values are calculated based on chapter 3.1 of the GHS document



ATEmix (oral)	No information available
ATEmix (dermal)	No information available
ATEmix (inhalation-dust/mist)	No information available
ATEmix (inhalation-vapor)	No information available
ATEmix (inhalation-gas)	No information available

**Skin corrosion/irritation**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Skin Corrosion/Irritation Data**

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	OECD Test 404: Acute Dermal Corrosion/Irritation	Rabbit	500 mg	4 hours	Not corrosive or irritating to skin	ECHA
Sodium sulfate (<1%) CAS#: 7757-82-6	Standard Draize Test	Rabbit	500 mg	4 hours	Not corrosive or irritating to skin	ECHA
Formaldehyde (<0.1%) CAS#: 50-00-0	Standard Draize Test	Human	0.150 mg	72 hours	Corrosive to skin	RTECS
Diammonium sulfate (<0.01%) CAS#: 7783-20-2	Standard Draize Test	Rabbit	800 mg	20 hours	Not corrosive or irritating to skin	ECHA

**Serious eye damage/irritation**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Eye Damage/Eye Irritation Data**

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	OECD Test 405: Acute Eye Corrosion/Irritation	Rabbit	100 mg	24 hours	Not corrosive or irritating to eyes	ECHA
Sodium sulfate (<1%) CAS#: 7757-82-6	Standard Draize Test	Rabbit	90 mg	24 hours	Not corrosive or irritating to eyes	ECHA
Formaldehyde (<0.1%) CAS#: 50-00-0	Rinse Test	Human	1 ppm	6 minutes	Corrosive to eyes	RTECS
Diammonium sulfate (<0.01%) CAS#: 7783-20-2	Standard Draize Test	Rabbit	0.050 mL	None reported	Not corrosive or irritating to eyes	ECHA

**Respiratory or skin sensitization**

May cause sensitization by inhalation. May cause sensitization by skin contact.

**Mixture**

No data available.

**Ingredient Sensitization Data**

Test data reported below.

**Skin Sensitization Exposure Route**

Chemical name	Test method	Species	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	OECD Test No. 406: Skin Sensitization	Guinea pig	Confirmed to be a skin sensitizer	ECHA
Sodium sulfate (<1%) CAS#: 7757-82-6	OECD Test No. 406: Skin Sensitization	Guinea pig	Not confirmed to be a skin sensitizer	HSDB
Formaldehyde (<0.1%) CAS#: 50-00-0	Patch test	Human	Confirmed to be a skin sensitizer	ERMA

**Respiratory Sensitization Exposure Route**

Chemical name	Test method	Species	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	Based on human experience	Human	Confirmed to be a respiratory sensitizer	HSDB
Formaldehyde (<0.1%) CAS#: 50-00-0	IgE Specific Immune Response Test	Guinea pig	Confirmed to be a respiratory sensitizer	CICAD

**STOT - single exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Single Exposure Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Human LD <sub>Lo</sub>	70 mg/kg	None reported	<b>Gastrointestinal</b> <b>Kidney, Ureter, or Bladder</b> <b>Liver</b> Other changes Ulcerated stomach Other changes	RTECS
Diammonium sulfate (<0.01%) CAS#: 7783-20-2	Man TD <sub>Lo</sub>	1500 mg/kg	None reported	<b>Gastrointestinal</b> Gas	RTECS

**STOT - repeated exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Repeat Exposure Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	Rat NOAEL	80 mg/kg	None reported	None reported	Vendor SDS

**Inhalation (Dust/Mist) Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	Rat TC <sub>Lo</sub>	350 mg/m <sup>3</sup>	21 days	<b>Kidney, Ureter, or Bladder</b> Urine volume decreased or anuria <b>Nutritional and Gross Metabolic</b> Weight loss or decreased weight gain <b>Biochemical</b> Enzyme inhibition, induction, or change in blood or tissue levels (true cholinesterase)	RTECS

**Inhalation (Vapor) Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Human TC <sub>Lo</sub>	0.017 mg/L	0.5 days	<b>Eye</b> <b>Lungs, Thorax, or Respiration</b> Lacrimation Other changes	RTECS

**Carcinogenicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Carcinogenicity Data**

Test data reported below.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane	100-97-0	-	-	-	-
Sodium sulfate	7757-82-6	-	-	-	-
Formaldehyde	50-00-0	A1	Group 1	Known	X
Diammonium sulfate	7783-20-2	-	-	-	-

**Legend**

<b>ACGIH (American Conference of Governmental Industrial Hygienists)</b>	A2 - Suspected Human Carcinogen
<b>IARC (International Agency for Research on Cancer)</b>	Group 1 - Carcinogenic to Humans
<b>NTP (National Toxicology Program)</b>	Known - Known Carcinogen
<b>OSHA</b>	X - Present

**Inhalation (Vapor) Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Rat	15 mg/L	78 weeks	Olfaction Tumors	RTECS

**Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

**Mixture invitro Data**

No data available.

**Substance invitro Data**

Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	Cytogenetic analysis	Human HeLa Cell	1 mmol/L	None reported	Positive test result for mutagenicity	RTECS

**Mixture invivo Data**

No data available.

**Substance invivo Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Test	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	Dominant lethal test	Mouse	25000 mg/kg	None reported	Positive test result for mutagenicity	RTECS

**Inhalation (Vapor) Exposure Route**

Chemical name	Test	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Micronucleus test	Human	.000985 mg/L	8.5 years	Positive test result for mutagenicity	RTECS

**Reproductive toxicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Reproductive Toxicity Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium sulfate (<1%) CAS#: 7757-82-6	Mouse TD <sub>Lo</sub>	14000 mg/kg	4 days	Effects on Newborn Other neonatal measures or effects	RTECS

#### Inhalation (Vapor) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Rat TC <sub>Lo</sub>	40 mg/L	14 days	Effects on Embryo or Fetus Fetotoxicity (except death e.g. stunted fetus)	RTECS

#### Aspiration hazard

Based on available data, the classification criteria are not met.

## 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

Based on available data, the classification criteria are not met.

#### Unknown aquatic toxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

#### Mixture

##### Aquatic Acute Toxicity

No data available.

##### Aquatic Chronic Toxicity

No data available.

#### Substance

##### Aquatic Acute Toxicity

Test data reported below.

#### Fish

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium sulfate (<1%) CAS#: 7757-82-6	96 hours	None reported	LC <sub>50</sub>	56 mg/L	IUCLID
Formaldehyde (<0.1%) CAS#: 50-00-0	96 hours	<i>Morone saxatilis</i>	LC <sub>50</sub>	6.7 mg/L	PEEN
Diammonium sulfate (<0.01%) CAS#: 7783-20-2	96 hours	<i>Oncorhynchus mykiss</i>	LC <sub>50</sub>	36.7 mg/L	GESTIS

#### Crustacea

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium sulfate (<1%) CAS#: 7757-82-6	48 Hours	<i>Daphnia magna</i>	EC <sub>50</sub>	3150 mg/L	IUCLID
Formaldehyde (<0.1%)	48 Hours	<i>Daphnia pulex</i>	EC <sub>50</sub>	5.8 mg/L	PEEN

**Product Code(s)** 2659842  
**Issue Date** 25-Jan-2021  
**Version** 8.2

**Product Name** StablCal® Standard, 1.0 NTU  
**Revision Date** 26-Jan-2024  
**Page** 13 / 17

CAS#: 50-00-0					
Diammonium sulfate (<0.01%) CAS#: 7783-20-2	48 Hours	None reported	LC <sub>50</sub>	14 mg/L	GESTIS

**Aquatic Chronic Toxicity**

No data available.

**Persistence and degradability**

**Mixture**

No data available.

**Mixture**

No data available.

**Partition coefficient**

No data available

**Mobility**

**Soil Organic Carbon-Water Partition Coefficient**

No data available

**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Waste from residues/unused products**

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging**

Do not reuse empty containers.

**US EPA Waste Number**

U122

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Formaldehyde 50-00-0	U122	Included in waste streams: K009, K010, K038, K040, K156, K157	-	U122

**14. TRANSPORT INFORMATION**

**DOT**

Not regulated

**TDG**

Not regulated

**IATA**

Not regulated

**IMDG**

Not regulated

**Note:**

No special precautions necessary.

**Additional information**

**15. REGULATORY INFORMATION**

**National Inventories**

TSCA Complies  
 DSL/NDSL Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

**International Inventories**

EINECS/ELINCS Complies  
 ENCS Does not comply  
 IECSC Complies  
 KECL Complies  
 PICCS Does not comply  
 TCSI Complies  
 AICS Complies  
 NZIoC Complies

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
 ENCS - Japan Existing and New Chemical Substances  
 IECSC - China Inventory of Existing Chemical Substances  
 KECL - Korean Existing and Evaluated Chemical Substances  
 PICCS - Philippines Inventory of Chemicals and Chemical Substances  
 TCSI - Taiwan Chemical Substances Inventory  
 AICS - Australian Inventory of Chemical Substances  
 NZIoC - New Zealand Inventory of Chemicals

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	SARA 313 - Threshold Values %
Formaldehyde (CAS #: 50-00-0)	0.1
Diammonium sulfate (CAS #: 7783-20-2)	1.0

**SARA 311/312 Hazard Categories**

Acute health hazard Yes  
 Chronic Health Hazard Yes  
 Fire hazard No  
 Sudden release of pressure hazard No  
 Reactive Hazard No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Formaldehyde 50-00-0	100 lb	-	-	X

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Formaldehyde 50-00-0	100 lb	100 lb	RQ 100 lb final RQ RQ 45.4 kg final RQ

**U.S. - Department of Homeland Security - Chemical Facility Anti-Terrorism Standards (CFATS) - Security Issues**

Chemical name	U.S. - Department of Homeland Security - Chemical Facility Anti-Terrorism Standards (CFATS) - Security Issues
Formaldehyde (<0.1%) CAS#: 50-00-0	Release - Toxic (solution)

### US State Regulations

#### California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
Formaldehyde (CAS #: 50-00-0)	Carcinogen



**WARNING:** This product can expose you to chemicals including Formaldehyde, which is known to the State of California to cause cancer.

For more information, go to <http://www.P65Warnings.ca.gov>

IMERC: Not applicable

#### U.S. State Right-to-Know Regulations

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane 100-97-0	X	-	-
Sodium sulfate 7757-82-6	-	X	X
Formaldehyde 50-00-0	X	X	X
Diammonium sulfate 7783-20-2	-	X	X

#### U.S. EPA Label Information

Chemical name	FIFRA	FDA
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane	180.0910	-
Sodium sulfate	-	21 CFR 186.1797
Diammonium sulfate	180.0910	21 CFR 184.1143

## 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

#### Special Comments

None

#### Additional information

#### Global Automotive Declarable Substance List (GADSL)

Chemical name	Global Automotive Declarable Substance List Classifications	Global Automotive Declarable Substance List Thersholds
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane	Declarable Substance (FI)	0.1 %



100-97-0		
Formaldehyde 50-00-0	Prohibited Substance (FI) Prohibited Substance (LR) Declarable Substance (LR) Declarable Substance (FI)	0.1 %

**NFPA and HMIS Classifications**

<b>NFPA</b>	<b>Health hazards - 2</b>	<b>Flammability - 0</b>	<b>Instability - 0</b>	<b>Physical and chemical properties -</b>
<b>HMIS</b>	<b>Health hazards - 2</b> - *	<b>Flammability - 0</b>	<b>Physical hazards - 0</b>	<b>Personal protection -</b> X - I

**Key or legend to abbreviations and acronyms used in the safety data sheet**

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)
CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	EPA (Environmental Protection Agency)
ERMA	ERMA (New Zealand's Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)

**Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these

**Product Code(s)** 2659842  
**Issue Date** 25-Jan-2021  
**Version** 8.2

**Product Name** StablCal® Standard, 1.0 NTU  
**Revision Date** 26-Jan-2024  
**Page** 17 / 17

"liberated" exposure limits in their state regulations.

SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

**Prepared By** Hach Product Compliance Department

**Issue Date** 25-Jan-2021

**Revision Date** 26-Jan-2024

**Revision Note** None

**Disclaimer**

**USER RESPONSIBILITY:** Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

**THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.**

HACH COMPANY©2023

**End of Safety Data Sheet**



**Be Right™**

# SAFETY DATA SHEET

Issue Date 21-02-2020

Revision Date 26-Jan-2024

Version 5.4

Page 1 / 11

## 1. IDENTIFICATION

**Product identifier**

**Product Name** Silicone Oil

**Other means of identification**

**Product Code(s)** 126936

**Safety data sheet number** M00833

**Recommended use of the chemical and restrictions on use**

**Recommended Use** Laboratory reagent. Lubricant.

**Uses advised against** Consumer use.

**Restrictions on use** For Laboratory Use Only.

**Details of the supplier of the safety data sheet**

**Manufacturer Address**

Hach Company, P.O.Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

**Emergency telephone number**

+1(303) 623-5716 - 24 Hour Service

## 2. HAZARDS IDENTIFICATION

**Classification**

**Regulatory Status**

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

**Hazards not otherwise classified (HNOC)**

Not applicable

**Label elements**

**Signal word**

None

**Hazard statements**

The product contains no substances which at their given concentration, are considered to be hazardous to health

**Other Hazards Known**

None

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance**

**Chemical Name** Poly(dimethylsiloxane)  
**Chemical Family** Silicones.  
**Formula** -  
**CAS No** 63148-62-9  
**Chemical nature** Organosilicon compounds.

#### 4. FIRST AID MEASURES

**Description of first aid measures**

**General advice** No hazards which require special first aid measures. Use first aid treatment according to the nature of the injury.

**Inhalation** Remove to fresh air.

**Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

**Skin contact** Wash skin with soap and water.

**Ingestion** Clean mouth with water and drink afterwards plenty of water.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** See Section 11 for additional Toxicological Information.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

#### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** Caution: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical** No information available.

**Hazardous combustion products** Silicon oxide. Carbon monoxide, Carbon dioxide.

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

#### 6. ACCIDENTAL RELEASE MEASURES

**U.S. Notice** Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation.

**Environmental precautions**

**Environmental precautions** See Section 12 for additional ecological information.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**Reference to other sections** See section 8 for more information. See section 13 for more information.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

**Flammability class** Class IIIB

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**Exposure Guidelines** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

**Appropriate engineering controls**

**Engineering Controls** Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**Hand Protection** Wear suitable gloves.

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin and body protection** No special protective equipment required.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.

Product Code(s) 126936  
Issue Date 21-02-2020  
Version 5.4

Product Name Silicone Oil  
Revision Date 26-Jan-2024  
Page 4 / 11

Thermal hazards None under normal processing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Physical state Liquid  
Appearance aqueous solution  
Odor None  
Color colorless  
Odor threshold Not applicable

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Molecular weight	No information available	
pH	No data available	
Melting point / freezing point	No data available	
Initial boiling point and boiling range	> 140 °C / 284 °F	
Evaporation rate	< 1 (ether = 1)	
Vapor pressure	< 5.026 mm Hg / < 0.67 kPa at 25 °C / 77 °F	
Relative vapor density	> 1	
Specific gravity - VALUE 1	0.98	
Partition coefficient	No data available	
Soil Organic Carbon-Water Partition Coefficient	No data available	
Autoignition temperature	No data available	
Decomposition temperature	No information available	
Dynamic viscosity	No data available	
Kinematic viscosity	No data available	

### Solubility(ies)

#### Water solubility

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
No information available	No data available	No information available

#### Solubility in other solvents

<u>Chemical Name</u>	<u>Solubility classification</u>	<u>Solubility</u>	<u>Solubility Temperature</u>
None reported	No information available	No data available	No information available

### Other information

#### Metal Corrosivity

Steel Corrosion Rate No data available  
Aluminum Corrosion Rate No data available

#### Volatile Organic Compounds (VOC) Content

This Product is by Weight 100% an Individual Pure Chemical Substance

**Product Code(s)** 126936  
**Issue Date** 21-02-2020  
**Version** 5.4

**Product Name** Silicone Oil  
**Revision Date** 26-Jan-2024  
**Page** 5 / 11

#### Explosive properties

**Upper explosion limit** No data available  
**Lower explosion limit** No data available

#### Flammable properties

**Flash point** > 204 °C / 399.2 °F  
**Method** OC (open cup)

#### Flammability Limit in Air

**Upper flammability limit:** No data available  
**Lower flammability limit:** No data available

#### Oxidizing properties

No data available.

#### Bulk density

No data available

## 10. STABILITY AND REACTIVITY

#### Reactivity

Not applicable.

#### Chemical stability

Stable under normal conditions.

#### Explosion data

**Sensitivity to Mechanical Impact** None.  
**Sensitivity to Static Discharge** None.

#### Possibility of hazardous reactions

None under normal processing.

#### Hazardous polymerization

Hazardous polymerization does not occur.

#### Conditions to avoid

None known based on information supplied.

#### Incompatible materials

Strong oxidizing agents, strong acids, and strong bases.

#### Hazardous decomposition products

Silicon oxide. Carbon monoxide. Carbon dioxide.

## 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

##### Product Information

**Inhalation** No known effect based on information supplied.  
**Eye contact** No known effect based on information supplied.  
**Skin contact** No known effect based on information supplied.  
**Ingestion** No known effect based on information supplied.

**Product Code(s)** 126936  
**Issue Date** 21-02-2020  
**Version** 5.4

**Product Name** Silicone Oil  
**Revision Date** 26-Jan-2024  
**Page** 6 / 11

**Symptoms** No information available.

**Acute toxicity**

Based on available data, the classification criteria are not met

**Mixture**

If available, see ingredient data below.

**Ingredient Acute Toxicity Data**

No data available.

**Unknown Acute Toxicity**

0% of the mixture consists of ingredient(s) of unknown toxicity.

**Acute Toxicity Estimations (ATE)**

Not applicable

<b>ATEmix (oral)</b>	No information available
<b>ATEmix (dermal)</b>	No information available
<b>ATEmix (inhalation-dust/mist)</b>	No information available
<b>ATEmix (inhalation-vapor)</b>	No information available
<b>ATEmix (inhalation-gas)</b>	No information available

**Skin corrosion/irritation**

Based on available data, the classification criteria are not met.

**Mixture**

If available, see ingredient data below.

**Ingredient Skin Corrosion/Irritation Data**

No data available.

**Serious eye damage/irritation**

Based on available data, the classification criteria are not met.

**Mixture**

If available, see ingredient data below.

**Ingredient Eye Damage/Eye Irritation Data**

No data available.

**Respiratory or skin sensitization**

Based on available data, the classification criteria are not met.

**Mixture**

If available, see ingredient data below.

**Ingredient Sensitization Data**

No data available.

**STOT - single exposure**

Based on available data, the classification criteria are not met.

**Mixture**

If available, see ingredient data below.

**Ingredient Specific Target Organ Toxicity Single Exposure Data**

No data available.

**STOT - repeated exposure**

Based on available data, the classification criteria are not met.



**Mixture**

If available, see ingredient data below.

**Ingredient Specific Target Organ Toxicity Repeat Exposure Data**

No data available.

**Carcinogenicity**

Based on available data, the classification criteria are not met.

**Mixture**

If available, see ingredient data below.

**Ingredient Carcinogenicity Data**

No data available.

**Legend**

<b>ACGIH (American Conference of Governmental Industrial Hygienists)</b>	Does not apply
<b>IARC (International Agency for Research on Cancer)</b>	Does not apply
<b>NTP (National Toxicology Program)</b>	Does not apply
<b>OSHA</b>	Does not apply

**Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

**Mixture invitro Data**

If available, see ingredient data below.

**Substance invitro Data**

No data available.

**Mixture invivo Data**

If available, see ingredient data below.

**Substance invivo Data**

No data available.

**Reproductive toxicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Reproductive Toxicity Data**

No data available.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Based on available data, the classification criteria are not met.

**Unknown aquatic toxicity**

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

**Mixture**

**Aquatic Acute Toxicity**

**Product Code(s)** 126936  
**Issue Date** 21-02-2020  
**Version** 5.4

**Product Name** Silicone Oil  
**Revision Date** 26-Jan-2024  
**Page** 8 / 11

If available, see ingredient data below.

**Aquatic Chronic Toxicity**

If available, see ingredient data below.

**Substance**

**Aquatic Acute Toxicity**

Test data reported below.

**Aquatic Chronic Toxicity**

No data available.

**Persistence and degradability**

**Mixture**

No data available.

**Mixture**

No data available.

**Partition coefficient**

No data available

**Mobility**

**Soil Organic Carbon-Water Partition Coefficient**

No data available

**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Waste from residues/unused products**

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging**

Do not reuse empty containers.

**US EPA Waste Number**

Not applicable

**14. TRANSPORT INFORMATION**

**DOT**

Not regulated

**TDG**

Not regulated

**IATA**

Not regulated

**IMDG**

Not regulated

**Additional information**

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods.

If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

## 15. REGULATORY INFORMATION

### National Inventories

TSCA Complies  
DSL/NDSL Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

### International Inventories

EINECS/ELINCS Complies  
ENCS Complies  
IECSC Complies  
KECL Complies  
PICCS Complies  
TCSI Complies  
AICS Complies  
NZIoC Complies

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
ENCS - Japan Existing and New Chemical Substances  
IECSC - China Inventory of Existing Chemical Substances  
KECL - Korean Existing and Evaluated Chemical Substances  
PICCS - Philippines Inventory of Chemicals and Chemical Substances  
TCSI - Taiwan Chemical Substances Inventory  
AICS - Australian Inventory of Chemical Substances  
NZIoC - New Zealand Inventory of Chemicals

### US Federal Regulations

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

#### SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

#### CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

#### CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

### US State Regulations

#### California Proposition 65

This product does not contain any Proposition 65 chemicals

IMERC: Not applicable

#### U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations.

**U.S. EPA Label Information**

**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

**Special Comments**

None

**Additional information**

**Global Automotive Declarable Substance List (GADSL)**

Not applicable

**NFPA and HMIS Classifications**

<b>NFPA</b>	<b>Health hazards - 0</b>	<b>Flammability - 1</b>	<b>Instability - 0</b>	<b>Physical and chemical properties -</b>
<b>HMIS</b>	<b>Health hazards - 0</b>	<b>Flammability - 1</b>	<b>Physical hazards - 0</b>	<b>Personal protection -</b> X - 1

**Key or legend to abbreviations and acronyms used in the safety data sheet**

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)
CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	EPA (Environmental Protection Agency)
ERMA	ERMA (New Zealand's Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)

**Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Product Code(s)** 126936  
**Issue Date** 21-02-2020  
**Version** 5.4

**Product Name** Silicone Oil  
**Revision Date** 26-Jan-2024  
**Page** 11 / 11

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

**Prepared By** Hach Product Compliance Department  
**Issue Date** 21-02-2020  
**Revision Date** 26-Jan-2024  
**Revision Note** None

**Disclaimer**

**USER RESPONSIBILITY:** Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

**THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.**

HACH COMPANY©2023

**End of Safety Data Sheet**



Be Right™

# SAFETY DATA SHEET

Issue Date 26-12-2019

Revision Date 17-Oct-2023

Version 5.5

Page 1 / 17

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

### Product identifier

Product Code(s) 2697942  
Product Name StablCal® Standard, 0.30 NTU

### Other means of identification

Safety data sheet number M03879

### Recommended use of the chemical and restrictions on use

Recommended Use Laboratory Use. Standard solution.  
Restrictions on use For Laboratory Use Only.  
Uses advised against Consumer use

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

#### **Supplier Address**

Hexis Cientifica Ltda CNPJ: 53.276.010 / 00001-10 Av. Antonieta Piva Barranqueiros, 385 - Industrial District - Jundiai - SP -  
Phone: 11 4589-2672

#### **Manufacturer Address**

Hach Company, P.O. Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

### Emergency telephone number

#### **Argentina**

Argentina: +(54)-1159839431

#### **Ecuador**

Ecuador: +593-01 800 000 906 (Access Code: 334846)

#### **Costa Rica**

Costa Rica - National Poison Center: +506-2223-1028

#### **Colombia**

Colombia: +57 601 7942539 / 01-800-7102151

#### **United States of America**

+1(303) 623-5716 - 24 Hour Service

## Section 2: HAZARDS IDENTIFICATION

### GHS Classification

Respiratory sensitization	Category 1
Skin sensitization	Category 1

### Label elements



Signal word - Danger

**Hazard statements**

H317 - May cause an allergic skin reaction  
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

**Precautionary statements**

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
P284 - In case of inadequate ventilation wear respiratory protection  
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor  
P501 - Dispose of contents/ container to an approved waste disposal plant  
P272 - Contaminated work clothing should not be allowed out of the workplace  
P280 - Wear protective gloves, protective clothing, eye protection, and face protection  
P302 + P352 - IF ON SKIN: Wash with plenty of water and soap  
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention  
P362 + P364 - Take off all contaminated clothing and wash it before reuse

**Other Hazards Known**

**Other hazards which do not result in classification**

No information available  
0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity  
0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity  
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)  
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)  
0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**Substance**

Not applicable

**Mixture**

Pure substance/mixture Mixture  
Chemical Name Not applicable  
Chemical Family Mixture  
CAS No Not applicable  
Chemical nature Aqueous solution of organic salts and polymers.

Chemical name	CAS No	Percent Range
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane	100-97-0	<10%
Sodium sulfate	7757-82-6	<1%
Formaldehyde	50-00-0	<0.1%
Diammonium sulfate	7783-20-2	<0.01%

**Section 4: FIRST AID MEASURES**

**Description of necessary first aid measures**

<b>General advice</b>	Show this safety data sheet to the doctor in attendance.
<b>Inhalation</b>	May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Get immediate medical advice/attention.
<b>Skin contact</b>	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Ingestion</b>	May produce an allergic reaction. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

**For emergency responders**

<b>Self-protection of the first aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.
---	---

**Most important symptoms/effects, acute and delayed**

<b>Symptoms</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing. Itching. Rashes. Hives.
-----------------	---

**Indication of immediate medical attention and special treatment needed, if necessary**

<b>Note to physicians</b>	May cause sensitization in susceptible persons. Treat symptomatically.
---------------------------	--

**Section 5: FIRE FIGHTING MEASURES**

**Extinguishing media**

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
-------------------------------------	---

<b>Unsuitable Extinguishing Media</b>	No information available
---------------------------------------	--------------------------

**Specific hazards arising from the chemical**

<b>Specific hazards arising from the chemical</b>	Product is or contains a sensitizer. May cause sensitization by inhalation and skin contact. May cause sensitization by skin contact.
---	--

**Flammable properties**

Not classified as flammable according to GHS criteria Substance does not burn During a fire, this product decomposes to form toxic gases.

**Explosive properties**

Not classified according to GHS criteria.

<b>Hazardous combustion products</b>	This material will not burn.
--------------------------------------	------------------------------

**Specific/special fire-fighting measures**

<b>Specific/special fire-fighting measures</b>	No information available.
--	---------------------------

**Special protective equipment and precautions for fire-fighters**

<b>Special protective equipment for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
---	---



## Section 6: ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**For emergency responders** Use personal protective equipment as required.

### Environmental precautions

**Environmental precautions** Prevent further leakage or spillage if safe to do so.

### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**Other Information** Refer to protective measures listed in Sections 7 and 8.

**Reference to other sections** See section 8 for more information.  
 See section 13 for more information.

## Section 7: HANDLING AND STORAGE

### Preventive measures for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Provide extract ventilation to points where emissions occur. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Take off contaminated clothing and wash before reuse.

### Precautions for safe handling

**General Hygiene Considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

**Incompatible materials** Strong oxidizing agents, strong acids, and strong bases.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines

Chemical name	Brazil	Chile	Argentina	Venezuela
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane 'CAS #:' 100-97-0	TWA: 1 mg/m <sup>3</sup>	NDF	NDF	NDF
Formaldehyde 'CAS #:' 50-00-0	TWA: 0.1 ppm Ceiling: 1.6 ppm Ceiling: 2.3 mg/m <sup>3</sup>	Ceiling: 0.3 ppm Ceiling: 0.37 mg/m <sup>3</sup>	Ceiling: 0.3 ppm	STEL: 0.3 ppm

Chemical name	Mexico	Colombia	Uruguay	Peru
---------------	--------	----------	---------	------

1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane 'CAS #:' 100-97-0	NDF	TWA: 1 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	NDF
Formaldehyde 'CAS #:' 50-00-0	NDF	TWA: 0.1 ppm	TWA: 0.1 ppm	NDF

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane <10%	dermal sensitizer TWA: 1 mg/m <sup>3</sup> inhalable fraction and vapor	NDF	NDF
Formaldehyde <0.1%	dermal sensitizer;respiratory sensitizer STEL: 0.3 ppm TWA: 0.1 ppm	TWA: 0.75 ppm (vacated) TWA: 3 ppm (vacated) STEL: 10 ppm (vacated) Ceiling: 5 ppm STEL: 2 ppm	IDLH: 20 ppm Ceiling: 0.1 ppm 15 min TWA: 0.016 ppm

**Legend** See section 16 for terms and abbreviations

**Appropriate engineering controls**

**Engineering Controls**

Showers  
 Eyewash stations  
 Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Respiratory protection**

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**Hand Protection**

Wear suitable gloves. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374-1:2016. Barrier creams may help to protect the exposed areas of skin.

**Eye/face protection**

Wear safety glasses with side shields (or goggles).

**Skin and body protection**

Wear suitable protective clothing.

**General Hygiene Considerations**

Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

**Environmental exposure controls**

Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.

**Thermal hazards**

None under normal processing.

**Section 9: PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

**Physical state** Liquid  
**Appearance** Turbid solution  
**Color** Milky white  
**Odor** Odorless  
**Odor threshold** No data available

Property	Values	Remarks • Method
Molecular weight	Not applicable	
pH	7.85	@ 20 °C

**Product Code(s)** 2697942  
**Issue Date** 26-12-2019  
**Version** 5.5

**Product Name** StablCal® Standard, 0.30 NTU  
**Revision Date** 17-Oct-2023  
**Page** 6 / 17

**Melting point / freezing point** 0 °C / 32 °F  
**Initial boiling point and boiling range** 100 °C / 212 °F  
**Evaporation rate** 1 (water = 1)  
**Vapor pressure** 17.477 mm Hg / 2.33 kPa at 20 °C / 68 °F  
**Relative vapor density** 0.62  
**Specific gravity - VALUE 1** 1.02  
**Partition coefficient** Not applicable  
**Soil Organic Carbon-Water Partition Coefficient** Not applicable  
**Autoignition temperature** No data available  
**Decomposition temperature** No data available  
**Dynamic viscosity** No data available  
**Kinematic viscosity** No data available  
**Solubility(ies)**

**Water solubility**

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

**Solubility in other solvents**

Chemical Name	Solubility classification	Solubility	Solubility Temperature
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F

**Other information**

**Metal Corrosivity**

**Steel Corrosion Rate** No data available  
**Aluminum Corrosion Rate** No data available

**Volatile Organic Compounds (VOC) Content**

No information available See ingredients information below

Chemical name	CAS No	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane	100-97-0	Not applicable	X
Sodium sulfate	7757-82-6	No data available	-
Formaldehyde	50-00-0	No data available	X
Diammonium sulfate	7783-20-2	No data available	-

**Explosive properties**

**Upper explosion limit** Not applicable  
**Lower explosion limit** Not applicable

**Flammable properties**

**Product Code(s)** 2697942  
**Issue Date** 26-12-2019  
**Version** 5.5

**Product Name** StablCal® Standard, 0.30 NTU  
**Revision Date** 17-Oct-2023  
**Page** 7 / 17

<b>Flash point</b>	No data available
<b>Flammability Limit in Air</b>	
<b>Upper flammability limit:</b>	No data available
<b>Lower flammability limit:</b>	No data available
<b>Oxidizing properties</b>	No data available.
<b>Bulk density</b>	Not applicable

## Section 10: STABILITY AND REACTIVITY

**Reactivity**  
Not applicable.

**Chemical stability**  
**Stability** Stable under normal conditions.

**Explosion data**  
    **Sensitivity to Mechanical Impact** None  
    **Sensitivity to Static Discharge** None.

**Possibility of hazardous reactions**  
**Possibility of Hazardous Reactions** None under normal processing.

**Hazardous polymerization**  
Hazardous polymerization does not occur.

**Conditions to avoid**  
**Conditions to avoid** None known based on information supplied.

**Incompatible materials**  
**Incompatible materials** Strong oxidizing agents, strong acids, and strong bases.

**Hazardous decomposition products**  
Ammonia. Carbon monoxide. Formaldehyde. Nitrogen oxides. Sodium oxides. Sulfur oxides.

## Section 11: TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

<b>Inhalation</b>	May cause sensitization in susceptible persons.
<b>Eye contact</b>	No known effect based on information supplied.
<b>Skin contact</b>	Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May cause sensitization by skin contact.
<b>Ingestion</b>	May cause additional affects as listed under "Inhalation".
<b>Symptoms</b>	Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/ or wheezing. Itching. Rashes. Hives.

**Product Code(s)** 2697942  
**Issue Date** 26-12-2019  
**Version** 5.5

**Product Name** StablCal® Standard, 0.30 NTU  
**Revision Date** 17-Oct-2023  
**Page** 8 / 17

#### Acute toxicity

Based on available data, the classification criteria are not met

#### Mixture

No data available.

#### Ingredient Acute Toxicity Data

Test data reported below.

#### Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Rat LD <sub>50</sub>	100 mg/kg	None reported	None reported	GESTIS
Diammonium sulfate (<0.01%) CAS#: 7783-20-2	Rat LD <sub>50</sub>	2840 mg/kg	None reported	None reported	GESTIS

#### Dermal Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Rabbit LD <sub>50</sub>	270 mg/kg	None reported	None reported	GESTIS

#### Inhalation (Dust/Mist) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Rat LC <sub>50</sub>	0.578 mg/L	4 hours	None reported	LOLI

#### Unknown Acute Toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity.

#### Acute Toxicity Estimations (ATE)

The following values are calculated based on chapter 3.1 of the GHS document

Oral LD <sub>50</sub>	No information available mg/kg
Dermal LD <sub>50</sub>	No information available
Mist	No information available
Vapor	No information available
Gas	No information available

#### Skin corrosion/irritation

Based on available data, the classification criteria are not met.

#### Mixture

No data available.

#### Ingredient Skin Corrosion/Irritation Data

Test data reported below.

Chemical name	Test method	Species	Reported	Exposure	Results	Key literature
EN / BGHS						

			dose	time		references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	OECD Test 404: Acute Dermal Corrosion/Irritation	Rabbit	500 mg	4 hours	Not corrosive or irritating to skin	ECHA
Sodium sulfate (<1%) CAS#: 7757-82-6	Standard Draize Test	Rabbit	500 mg	4 hours	Not corrosive or irritating to skin	ECHA
Formaldehyde (<0.1%) CAS#: 50-00-0	Standard Draize Test	Human	0.150 mg	72 hours	Corrosive to skin	RTECS
Diammonium sulfate (<0.01%) CAS#: 7783-20-2	Standard Draize Test	Rabbit	800 mg	20 hours	Not corrosive or irritating to skin	ECHA

#### **Serious eye damage/irritation**

Based on available data, the classification criteria are not met.

#### **Mixture**

No data available.

#### **Ingredient Eye Damage/Eye Irritation Data**

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	OECD Test 405: Acute Eye Corrosion/Irritation	Rabbit	100 mg	24 hours	Not corrosive or irritating to eyes	ECHA
Sodium sulfate (<1%) CAS#: 7757-82-6	Standard Draize Test	Rabbit	90 mg	24 hours	Not corrosive or irritating to eyes	ECHA
Formaldehyde (<0.1%) CAS#: 50-00-0	Rinse Test	Human	1 ppm	6 minutes	Corrosive to eyes	RTECS
Diammonium sulfate (<0.01%) CAS#: 7783-20-2	Standard Draize Test	Rabbit	0.050 mL	None reported	Not corrosive or irritating to eyes	ECHA

#### **Respiratory or skin sensitization**

May cause sensitization by inhalation. May cause sensitization by skin contact.

#### **Mixture**

No data available.

#### **Ingredient Sensitization Data**

Test data reported below.

#### **Skin Sensitization Exposure Route**

Chemical name	Test method	Species	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	OECD Test No. 406: Skin Sensitization	Guinea pig	Confirmed to be a skin sensitizer	ECHA
Sodium sulfate	OECD Test No.	Guinea pig	Not confirmed to be a skin sensitizer	HSDB

(<1%) CAS#: 7757-82-6	406: Skin Sensitization			
Formaldehyde (<0.1%) CAS#: 50-00-0	Patch test	Human	Confirmed to be a skin sensitizer	ERMA

**Respiratory Sensitization Exposure Route**

Chemical name	Test method	Species	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	Based on human experience	Human	Confirmed to be a respiratory sensitizer	HSDB
Formaldehyde (<0.1%) CAS#: 50-00-0	IgE Specific Immune Response Test	Guinea pig	Confirmed to be a respiratory sensitizer	CICAD

**STOT - single exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Single Exposure Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Human LD <sub>Lo</sub>	70 mg/kg	None reported	<b>Gastrointestinal Kidney, Ureter, or Bladder Liver</b> Other changes Ulcerated stomach Other changes	RTECS
Diammonium sulfate (<0.01%) CAS#: 7783-20-2	Man TD <sub>Lo</sub>	1500 mg/kg	None reported	<b>Gastrointestinal Gas</b>	RTECS

**STOT - repeated exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Repeat Exposure Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	Rat NOAEL	80 mg/kg	None reported	None reported	Vendor SDS

**Inhalation (Dust/Mist) Exposure Route**

EN / BGHS	Page 10 / 17
-----------	--------------

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	Rat TC <sub>Lo</sub>	350 mg/m <sup>3</sup>	21 days	<b>Kidney, Ureter, or Bladder</b> Urine volume decreased or anuria <b>Nutritional and Gross Metabolic</b> Weight loss or decreased weight gain <b>Biochemical</b> Enzyme inhibition, induction, or change in blood or tissue levels (true cholinesterase)	RTECS

**Inhalation (Vapor) Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Human TC <sub>Lo</sub>	0.017 mg/L	0.5 days	<b>Eye</b> <b>Lungs, Thorax, or Respiration</b> Lacrimation Other changes	RTECS

**Carcinogenicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Carcinogenicity Data**

Test data reported below.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane	100-97-0	-	-	-	-
Sodium sulfate	7757-82-6	-	-	-	-
Formaldehyde	50-00-0	A1	Group 1	Known	X
Diammonium sulfate	7783-20-2	-	-	-	-

**Legend**

<b>ACGIH (American Conference of Governmental Industrial Hygienists)</b>	A2 - Suspected Human Carcinogen A1 - Known Human Carcinogen
<b>IARC (International Agency for Research on Cancer)</b>	Group 1 - Carcinogenic to Humans
<b>NTP (National Toxicology Program)</b>	Known - Known Carcinogen
<b>OSHA</b>	X - Present

**Inhalation (Vapor) Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Rat	15 mg/L	78 weeks	<b>Olfaction</b> Tumors	RTECS

**Germ cell mutagenicity**

Based on available data, the classification criteria are not met.



**Product Code(s)** 2697942  
**Issue Date** 26-12-2019  
**Version** 5.5

**Product Name** StablCal® Standard, 0.30 NTU  
**Revision Date** 17-Oct-2023  
**Page** 12 / 17

**Mixture invitro Data**

No data available.

**Substance invitro Data**

Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	Cytogenetic analysis	Human HeLa Cell	1 mmol/L	None reported	Positive test result for mutagenicity	RTECS

**Mixture in vivo Data**

No data available.

**Substance in vivo Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Test	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	Dominant lethal test	Mouse	25000 mg/kg	None reported	Positive test result for mutagenicity	RTECS

**Inhalation (Vapor) Exposure Route**

Chemical name	Test	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Micronucleus test	Human	.000985 mg/L	8.5 years	Positive test result for mutagenicity	RTECS

**Reproductive toxicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Reproductive Toxicity Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium sulfate (<1%) CAS#: 7757-82-6	Mouse TD <sub>Lo</sub>	14000 mg/kg	4 days	Effects on Newborn Other neonatal measures or effects	RTECS

**Inhalation (Vapor) Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
---------------	---------------	---------------	---------------	-----------------------	--

Formaldehyde (<0.1%) CAS#: 50-00-0	Rat TC <sub>Lo</sub>	40 mg/L	14 days	Effects on Embryo or Fetus Fetotoxicity (except death e.g. stunted fetus)	RTECS
--	-------------------------	---------	---------	---	-------

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Section 12: ECOLOGICAL INFORMATION**

**Ecotoxicity**

Based on available data, the classification criteria are not met.

**Unknown Aquatic Toxicity**

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

**Mixture**

**Aquatic Acute Toxicity**

No data available.

**Aquatic Chronic Toxicity**

No data available.

**Substance**

**Aquatic Acute Toxicity**

Test data reported below.

**Fish**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium sulfate (<1%) CAS#: 7757-82-6	96 hours	None reported	LC <sub>50</sub>	56 mg/L	IUCLID
Formaldehyde (<0.1%) CAS#: 50-00-0	96 hours	<i>Morone saxatilis</i>	LC <sub>50</sub>	6.7 mg/L	PEEN
Diammonium sulfate (<0.01%) CAS#: 7783-20-2	96 hours	<i>Oncorhynchus mykiss</i>	LC <sub>50</sub>	36.7 mg/L	GESTIS

**Crustacea**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium sulfate (<1%) CAS#: 7757-82-6	48 Hours	<i>Daphnia magna</i>	EC <sub>50</sub>	3150 mg/L	IUCLID
Formaldehyde (<0.1%) CAS#: 50-00-0	48 Hours	<i>Daphnia pulex</i>	EC <sub>50</sub>	5.8 mg/L	PEEN
Diammonium sulfate (<0.01%) CAS#: 7783-20-2	48 Hours	None reported	LC <sub>50</sub>	14 mg/L	GESTIS

**Aquatic Chronic Toxicity**

No data available.

**Persistence and degradability**

**Product Code(s)** 2697942  
**Issue Date** 26-12-2019  
**Version** 5.5

**Product Name** StablCal® Standard, 0.30 NTU  
**Revision Date** 17-Oct-2023  
**Page** 14 / 17

**Mixture**  
No data available.

**Mixture**  
No data available.

**Partition coefficient** Not applicable

**Mobility**

**Soil Organic Carbon-Water Partition Coefficient** Not applicable

**Other adverse effects**

No information available

**Section 13: DISPOSAL CONSIDERATIONS**

**Disposal methods**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

**Section 14: TRANSPORT INFORMATION**

**DOT** Not regulated

**IMDG** Not regulated

**IATA** Not regulated

**ADR** Not regulated

**Additional information**

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

**Section 15: REGULATORY INFORMATION**

**International Inventories**

<b>TSCA</b>	Complies
<b>DSL/NDL</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	Does not comply
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	Does not comply
<b>TCSI</b>	Complies
<b>AICS</b>	Complies
<b>NZIoC</b>	Complies

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**Product Code(s)** 2697942  
**Issue Date** 26-12-2019  
**Version** 5.5

**Product Name** StablCal® Standard, 0.30 NTU  
**Revision Date** 17-Oct-2023  
**Page** 15 / 17

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**TCSI** - Taiwan Chemical Substances Inventory  
**AICS** - Australian Inventory of Chemical Substances  
**NZIoC** - New Zealand Inventory of Chemicals

### **Country Regulations**

#### **Brazil**

Federal Decree 10.088 / 2019  
Standard ABNT NBR 14725-3  
Ordinance no. 2.770 / 2022  
Resolution no. 5.998 / 2022 - ANTT  
Ordinance no. 426 / 2021  
Ordinance no. 256 / 2018  
Federal Decree 10.030 / 2019  
Ordinance no. 118 / 2019  
Law no. 12.305 / 10  
Law no. 10.357 / 2001  
Ordinance no. 204 / 2022  
Ordinance no. 577 / 2021

#### **Brazil - Chemicals Subject to Control and Inspection**

Exempted from Ordinance No 240/2019

<b>Chemical name</b>	<b>List I</b>	<b>List II</b>	<b>List III</b>	<b>List IV</b>	<b>List V</b>	<b>List VI</b>	<b>List VII</b>
Sodium sulfate							X

#### **Argentina**

SRT 3359/2015  
Resolution 801/2015  
Law of Health and Safety and Work (Law 19,587)  
Decree 351/79  
Regulatory Law 19587

#### **Columbia**

Law 253, 1996: Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.  
Resolution 2400/1979: Ministry of Labour and Social Security, ACGIH Exposure Limits.  
Decision 602, Andean Regulation for the Control of chemical substances used in the illegal manufacture of narcotic drugs and psychotropic substances.  
Law 29/1992: Montreal Protocol on Substances that Deplete the Ozone Layer and its Amendments.  
Law 55/1993: Recommendation No. 177 on the International Work Conference on Safety in the Use of Chemical Products at Work.  
Law 30/1990: Vienna Convention for the Protection of the Ozone Layer.  
Law 55/1993: Convention No. 170 on the General Conference of the ILO.

#### **Uruguay**

Law 16.157: Approval of the Montreal Protocol on Substances that Deplete the Ozone Layer.  
Law 17.283: Regarding environmental protection and management of hazardous wastes.  
Presidential Decree 346/11: Implementation of GHS for all manufactured or distributed products.  
Presidential Decree 519/984: Regulates the activities relating to the use of radioactive materials and ionizing radiation throughout the country.

#### **Ecuador**

Law No. 37 - Environmental Management Act  
 NTE INEN 2266:2013 - Requirements for Transport, Storage and Handling of Hazardous Materials  
 Unified Text of Secondary Legislation of the Environment Ministry: Book VI

## Section 16: OTHER INFORMATION

### Key or legend to abbreviations and acronyms used in the safety data sheet

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)
CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	EPA (Environmental Protection Agency)
ERMA	ERMA (New Zealand's Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)

### Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Ceiling Limit Value	MAC	Maximum Allowable Concentration
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

**Product Code(s)** 2697942  
**Issue Date** 26-12-2019  
**Version** 5.5

**Product Name** StablCal® Standard, 0.30 NTU  
**Revision Date** 17-Oct-2023  
**Page** 17 / 17

**NIOSH (RTECS) Number** None reported

**Key literature references and sources for data**

See Section 11: TOXICOLOGICAL INFORMATION

See Section 12: ECOLOGICAL INFORMATION

**Prepared By** Hach Product Compliance Department

**Issue Date** 26-12-2019

**Revision Date** 17-Oct-2023

**Revision Note** None

**Restrictions on use** For Laboratory Use Only.

**This material safety data sheet has been prepared according to Brazilian legislation and ABNT NBR 14725:2009**

**Disclaimer**

**USER RESPONSIBILITY:** Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

**THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.**

**HACH COMPANY©2023**

**End of Safety Data Sheet**



Be Right™

# SAFETY DATA SHEET

Issue Date 26-12-2019

Revision Date 26-Jan-2024

Version 7.8

Page 1 / 17

## 1. IDENTIFICATION

### Product identifier

Product Name StablCal® Standard \_\_\_\_\_ ± \_\_\_\_\_ NTU

### Other means of identification

Product Code(s) 2723342

Safety data sheet number M03880

### Recommended use of the chemical and restrictions on use

Recommended Use Laboratory Use. Standard solution.

Uses advised against Consumer use.

Restrictions on use For Laboratory Use Only.

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

#### Manufacturer Address

Hach Company, P.O.Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

#### Emergency telephone number

+1(303) 623-5716 - 24 Hour Service

## 2. HAZARDS IDENTIFICATION

### Classification

#### Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Respiratory sensitization	Category 1
Skin sensitization	Category 1

#### Hazards not otherwise classified (HNOC)

Not applicable

#### Label elements

#### Signal word

Danger



#### Hazard statements

EN / AGHS

Page 1 / 17

H317 - May cause an allergic skin reaction

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

#### Precautionary statements

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P285 - In case of inadequate ventilation wear respiratory protection

P304 + P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing

P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

P501 - Dispose of contents/ container to an approved waste disposal plant

P272 - Contaminated work clothing should not be allowed out of the workplace

P280 - Wear protective gloves, protective clothing, eye protection, and face protection

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

P363 - Wash contaminated clothing before reuse

#### Other Hazards Known

None

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Substance

Not applicable

#### Mixture

#### Chemical Family

Mixture.

#### Chemical nature

Aqueous solution of organic salts and polymers.

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No	Percent Range	HMRIC #
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane	100-97-0	<10%	-
Sodium sulfate	7757-82-6	<1%	-
Formaldehyde	50-00-0	<0.1%	-
Diammonium sulfate	7783-20-2	<0.01%	-

### 4. FIRST AID MEASURES

#### Description of first aid measures

#### General advice

Show this safety data sheet to the doctor in attendance.

#### Inhalation

May cause allergic respiratory reaction. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Get immediate medical advice/attention.

#### Eye contact

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

#### Skin contact

Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.

#### Ingestion

May produce an allergic reaction. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

#### Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or



clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing. Itching. Rashes. Hives.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** May cause sensitization in susceptible persons. Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** Caution: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical** Product is or contains a sensitizer. May cause sensitization by inhalation and skin contact. May cause sensitization by skin contact.

**Hazardous combustion products** This material will not burn.

**Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**6. ACCIDENTAL RELEASE MEASURES**

**U.S. Notice** Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Other Information** Refer to protective measures listed in Sections 7 and 8.

**Environmental precautions**

**Environmental precautions** Prevent further leakage or spillage if safe to do so.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**Reference to other sections** See section 8 for more information. See section 13 for more information.

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Provide extract ventilation to points where emissions occur. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Remove contaminated clothing and shoes. Take off contaminated clothing and wash before reuse.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

**Flammability class** Not applicable

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

**Exposure Guidelines**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane CAS#: 100-97-0	dermal sensitizer TWA: 1 mg/m <sup>3</sup> inhalable fraction and vapor	NDF	NDF
Formaldehyde CAS#: 50-00-0	dermal sensitizer;respiratory sensitizer STEL: 0.3 ppm TWA: 0.1 ppm	TWA: 0.75 ppm (vacated) TWA: 3 ppm (vacated) STEL: 10 ppm (vacated) Ceiling: 5 ppm STEL: 2 ppm	IDLH: 20 ppm Ceiling: 0.1 ppm 15 min TWA: 0.016 ppm

**Appropriate engineering controls**

**Engineering Controls** Showers  
 Eyewash stations  
 Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**Hand Protection** Wear suitable gloves.

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin and body protection** Wear suitable protective clothing.

**General Hygiene Considerations** Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

**Environmental exposure controls** Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.

**Thermal hazards** None under normal processing.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Product Code(s) 2723342  
 Issue Date 26-12-2019  
 Version 7.8

Product Name StablCal® Standard \_\_\_\_\_ ± \_\_\_\_\_ NTU  
 Revision Date 26-Jan-2024  
 Page 5 / 17

**Information on basic physical and chemical properties**

Physical state Liquid  
 Appearance Turbid solution  
 Odor Odorless  
 Color Milky white  
 Odor threshold No data available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Molecular weight	Not applicable	
pH	7.85	@ 20 °C
Melting point / freezing point	0 °C / 32 °F	
Initial boiling point and boiling range	100 °C / 212 °F	
Evaporation rate	1 (water = 1)	
Vapor pressure	17.477 mm Hg / 2.33 kPa at 20 °C / 68 °F	
Relative vapor density	0.62	
Specific gravity - VALUE 1	1.02	
Partition coefficient	Not applicable	
Soil Organic Carbon-Water Partition Coefficient	Not applicable	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Dynamic viscosity	No data available	
Kinematic viscosity	No data available	

**Solubility(ies)**

**Water solubility**

Water solubility classification	Water solubility	Water Solubility Temperature
Soluble	> 1000 mg/L	25 °C / 77 °F

**Solubility in other solvents**

Chemical Name	Solubility classification	Solubility	Solubility Temperature
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F

**Other information**

**Metal Corrosivity**

Steel Corrosion Rate No data available  
 Aluminum Corrosion Rate No data available

**Volatile Organic Compounds (VOC) Content**  
 No information available See ingredients information below

Chemical name	CAS No	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]de	100-97-0	Not applicable	X

Chemical name	CAS No	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
cane			
Sodium sulfate	7757-82-6	No data available	-
Formaldehyde	50-00-0	No data available	X
Diammonium sulfate	7783-20-2	No data available	-

#### Explosive properties

Upper explosion limit Not applicable  
Lower explosion limit Not applicable

#### Flammable properties

Flash point No data available

#### Flammability Limit in Air

Upper flammability limit: No data available  
Lower flammability limit: No data available

#### Oxidizing properties

No data available.

#### Bulk density

Not applicable

## 10. STABILITY AND REACTIVITY

#### Reactivity

Not applicable.

#### Chemical stability

Stable under normal conditions.

#### Explosion data

Sensitivity to Mechanical Impact None.  
Sensitivity to Static Discharge None.

#### Possibility of hazardous reactions

None under normal processing.

#### Hazardous polymerization

Hazardous polymerization does not occur.

#### Conditions to avoid

None known based on information supplied.

#### Incompatible materials

Strong oxidizing agents, strong acids, and strong bases.

#### Hazardous decomposition products

Ammonia. Carbon monoxide. Formaldehyde. Nitrogen oxides. Sodium oxides. Sulfur oxides.

## 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

#### Product Information

**Inhalation** May cause sensitization in susceptible persons.

**Eye contact** No known effect based on information supplied.

**Skin contact** Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May cause sensitization by skin contact.

**Ingestion** May cause additional affects as listed under "Inhalation".

**Symptoms** Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/ or wheezing. Itching. Rashes. Hives.

**Acute toxicity**  
 Based on available data, the classification criteria are not met

**Mixture**  
 No data available.

**Ingredient Acute Toxicity Data**  
 Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Rat LD <sub>50</sub>	100 mg/kg	None reported	None reported	GESTIS
Diammonium sulfate (<0.01%) CAS#: 7783-20-2	Rat LD <sub>50</sub>	2840 mg/kg	None reported	None reported	GESTIS

**Dermal Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Rabbit LD <sub>50</sub>	270 mg/kg	None reported	None reported	GESTIS

**Inhalation (Dust/Mist) Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Rat LC <sub>50</sub>	0.578 mg/L	4 hours	None reported	LOLI

**Unknown Acute Toxicity**  
 1E-05% of the mixture consists of ingredient(s) of unknown toxicity.

**Acute Toxicity Estimations (ATE)**

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	No information available
ATEmix (dermal)	No information available
ATEmix (inhalation-dust/mist)	No information available

ATEmix (inhalation-vapor)	No information available
ATEmix (inhalation-gas)	No information available

**Skin corrosion/irritation**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Skin Corrosion/Irritation Data**

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	OECD Test 404: Acute Dermal Corrosion/Irritation	Rabbit	500 mg	4 hours	Not corrosive or irritating to skin	ECHA
Sodium sulfate (<1%) CAS#: 7757-82-6	Standard Draize Test	Rabbit	500 mg	4 hours	Not corrosive or irritating to skin	ECHA
Formaldehyde (<0.1%) CAS#: 50-00-0	Standard Draize Test	Human	0.150 mg	72 hours	Corrosive to skin	RTECS
Diammonium sulfate (<0.01%) CAS#: 7783-20-2	Standard Draize Test	Rabbit	800 mg	20 hours	Not corrosive or irritating to skin	ECHA

**Serious eye damage/irritation**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Eye Damage/Eye Irritation Data**

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	OECD Test 405: Acute Eye Corrosion/Irritation	Rabbit	100 mg	24 hours	Not corrosive or irritating to eyes	ECHA
Sodium sulfate (<1%) CAS#: 7757-82-6	Standard Draize Test	Rabbit	90 mg	24 hours	Not corrosive or irritating to eyes	ECHA
Formaldehyde (<0.1%) CAS#: 50-00-0	Rinse Test	Human	1 ppm	6 minutes	Corrosive to eyes	RTECS
Diammonium sulfate (<0.01%) CAS#: 7783-20-2	Standard Draize Test	Rabbit	0.050 mL	None reported	Not corrosive or irritating to eyes	ECHA

**Respiratory or skin sensitization**

May cause sensitization by inhalation. May cause sensitization by skin contact.

**Mixture**

No data available.

**Ingredient Sensitization Data**

Test data reported below.

**Skin Sensitization Exposure Route**

Chemical name	Test method	Species	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	OECD Test No. 406: Skin Sensitization	Guinea pig	Confirmed to be a skin sensitizer	ECHA
Sodium sulfate (<1%) CAS#: 7757-82-6	OECD Test No. 406: Skin Sensitization	Guinea pig	Not confirmed to be a skin sensitizer	HSDB
Formaldehyde (<0.1%) CAS#: 50-00-0	Patch test	Human	Confirmed to be a skin sensitizer	ERMA

**Respiratory Sensitization Exposure Route**

Chemical name	Test method	Species	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	Based on human experience	Human	Confirmed to be a respiratory sensitizer	HSDB
Formaldehyde (<0.1%) CAS#: 50-00-0	IgE Specific Immune Response Test	Guinea pig	Confirmed to be a respiratory sensitizer	CICAD

**STOT - single exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Single Exposure Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Human LD <sub>Lo</sub>	70 mg/kg	None reported	<b>Gastrointestinal Kidney, Ureter, or Bladder Liver</b> Other changes Ulcerated stomach Other changes	RTECS
Diammonium sulfate (<0.01%) CAS#: 7783-20-2	Man TD <sub>Lo</sub>	1500 mg/kg	None reported	<b>Gastrointestinal Gas</b>	RTECS

**STOT - repeated exposure**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Specific Target Organ Toxicity Repeat Exposure Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	Rat NOAEL	80 mg/kg	None reported	None reported	Vendor SDS

**Inhalation (Dust/Mist) Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	Rat TC <sub>Lo</sub>	350 mg/m <sup>3</sup>	21 days	<b>Kidney, Ureter, or Bladder</b> Urine volume decreased or anuria <b>Nutritional and Gross Metabolic</b> Weight loss or decreased weight gain <b>Biochemical</b> Enzyme inhibition, induction, or change in blood or tissue levels (true cholinesterase)	RTECS

**Inhalation (Vapor) Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Human TC <sub>Lo</sub>	0.017 mg/L	0.5 days	<b>Eye</b> <b>Lungs, Thorax, or Respiration</b> Lacrimation Other changes	RTECS

**Carcinogenicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Carcinogenicity Data**

Test data reported below.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane	100-97-0	-	-	-	-
Sodium sulfate	7757-82-6	-	-	-	-
Formaldehyde	50-00-0	A1	Group 1	Known	X
Diammonium sulfate	7783-20-2	-	-	-	-

**Legend**

<b>ACGIH (American Conference of Governmental Industrial Hygienists)</b>	A2 - Suspected Human Carcinogen A1 - Known Human Carcinogen
<b>IARC (International Agency for Research on Cancer)</b>	Group 1 - Carcinogenic to Humans
<b>NTP (National Toxicology Program)</b>	Known - Known Carcinogen
<b>OSHA</b>	X - Present

**Inhalation (Vapor) Exposure Route**

EN / AGHS	Page 10 / 17
-----------	--------------



Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Rat	15 mg/L	78 weeks	Olfaction Tumors	RTECS

**Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

**Mixture invitro Data**

No data available.

**Substance invitro Data**

Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	Cytogenetic analysis	Human HeLa Cell	1 mmol/L	None reported	Positive test result for mutagenicity	RTECS

**Mixture invivo Data**

No data available.

**Substance invivo Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Test	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane (<10%) CAS#: 100-97-0	Dominant lethal test	Mouse	25000 mg/kg	None reported	Positive test result for mutagenicity	RTECS

**Inhalation (Vapor) Exposure Route**

Chemical name	Test	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Micronucleus test	Human	.000985 mg/L	8.5 years	Positive test result for mutagenicity	RTECS

**Reproductive toxicity**

Based on available data, the classification criteria are not met.

**Mixture**

No data available.

**Ingredient Reproductive Toxicity Data**

Test data reported below.

**Oral Exposure Route**

Chemical name	Endpoint	Reported	Exposure	Toxicological effects	Key literature references and
---------------	----------	----------	----------	-----------------------	-------------------------------

	type	dose	time		sources for data
Sodium sulfate (<1%) CAS#: 7757-82-6	Mouse TD <sub>Lo</sub>	14000 mg/kg	4 days	Effects on Newborn Other neonatal measures or effects	RTECS

**Inhalation (Vapor) Exposure Route**

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Formaldehyde (<0.1%) CAS#: 50-00-0	Rat TC <sub>Lo</sub>	40 mg/L	14 days	Effects on Embryo or Fetus Fetotoxicity (except death e.g. stunted fetus)	RTECS

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Based on available data, the classification criteria are not met.

**Unknown aquatic toxicity**

1E-05% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

**Mixture**

**Aquatic Acute Toxicity**

No data available.

**Aquatic Chronic Toxicity**

No data available.

**Substance**

**Aquatic Acute Toxicity**

Test data reported below.

**Fish**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium sulfate (<1%) CAS#: 7757-82-6	96 hours	None reported	LC <sub>50</sub>	56 mg/L	IUCLID
Formaldehyde (<0.1%) CAS#: 50-00-0	96 hours	<i>Morone saxatilis</i>	LC <sub>50</sub>	6.7 mg/L	PEEN
Diammonium sulfate (<0.01%) CAS#: 7783-20-2	96 hours	<i>Oncorhynchus mykiss</i>	LC <sub>50</sub>	36.7 mg/L	GESTIS

**Crustacea**

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Sodium sulfate (<1%) CAS#: 7757-82-6	48 Hours	<i>Daphnia magna</i>	EC <sub>50</sub>	3150 mg/L	IUCLID
Formaldehyde (<0.1%) CAS#: 50-00-0	48 Hours	<i>Daphnia pulex</i>	EC <sub>50</sub>	5.8 mg/L	PEEN
Diammonium sulfate	48 Hours	None reported	LC <sub>50</sub>	14 mg/L	GESTIS

Product Code(s) 2723342  
Issue Date 26-12-2019  
Version 7.8

Product Name StablCal® Standard \_\_\_\_\_ ± \_\_\_\_\_ NTU  
Revision Date 26-Jan-2024  
Page 13 / 17

(<0.01%) CAS#: 7783-20-2					
-----------------------------	--	--	--	--	--

**Aquatic Chronic Toxicity**

No data available.

**Persistence and degradability**

**Mixture**

No data available.

**Mixture**

No data available.

**Partition coefficient**

Not applicable

**Mobility**

**Soil Organic Carbon-Water Partition Coefficient**

Not applicable

**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Waste from residues/unused products**

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging**

Do not reuse empty containers.

**US EPA Waste Number**

U122

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Formaldehyde 50-00-0	U122	Included in waste streams: K009, K010, K038, K040, K156, K157	-	U122

**14. TRANSPORT INFORMATION**

**DOT**

Not regulated

**TDG**

Not regulated

**IATA**

Not regulated

**IMDG**

Not regulated

**Note:**

No special precautions necessary.

**Additional information**

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

**15. REGULATORY INFORMATION**

**National Inventories**

TSCA Complies  
 DSL/NDSL Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

**International Inventories**

EINECS/ELINCS Complies  
 ENCS Does not comply  
 IECSC Complies  
 KECL Complies  
 PICCS Does not comply  
 TCSI Complies  
 AICS Complies  
 NZIoC Complies

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
 ENCS - Japan Existing and New Chemical Substances  
 IECSC - China Inventory of Existing Chemical Substances  
 KECL - Korean Existing and Evaluated Chemical Substances  
 PICCS - Philippines Inventory of Chemicals and Chemical Substances  
 TCSI - Taiwan Chemical Substances Inventory  
 AICS - Australian Inventory of Chemical Substances  
 NZIoC - New Zealand Inventory of Chemicals

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	SARA 313 - Threshold Values %
Formaldehyde (CAS #: 50-00-0)	0.1
Diammonium sulfate (CAS #: 7783-20-2)	1.0

**SARA 311/312 Hazard Categories**

Acute health hazard Yes  
 Chronic Health Hazard Yes  
 Fire hazard No  
 Sudden release of pressure hazard No  
 Reactive Hazard No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Formaldehyde 50-00-0	100 lb	-	-	X

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Formaldehyde	100 lb	100 lb	RQ 100 lb final RQ

Product Code(s) 2723342  
 Issue Date 26-12-2019  
 Version 7.8

Product Name StablCal® Standard \_\_\_\_\_ ± \_\_\_\_\_ NTU  
 Revision Date 26-Jan-2024  
 Page 15 / 17

50-00-0			RQ 45.4 kg final RQ
---------	--	--	---------------------

**U.S. - Department of Homeland Security - Chemical Facility Anti-Terrorism Standards (CFATS) - Security Issues**

Chemical name	U.S. - Department of Homeland Security - Chemical Facility Anti-Terrorism Standards (CFATS) - Security Issues
Formaldehyde (<0.1%) CAS#: 50-00-0	Release - Toxic (solution)

**US State Regulations**

**California Proposition 65**

This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
Formaldehyde (CAS #: 50-00-0)	Carcinogen



**WARNING:** This product can expose you to chemicals including Formaldehyde, which is known to the State of California to cause cancer.

For more information, go to <http://www.P65Warnings.ca.gov>

**IMERC:** Not applicable

**U.S. State Right-to-Know Regulations**

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane 100-97-0	X	-	-
Sodium sulfate 7757-82-6	-	X	X
Formaldehyde 50-00-0	X	X	X
Diammonium sulfate 7783-20-2	-	X	X

**U.S. EPA Label Information**

Chemical name	FIFRA	FDA
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane	180.0910	-
Sodium sulfate	-	21 CFR 186.1797
Diammonium sulfate	180.0910	21 CFR 184.1143

**16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

**Special Comments**

None

**Additional information**

**Global Automotive Declarable Substance List (GADSL)**

Chemical name	Global Automotive Declarable	Global Automotive Declarable
---------------	------------------------------	------------------------------

	Substance List Classifications	Substance List Thersholds
1,3,5,7-Tetraazatricyclo[3.3.1.1(3,7)]decane 100-97-0	Declarable Substance (FI)	0.1 %
Formaldehyde 50-00-0	Prohibited Substance (FI) Prohibited Substance (LR) Declarable Substance (LR) Declarable Substance (FI)	0.1 %

**NFPA and HMIS Classifications**

<b>NFPA</b>	<b>Health hazards - 2</b>	<b>Flammability - 0</b>	<b>Instability - 0</b>	<b>Physical and chemical properties -</b>
<b>HMIS</b>	<b>Health hazards - 2</b> - *	<b>Flammability - 0</b>	<b>Physical hazards - 0</b>	<b>Personal protection -</b> X - I

**Key or legend to abbreviations and acronyms used in the safety data sheet**

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)
CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	EPA (Environmental Protection Agency)
ERMA	ERMA (New Zealand's Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)

**Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for

**Product Code(s)** 2723342  
**Issue Date** 26-12-2019  
**Version** 7.8

**Product Name** StablCal® Standard \_\_\_\_\_ ± \_\_\_\_\_ NTU  
**Revision Date** 26-Jan-2024  
**Page** 17 / 17

reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.

SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

**Prepared By** Hach Product Compliance Department

**Issue Date** 26-12-2019

**Revision Date** 26-Jan-2024

**Revision Note** None

**Disclaimer**

**USER RESPONSIBILITY:** Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

**THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.**

**HACH COMPANY©2023**

**End of Safety Data Sheet**