

The following list contains the Material Safety Data Sheets you requested. Please scroll down to view the requested MSDS(s).

Product	MSDS	Distributor	Format	Language	Quantity
2100Q01USB	126936	Hach Company	OSHA	English	1
2100Q01USB	2684801	Hach Company	OSHA	English	1
2100Q01USB	2684901	Hach Company	OSHA	English	1
2100Q01USB	2961801	Hach Company	OSHA	English	1
2100Q01USB	126936	Hach Company	ROWGHS	English	1
2100Q01USB	2684801	Hach Company	ROWGHS	English	1
2100Q01USB	2684901	Hach Company	ROWGHS	English	1
2100Q01USB	2660501	Hach Company	ROWGHS	English	1

Total Enclosures: 8

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

MSDS No: M00833

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Silicone Oil
Catalog Number: 126936

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

Emergency Telephone Numbers:
(Medical and Transportation)
(303) 623-5716 24 Hour Service
(515)232-2533 8am - 4pm CST

MSDS Number: M00833
Chemical Name: Silicone Oil
CAS No.: 63148-62-9
Chemical Formula: Proprietary
Chemical Family: Silicones
Hazard: May cause eye irritation.
Date of MSDS Preparation:
Day: 08
Month: March
Year: 2013

2. COMPOSITION / INFORMATION ON INGREDIENTS

Silicone Oil

CAS No.: 63148-62-9
TSCA CAS Number: 63148-62-9
Percent Range: 100.0
Percent Range Units: weight / weight
LD50: None reported
LC50: None reported
TLV: Not established
PEL: Not established
Hazard: May cause eye irritation.

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Clear, colorless liquid
Odor: None
MAY CAUSE EYE IRRITATION

HMIS:

Health: 1
Flammability: 1
Reactivity: 0
Protective Equipment: X - See protective equipment, Section 8.

NFPA:

Health: 1
Flammability: 1
Reactivity: 0
Symbol: Not applicable

Potential Health Effects:

Eye Contact: May cause irritation
Skin Contact: No effects are anticipated
Skin Absorption: No effects anticipated
Target Organs: Not applicable
Ingestion: No Effects Anticipated
Target Organs: Not applicable
Inhalation: No effects anticipated
Target Organs: Not applicable
Medical Conditions Aggravated: None reported
Chronic Effects: None reported
Cancer / Reproductive Toxicity Information:
O.S.H.A. Listed: No
IARC Listed: No
NTP Listed: No
Additional Cancer / Reproductive Toxicity Information: None reported
Toxicologically Synergistic Products: None reported

4. FIRST AID

Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician.
Skin Contact (First Aid): Wash skin with soap and plenty of water.
Ingestion (First Aid): Do not induce vomiting. Call physician immediately.
Inhalation: Remove to fresh air.

5. FIRE FIGHTING MEASURES

Flammable Properties: Combustion generates toxic fumes.
Flash Point: >204°C; >400°F
Method: Open cup
Flammability Limits:
Lower Explosion Limits: Not applicable
Upper Explosion Limits: Not applicable
Autoignition Temperature: Not determined
Hazardous Combustion Products: Toxic fumes of: silicon dioxide carbon monoxide, carbon dioxide.
Fire / Explosion Hazards: May react violently with: strong oxidizers
Static Discharge: None reported.
Mechanical Impact: None reported
Extinguishing Media: Use media appropriate to surrounding fire conditions
Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Spill Response 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.
Containment Technique: Absorb spilled liquid with non-reactive sorbent material. Stop spilled material from being released to the environment.
Clean-up Technique: Absorb spilled liquid with non-reactive sorbent material. Dispose of material in government approved hazardous waste facility.
Evacuation Procedure: Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.
Special Instructions (for accidental release): Not applicable
304 EHS RQ (40 CFR 355): Not applicable
D.O.T. Emergency Response Guide Number: Not applicable

7. HANDLING / STORAGE

Handling: Avoid contact with eyes. Maintain general industrial hygiene practices when using this product.

Storage: Keep away from: oxidizers

Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

Engineering Controls: Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields

Skin Protection: disposable latex gloves. In the EU, the selected gloves must satisfy the specifications of EU Directive 89/686/EEC and standard EN 374 derived from it.

Inhalation Protection: adequate ventilation

Precautionary Measures: Keep away from: oxidizers

TLV: Not established

PEL: Not established

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Clear, colorless liquid

Physical State: Liquid

Molecular Weight: Not available

Odor: None

pH: Not applicable

Vapor Pressure: <5mm at 25°C

Vapor Density (air = 1): > 1

Boiling Point: >140°C/0.002mm

Melting Point: Not applicable

Specific Gravity/ Relative Density (water = 1; air = 1): 0.98

Evaporation Rate (water = 1): < 1 (Ether = 1)

Volatile Organic Compounds Content: Not determined

Partition Coefficient (n-octanol / water): Not applicable

Solubility:

Water: less than 0.1%

Acid: Not determined

Other: Not determined

Metal Corrosivity:

Steel: Not determined

Aluminum: Not determined

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.

Conditions to Avoid: Not applicable

Reactivity / Incompatibility: Incompatible with: oxidizers

Hazardous Decomposition: Toxic fumes of: silicon dioxide, carbon monoxide, carbon dioxide

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Product Toxicological Data:

LD50: None reported

LC50: None reported

Dermal Toxicity Data: None reported

Skin and Eye Irritation Data: None reported

Mutation Data: Subcutaneous mouse; TDLo: 120 g/kg; TUMORIGENIC; skin and appendages (Tumors)

Reproductive Effects Data: None reported

Ingredient Toxicological Data: --

Not applicable

12. ECOLOGICAL INFORMATION

Product Ecological Information: Fish 96hr LC50 = 10000 mg/l

Mobility in soil: No data available

Ingredient Ecological Information: --

Not applicable

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: Not applicable

Special Instructions (Disposal): Incinerate material at an E.P.A. approved hazardous waste facility.

Empty Containers: Rinse three times with an appropriate solvent. Dispose of empty container as normal trash.

NOTICE (Disposal): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information.

14. TRANSPORT INFORMATION

D.O.T.:

D.O.T. Proper Shipping Name: Not Currently Regulated

--

DOT Hazard Class: NA

DOT Subsidiary Risk: NA

DOT ID Number: NA

DOT Packing Group: NA

I.C.A.O.:

I.C.A.O. Proper Shipping Name: Not Currently Regulated

--

ICAO Hazard Class: NA

ICAO Subsidiary Risk: NA

ICAO ID Number: NA

ICAO Packing Group: NA

I.M.O.:

I.M.O. Proper Shipping Name: Not Currently Regulated

--

I.M.O. Hazard Class: NA

I.M.O. Subsidiary Risk: NA

I.M.O. ID Number: NA

I.M.O. Packing Group: NA

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 set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

O.S.H.A.: This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

E.P.A.:

S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370): Immediate (Acute) Health Hazard

S.A.R.A. Title III Section 313 (40 CFR 372): This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.

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302 (EHS) TPQ (40 CFR 355): Not applicable

304 CERCLA RQ (40 CFR 302.4): Not applicable

304 EHS RQ (40 CFR 355): Not applicable

Clean Water Act (40 CFR 116.4): Not applicable

RCRA: Not applicable

C.P.S.C.: Not applicable

State Regulations:

California Prop. 65: No Prop. 65 listed chemicals are present in this product.

Identification of Prop. 65 Ingredient(s): None

California Perchlorate Rule CCR Title 22 Chap 33: Not applicable

Trade Secret Registry: Not applicable

National Inventories:

U.S. Inventory Status: TSCA Listed: Yes

TSCA CAS Number: 63148-62-9

16. OTHER INFORMATION

Intended Use: Laboratory Reagent Lubricant

References: 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. In-house information. Technical Judgment. Vendor Information.

Revision Summary: Substantial revision to comply with EU Reg 1272/2008, Reg 1907/2006 and UN GHS (ST/SG/AC.10/36/Add.3).

Legend:

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

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.

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MSDS No: M01360

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: STABLCAL® FORMAZIN STANDARD 20 NTU
Catalog Number: 2684801

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

Emergency Telephone Numbers:
(Medical and Transportation)
(303) 623-5716 24 Hour Service
(515)232-2533 8am - 4pm CST

MSDS Number: M01360
Chemical Name: Not applicable
CAS No.: Not applicable
Chemical Formula: Not applicable
Chemical Family: Mixture
Hazard: May cause allergic reaction.
Date of MSDS Preparation:
Day: 28
Month: January
Year: 2014

2. COMPOSITION / INFORMATION ON INGREDIENTS

Hexamethylenetetramine

CAS No.: 100-97-0
TSCA CAS Number: 100-97-0
Percent Range: < 5.0
Percent Range Units: weight / weight
LD50: Oral Rat LD50 = 569 mg/kg
LC50: None reported
TLV: 10 mg/m³ as inhalable dust; 3 mg/m³ as respirable dust
PEL: 15 mg/m³ as inhalable dust; 5 mg/m³ as respirable dust
Hazard: Flammable solid.May cause allergic reaction.Harmful if swallowed

Demineralized Water

CAS No.: 7732-18-5
TSCA CAS Number: 7732-18-5
Percent Range: > 90.0
Percent Range Units: weight / weight
LD50: LD50 oral rat = >89,800 mg/kg
LC50: None reported
TLV: Not established
PEL: Not established
Hazard: No effects anticipated.

Other components, each

CAS No.: Not applicable
TSCA CAS Number: Not applicable
Percent Range: < 1.0
Percent Range Units: weight / weight
LD50: Not applicable
LC50: Not applicable

TLV: Not established

PEL: Not established

Hazard: Any ingredient(s) of this product listed as "Other component(s)" is not considered a health hazard to the user of this product.

Formazin Polymer

CAS No.: Not applicable

TSCA CAS Number: Not applicable

Percent Range: < 1.0

Percent Range Units: weight / weight

LD50: None reported.

LC50: None reported.

TLV: Not established.

PEL: Not established.

Hazard: Practically non-toxic.

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Turbid, milky suspension

Odor: Odorless

MAY CAUSE EYE AND SKIN IRRITATION

HMIS:

Health: 2

Flammability: 0

Reactivity: 0

Protective Equipment: X - See protective equipment, Section 8.

NFPA:

Health: 2

Flammability: 0

Reactivity: 0

Symbol: Not applicable

Potential Health Effects:

Eye Contact: No effects are anticipated

Skin Contact: May cause allergic reaction

Skin Absorption: None reported

Target Organs: Not applicable

Ingestion: Large doses may cause: gastrointestinal irritation kidney damage

Target Organs: Kidneys

Inhalation: May cause: allergic respiratory reaction

Target Organs: Lungs

Medical Conditions Aggravated: Allergies or sensitivity to hexamethylenetetramine.

Chronic Effects: Chronic overexposure may cause symptoms similar to acute exposure.

Cancer / Reproductive Toxicity Information:

This product does NOT contain any OSHA listed carcinogens.

This product does NOT contain any IARC listed chemicals.

This product does NOT contain any NTP listed chemicals.

Additional Cancer / Reproductive Toxicity Information: Contains: an experimental mutagen.

Toxicologically Synergistic Products: None reported

4. FIRST AID

Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician if irritation develops.

Skin Contact (First Aid): Wash skin with soap and plenty of water. Call physician if irritation develops. Remove contaminated clothing, wash before reuse, and do not allow out of workplace.

Ingestion (First Aid): Never give anything by mouth to an unconscious person. Rinse mouth with plenty of water. Give 1-2 glasses of water. If concerned contact a physician. If you feel unwell, contact a physician.

Inhalation: Remove to fresh air. If concerned contact a physician. If you feel unwell, contact a physician.

5. FIRE FIGHTING MEASURES

Flammable Properties: Material is not classified as flammable according to GHS criteria. During a fire, this product decomposes to form toxic gases.

Flash Point: Not applicable

Method: Not applicable

Flammability Limits:

Lower Explosion Limits: Not applicable

Upper Explosion Limits: Not applicable

Autoignition Temperature: Not applicable

Hazardous Combustion Products: This material will not burn.

Fire / Explosion Hazards: May react violently with: strong acids strong oxidizers

Static Discharge: None reported.

Mechanical Impact: None reported

Extinguishing Media: Use media appropriate to surrounding fire conditions

Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear. Evacuate area and fight fire from a safe distance.

6. ACCIDENTAL RELEASE MEASURES

Spill Response 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.

Containment Technique: Stop spilled material from being released to the environment. Absorb spilled liquid with non-reactive sorbent material. Dike large spills to keep spilled material from entering sewage and drainage systems or bodies of water.

Clean-up Technique: Absorb spilled liquid with non-reactive sorbent material. Sweep up material. Place material in a plastic bag. Dispose of in accordance with local, state and federal regulations or laws. Decontaminate the area of the spill with a soap solution.

Evacuation Procedure: Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.

Special Instructions (for accidental release): Not applicable

304 EHS RQ (40 CFR 355): Not applicable

D.O.T. Emergency Response Guide Number: Not applicable

7. HANDLING / STORAGE

Handling: Avoid contact with eyes skin Do not breathe mist or vapors. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

Storage: Store between 5 - 25 °C. Keep away from: direct sunlight Protect from: heat acids oxidizers

Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

Engineering Controls: Have an eyewash station nearby. Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields

Skin Protection: nitrile gloves lab coat

Inhalation Protection: adequate ventilation

Precautionary Measures: Avoid contact with: eyes skin Do not breathe: mist/vapor Wash thoroughly after handling. Keep away from: acids/acid fumes oxidizers

TLV: Not established

PEL: Not established

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Turbid, milky suspension

Physical State: Liquid

Molecular Weight: Not applicable

Odor: Odorless
pH: 8.14
Vapor Pressure: ~ 17.5 mm Hg (2.27 kPa) at 20 °C (68 °F)
Vapor Density (air = 1): 0.62
Boiling Point: 100 °C (212 °F)
Melting Point: 0 °C (32 °F)
Specific Gravity/ Relative Density (water = 1; air =1): 1.01
Evaporation Rate (water = 1): ~ 1
Volatile Organic Compounds Content: Not determined
Partition Coefficient (n-octanol / water): Not applicable
Solubility:
 Water: Miscible
 Acid: Miscible
 Other: Not determined
Metal Corrosivity:
 Steel: Not determined
 Aluminum: Not determined

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Conditions to Avoid: Extreme temperatures Heating to decomposition.
Reactivity / Incompatibility: Incompatible with: oxidizers acids
Hazardous Decomposition: Heating to decomposition releases: ammonia carbon monoxide formaldehyde nitrogen oxides
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Product Toxicological Data:
 LD50: None reported
 LC50: None reported
Dermal Toxicity Data: None reported
Skin and Eye Irritation Data: None reported
Mutation Data: Hexamethylenetetramine: Cytogenic analysis in human Hela cells @ 1 mmol/L; Oncogenic Transformation - Hamster kidney - 10 mg/L
Reproductive Effects Data: None reported
Ingredient Toxicological Data: Hexamethylenetetramine: Oral Rat LD50 = 569 mg/kg; Low mutagenic potential for bacteria and mammalian cells in culture. ORATS (EINECS-No.: 202-905-8 27.05.08) Cytogenic analysis Human Hela cells @ 1 mmol/L; Oncogenic Transformation Hamster kidney 10 mg/L

12. ECOLOGICAL INFORMATION

Product Ecological Information: --
No ecological data available for this product. Mobility in soil: No data available Based on classification principles, not classified as hazardous to the environment.
Ingredient Ecological Information: Hexamethylenetetramine, Water: Persistent, not bioaccumulative or inherently toxic to aquatic organisms.
Ecological data for ingredients is not indicative of likely ecological harm. CEPA categorization for ingredients are as follows:

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: Not applicable
Special Instructions (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. Otherwise, Check with national, local municipal and state authorities and waste contractors for pertinent local information on the disposal of this article.
Empty Containers: Rinse three times with an appropriate solvent. Dispose of empty container as normal trash.

NOTICE (Disposal): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information.

14. TRANSPORT INFORMATION

D.O.T.:

D.O.T. Proper Shipping Name: Not Currently Regulated

--

DOT Hazard Class: NA

DOT Subsidiary Risk: NA

DOT ID Number: NA

DOT Packing Group: NA

I.C.A.O.:

I.C.A.O. Proper Shipping Name: Not Currently Regulated

--

ICAO Hazard Class: NA

ICAO Subsidiary Risk: NA

ICAO ID Number: NA

ICAO Packing Group: NA

I.M.O.:

I.M.O. Proper Shipping Name: Not Currently Regulated

--

I.M.O. Hazard Class: NA

I.M.O. Subsidiary Risk: NA

I.M.O. ID Number: NA

I.M.O. Packing Group: NA

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 set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

O.S.H.A.: This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

E.P.A.:

S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370): Immediate (Acute) Health Hazard

S.A.R.A. Title III Section 313 (40 CFR 372): This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.

--

302 (EHS) TPQ (40 CFR 355): Not applicable

304 CERCLA RQ (40 CFR 302.4): Not applicable

304 EHS RQ (40 CFR 355): Not applicable

Clean Water Act (40 CFR 116.4): Not applicable

RCRA: Contains no RCRA regulated substances.

C.P.S.C.: Not applicable

State Regulations:

California Prop. 65: No Prop. 65 listed chemicals are present in this product.

Identification of Prop. 65 Ingredient(s): Not applicable

California Perchlorate Rule CCR Title 22 Chap 33: Not applicable

Trade Secret Registry: Not applicable

National Inventories:

U.S. Inventory Status: All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).

TSCA CAS Number: Not applicable

16. OTHER INFORMATION

Intended Use: Laboratory Use Standard solution

References: 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. CCINFO RTECS. Canadian Centre for Occupational Health and Safety.

Hamilton, Ontario Canada: 30 June 1993. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Association, 1991. IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans. World Health Organization (Volumes 1-42) Supplement 7. France: 1987. Lefevre, Marc J. First Aid Manual for Chemical Accidents, 2nd Ed. New York: Van Nostrand Reinhold Company, 1989. List of Dangerous Substances Classified in Annex I of the EEC Directive (67/548) - Classification, Packaging and Labeling of Dangerous Substances, Amended July 1992. Sixth Annual Report on Carcinogens, 1991. U.S. Department of Health and Human Services. Rockville, MD: Technical Resources, Inc. 1991. Technical Judgment. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Verschueren, Karel. Handbook of Environmental Data on Organic Chemicals. New York: Van Nostrand Reinhold Co., 1977.

Revision Summary: Substantially Revised MSDS Substantial revision to comply with EU Reg 1272/2008, Reg 1907/2006 and UN GHS (ST/SG/AC.10/36/Add.3).

Legend:

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

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.

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(970) 669-3050

MSDS No: M01360

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: STABLCAL® FORMAZIN STANDARD 100 NTU
Catalog Number: 2684901

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

Emergency Telephone Numbers:
(Medical and Transportation)
(303) 623-5716 24 Hour Service
(515)232-2533 8am - 4pm CST

MSDS Number: M01360
Chemical Name: Not applicable
CAS No.: Not applicable
Chemical Formula: Not applicable
Chemical Family: Mixture
Hazard: May cause allergic reaction.
Date of MSDS Preparation:
Day: 28
Month: January
Year: 2014

2. COMPOSITION / INFORMATION ON INGREDIENTS

Hexamethylenetetramine

CAS No.: 100-97-0
TSCA CAS Number: 100-97-0
Percent Range: < 5.0
Percent Range Units: weight / weight
LD50: Oral Rat LD50 = 569 mg/kg
LC50: None reported
TLV: 10 mg/m³ as inhalable dust; 3 mg/m³ as respirable dust
PEL: 15 mg/m³ as inhalable dust; 5 mg/m³ as respirable dust
Hazard: Flammable solid.May cause allergic reaction.Harmful if swallowed

Demineralized Water

CAS No.: 7732-18-5
TSCA CAS Number: 7732-18-5
Percent Range: > 90.0
Percent Range Units: weight / weight
LD50: LD50 oral rat = >89,800 mg/kg
LC50: None reported
TLV: Not established
PEL: Not established
Hazard: No effects anticipated.

Other components, each

CAS No.: Not applicable
TSCA CAS Number: Not applicable
Percent Range: < 1.0
Percent Range Units: weight / weight
LD50: Not applicable
LC50: Not applicable

TLV: Not established

PEL: Not established

Hazard: Any ingredient(s) of this product listed as "Other component(s)" is not considered a health hazard to the user of this product.

Formazin Polymer

CAS No.: Not applicable

TSCA CAS Number: Not applicable

Percent Range: < 1.0

Percent Range Units: weight / weight

LD50: None reported.

LC50: None reported.

TLV: Not established.

PEL: Not established.

Hazard: Practically non-toxic.

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Turbid, milky suspension

Odor: Odorless

MAY CAUSE EYE AND SKIN IRRITATION

HMIS:

Health: 2

Flammability: 0

Reactivity: 0

Protective Equipment: X - See protective equipment, Section 8.

NFPA:

Health: 2

Flammability: 0

Reactivity: 0

Symbol: Not applicable

Potential Health Effects:

Eye Contact: No effects are anticipated

Skin Contact: May cause allergic reaction

Skin Absorption: None reported

Target Organs: Not applicable

Ingestion: Large doses may cause: gastrointestinal irritation kidney damage

Target Organs: Kidneys

Inhalation: May cause: allergic respiratory reaction

Target Organs: Lungs

Medical Conditions Aggravated: Allergies or sensitivity to hexamethylenetetramine.

Chronic Effects: Chronic overexposure may cause symptoms similar to acute exposure.

Cancer / Reproductive Toxicity Information:

This product does NOT contain any OSHA listed carcinogens.

This product does NOT contain any IARC listed chemicals.

This product does NOT contain any NTP listed chemicals.

Additional Cancer / Reproductive Toxicity Information: Contains: an experimental mutagen.

Toxicologically Synergistic Products: None reported

4. FIRST AID

Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician if irritation develops.

Skin Contact (First Aid): Wash skin with soap and plenty of water. Call physician if irritation develops. Remove contaminated clothing, wash before reuse, and do not allow out of workplace.

Ingestion (First Aid): Never give anything by mouth to an unconscious person. Rinse mouth with plenty of water. Give 1-2 glasses of water. If concerned contact a physician. If you feel unwell, contact a physician.

Inhalation: Remove to fresh air. If concerned contact a physician. If you feel unwell, contact a physician.

5. FIRE FIGHTING MEASURES

Flammable Properties: Material is not classified as flammable according to GHS criteria. During a fire, this product decomposes to form toxic gases.

Flash Point: Not applicable

Method: Not applicable

Flammability Limits:

Lower Explosion Limits: Not applicable

Upper Explosion Limits: Not applicable

Autoignition Temperature: Not applicable

Hazardous Combustion Products: This material will not burn.

Fire / Explosion Hazards: May react violently with: strong acids strong oxidizers

Static Discharge: None reported.

Mechanical Impact: None reported

Extinguishing Media: Use media appropriate to surrounding fire conditions

Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear. Evacuate area and fight fire from a safe distance.

6. ACCIDENTAL RELEASE MEASURES

Spill Response 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.

Containment Technique: Stop spilled material from being released to the environment. Absorb spilled liquid with non-reactive sorbent material. Dike large spills to keep spilled material from entering sewage and drainage systems or bodies of water.

Clean-up Technique: Absorb spilled liquid with non-reactive sorbent material. Sweep up material. Place material in a plastic bag. Dispose of in accordance with local, state and federal regulations or laws. Decontaminate the area of the spill with a soap solution.

Evacuation Procedure: Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.

Special Instructions (for accidental release): Not applicable

304 EHS RQ (40 CFR 355): Not applicable

D.O.T. Emergency Response Guide Number: Not applicable

7. HANDLING / STORAGE

Handling: Avoid contact with eyes skin Do not breathe mist or vapors. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

Storage: Store between 5 - 25 °C. Keep away from: direct sunlight Protect from: heat acids oxidizers

Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

Engineering Controls: Have an eyewash station nearby. Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields

Skin Protection: nitrile gloves lab coat

Inhalation Protection: adequate ventilation

Precautionary Measures: Avoid contact with: eyes skin Do not breathe: mist/vapor Wash thoroughly after handling. Keep away from: acids/acid fumes oxidizers

TLV: Not established

PEL: Not established

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Turbid, milky suspension

Physical State: Liquid

Molecular Weight: Not applicable

Odor: Odorless
pH: 8.14
Vapor Pressure: ~ 17.5 mm Hg (2.27 kPa) at 20 °C (68 °F)
Vapor Density (air = 1): 0.62
Boiling Point: 100 °C (212 °F)
Melting Point: 0 °C (32 °F)
Specific Gravity/ Relative Density (water = 1; air =1): 1.01
Evaporation Rate (water = 1): ~ 1
Volatile Organic Compounds Content: Not determined
Partition Coefficient (n-octanol / water): Not applicable
Solubility:
 Water: Miscible
 Acid: Miscible
 Other: Not determined
Metal Corrosivity:
 Steel: Not determined
 Aluminum: Not determined

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Conditions to Avoid: Extreme temperatures Heating to decomposition.
Reactivity / Incompatibility: Incompatible with: oxidizers acids
Hazardous Decomposition: Heating to decomposition releases: ammonia carbon monoxide formaldehyde nitrogen oxides
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Product Toxicological Data:
 LD50: None reported
 LC50: None reported
Dermal Toxicity Data: None reported
Skin and Eye Irritation Data: None reported
Mutation Data: Hexamethylenetetramine: Cytogenic analysis in human Hela cells @ 1 mmol/L; Oncogenic Transformation - Hamster kidney - 10 mg/L
Reproductive Effects Data: None reported
Ingredient Toxicological Data: Hexamethylenetetramine: Oral Rat LD50 = 569 mg/kg; Low mutagenic potential for bacteria and mammalian cells in culture. ORATS (EINECS-No.: 202-905-8 27.05.08) Cytogenic analysis Human Hela cells @ 1 mmol/L; Oncogenic Transformation Hamster kidney 10 mg/L

12. ECOLOGICAL INFORMATION

Product Ecological Information: --
No ecological data available for this product. Mobility in soil: No data available Based on classification principles, not classified as hazardous to the environment.
Ingredient Ecological Information: Hexamethylenetetramine, Water: Persistent, not bioaccumulative or inherently toxic to aquatic organisms.
Ecological data for ingredients is not indicative of likely ecological harm. CEPA categorization for ingredients are as follows:

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: Not applicable
Special Instructions (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. Otherwise, Check with national, local municipal and state authorities and waste contractors for pertinent local information on the disposal of this article.
Empty Containers: Rinse three times with an appropriate solvent. Dispose of empty container as normal trash.

NOTICE (Disposal): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information.

14. TRANSPORT INFORMATION

D.O.T.:

D.O.T. Proper Shipping Name: Not Currently Regulated

--

DOT Hazard Class: NA

DOT Subsidiary Risk: NA

DOT ID Number: NA

DOT Packing Group: NA

I.C.A.O.:

I.C.A.O. Proper Shipping Name: Not Currently Regulated

--

ICAO Hazard Class: NA

ICAO Subsidiary Risk: NA

ICAO ID Number: NA

ICAO Packing Group: NA

I.M.O.:

I.M.O. Proper Shipping Name: Not Currently Regulated

--

I.M.O. Hazard Class: NA

I.M.O. Subsidiary Risk: NA

I.M.O. ID Number: NA

I.M.O. Packing Group: NA

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 set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

O.S.H.A.: This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

E.P.A.:

S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370): Immediate (Acute) Health Hazard

S.A.R.A. Title III Section 313 (40 CFR 372): This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.

--

302 (EHS) TPQ (40 CFR 355): Not applicable

304 CERCLA RQ (40 CFR 302.4): Not applicable

304 EHS RQ (40 CFR 355): Not applicable

Clean Water Act (40 CFR 116.4): Not applicable

RCRA: Contains no RCRA regulated substances.

C.P.S.C.: Not applicable

State Regulations:

California Prop. 65: No Prop. 65 listed chemicals are present in this product.

Identification of Prop. 65 Ingredient(s): Not applicable

California Perchlorate Rule CCR Title 22 Chap 33: Not applicable

Trade Secret Registry: Not applicable

National Inventories:

U.S. Inventory Status: All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).

TSCA CAS Number: Not applicable

16. OTHER INFORMATION

Intended Use: Laboratory Use Standard solution

References: 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. CCINFO RTECS. Canadian Centre for Occupational Health and Safety.

Hamilton, Ontario Canada: 30 June 1993. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Association, 1991. IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans. World Health Organization (Volumes 1-42) Supplement 7. France: 1987. Lefevre, Marc J. First Aid Manual for Chemical Accidents, 2nd Ed. New York: Van Nostrand Reinhold Company, 1989. List of Dangerous Substances Classified in Annex I of the EEC Directive (67/548) - Classification, Packaging and Labeling of Dangerous Substances, Amended July 1992. Sixth Annual Report on Carcinogens, 1991. U.S. Department of Health and Human Services. Rockville, MD: Technical Resources, Inc. 1991. Technical Judgment. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Verschuere, Karel. Handbook of Environmental Data on Organic Chemicals. New York: Van Nostrand Reinhold Co., 1977.

Revision Summary: Substantially Revised MSDS Substantial revision to comply with EU Reg 1272/2008, Reg 1907/2006 and UN GHS (ST/SG/AC.10/36/Add.3).

Legend:

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

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.

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

MSDS No: M01359

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: 10 NTU Verification Standard
Catalog Number: 2961801

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

Emergency Telephone Numbers:
(Medical and Transportation)
(303) 623-5716 24 Hour Service
(515)232-2533 8am - 4pm CST

MSDS Number: M01359
Chemical Name: Not applicable
CAS No.: Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
Hazard: May cause allergic reaction.
Date of MSDS Preparation:
Day: 01
Month: October
Year: 2011

2. COMPOSITION / INFORMATION ON INGREDIENTS

Hexamethylenetetramine

CAS No.: 100-97-0
TSCA CAS Number: 100-97-0
Percent Range: 1.0 - 10.0
Percent Range Units: weight / weight
LD50: Orl mouse LDLo - 512 mg/Kg
LC50: None reported
TLV: Not established
PEL: Not established
Hazard: Flammable solid. May cause allergic reaction.

Demineralized Water

CAS No.: 7732-18-5
TSCA CAS Number: 7732-18-5
Percent Range: 90.0 - 100.0
Percent Range Units: volume / volume
LD50: None reported
LC50: None reported
TLV: Not established
PEL: Not established
Hazard: No effects anticipated.

Other components, each

CAS No.: Not applicable
TSCA CAS Number: Not applicable
Percent Range: < 1.0
Percent Range Units: weight / weight
LD50: Not applicable
LC50: Not applicable

TLV: Not established

PEL: Not established

Hazard: Any ingredient(s) of this product listed as "Other component(s)" is not considered a health hazard to the user of this product.

Formazin Polymer

CAS No.: Not available

TSCA CAS Number: Not applicable

Percent Range: < 1.0

Percent Range Units: weight / weight

LD50: None reported.

LC50: None reported.

TLV: Not established.

PEL: Not established.

Hazard: Toxic properties unknown.

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Clear, colorless liquid

Odor: None

MAY CAUSE EYE AND SKIN IRRITATION

MAY CAUSE ALLERGIC SKIN REACTION

HMIS:

Health: 2

Flammability: 0

Reactivity: 0

Protective Equipment: X - See protective equipment, Section 8.

NFPA:

Health: 2

Flammability: 0

Reactivity: 0

Symbol: Not applicable

Potential Health Effects:

Eye Contact: May cause irritation

Skin Contact: May cause irritation May cause allergic reaction

Skin Absorption: None reported

Target Organs: Not applicable

Ingestion: May cause: gastrointestinal irritation kidney damage

Target Organs: Kidneys

Inhalation: No effects anticipated

Target Organs: Not applicable

Medical Conditions Aggravated: Allergies or sensitivity to hexamethylenetetramine.

Chronic Effects: Chronic overexposure may cause symptoms similar to acute exposure.

Cancer / Reproductive Toxicity Information:

This product does NOT contain any OSHA listed carcinogens.

This product does NOT contain any IARC listed chemicals.

This product does NOT contain any NTP listed chemicals.

Additional Cancer / Reproductive Toxicity Information: Contains: an experimental mutagen.

Toxicologically Synergistic Products: None reported

4. FIRST AID

Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician.

Skin Contact (First Aid): Wash skin with soap and plenty of water. Call physician if irritation develops.

Ingestion (First Aid): Give 1-2 glasses of water under medical supervision. Never give anything by mouth to an unconscious person. Call physician immediately.

Inhalation: Remove to fresh air.

5. FIRE FIGHTING MEASURES

Flammable Properties: During a fire, this product decomposes to form toxic gases.

Flash Point: Not applicable

Method: Not applicable

Flammability Limits:

Lower Explosion Limits: Not applicable

Upper Explosion Limits: Not applicable

Autoignition Temperature: Not determined

Hazardous Combustion Products: This material will not burn.

Fire / Explosion Hazards: None reported

Static Discharge: None reported.

Mechanical Impact: None reported

Extinguishing Media: Use media appropriate to surrounding fire conditions

Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear. Evacuate area and fight fire from a safe distance.

6. ACCIDENTAL RELEASE MEASURES

Spill Response 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.

Containment Technique: Absorb spilled liquid with non-reactive sorbent material. Dike large spills to keep spilled material from entering sewage and drainage systems or bodies of water.

Clean-up Technique: Absorb spilled liquid with non-reactive sorbent material. Sweep up material. Place material in a plastic bag. Mark bag 'Non-hazardous trash', and dispose of as normal refuse. Decontaminate the area of the spill with a soap solution.

Evacuation Procedure: Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.

Special Instructions (for accidental release): Not applicable

304 EHS RQ (40 CFR 355): Not applicable

D.O.T. Emergency Response Guide Number: Not applicable

7. HANDLING / STORAGE

Handling: Avoid contact with eyes skin Do not breathe mist or vapors. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

Storage: Store between 5 - 25 °C. Keep away from: direct sunlight Protect from: heat

Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

Engineering Controls: Have an eyewash station nearby. Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields

Skin Protection: disposable latex gloves

Inhalation Protection: adequate ventilation

Precautionary Measures: Avoid contact with: eyes skin Do not breathe: mist/vapor Wash thoroughly after handling.

TLV: Not established

PEL: Not established

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Clear, colorless liquid

Physical State: Liquid

Molecular Weight: Not applicable

Odor: None

pH: 8.48

Vapor Pressure: Not determined

Vapor Density (air = 1): Not determined
Boiling Point: 100°C
Melting Point: Not applicable
Specific Gravity/ Relative Density (water = 1; air =1): 1.01
Evaporation Rate (water = 1): Not determined
Volatile Organic Compounds Content: Not determined
Partition Coefficient (n-octanol / water): Not applicable
Solubility:
 Water: Miscible
 Acid: Miscible
 Other: Not determined
Metal Corrosivity:
 Steel: Not determined
 Aluminum: Not determined

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Conditions to Avoid: Extreme temperatures
Reactivity / Incompatibility: Incompatible with: oxidizers
Hazardous Decomposition: Heating to decomposition releases: ammonia carbon monoxide formaldehyde nitrogen oxides
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Product Toxicological Data:
 LD50: None reported
 LC50: None reported
Dermal Toxicity Data: None reported
Skin and Eye Irritation Data: None reported
Mutation Data: Hexamethylenetetramine: Cytogenic analysis in human Hela cells @ 1 mmol/l; Oncogenic Transformation - hamster kidney - 10 mg/L
Reproductive Effects Data: None reported
Ingredient Toxicological Data: Hexamethylenetetramine: Oral Mouse LDLo = 512 mg/kg

12. ECOLOGICAL INFORMATION

Product Ecological Information: --
 No ecological data available for this product. Mobility in soil: No data available
Ingredient Ecological Information: Hexamethylenetetramine: Water Pollution Factors: BOD₅: 0.015, 0.026, std. dil. sew.

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: None
Special Instructions (Disposal): Dilute material with excess water making a weaker than 5% solution. Open cold water tap completely, slowly pour the material to the drain. Flush system with plenty of water.
Empty Containers: Rinse three times with an appropriate solvent. Dispose of empty container as normal trash.
NOTICE (Disposal): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information.

14. TRANSPORT INFORMATION

D.O.T.:
 D.O.T. Proper Shipping Name: Not Currently Regulated
 --
 DOT Hazard Class: NA
 DOT Subsidiary Risk: NA
 DOT ID Number: NA
 DOT Packing Group: NA

I.C.A.O.:

I.C.A.O. Proper Shipping Name: Not Currently Regulated

--

ICAO Hazard Class: NA

ICAO Subsidiary Risk: NA

ICAO ID Number: NA

ICAO Packing Group: NA

I.M.O.:

I.M.O. Proper Shipping Name: Not Currently Regulated

--

I.M.O. Hazard Class: NA

I.M.O. Subsidiary Risk: NA

I.M.O. ID Number: NA

I.M.O. Packing Group: NA

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 set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

O.S.H.A.: This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

E.P.A.:

S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370): Immediate (Acute) Health Hazard Delayed (Chronic) Health Hazard

S.A.R.A. Title III Section 313 (40 CFR 372): This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.

--

302 (EHS) TPQ (40 CFR 355): Not applicable

304 CERCLA RQ (40 CFR 302.4): Not applicable

304 EHS RQ (40 CFR 355): Not applicable

Clean Water Act (40 CFR 116.4): Not applicable

RCRA: Contains no RCRA regulated substances.

C.P.S.C.: Not applicable

State Regulations:

California Prop. 65: No Prop. 65 listed chemicals are present in this product.

Identification of Prop. 65 Ingredient(s): None

California Perchlorate Rule CCR Title 22 Chap 33: Not applicable

Trade Secret Registry: Not applicable

National Inventories:

U.S. Inventory Status: All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).

TSCA CAS Number: Not applicable

16. OTHER INFORMATION

Intended Use: Laboratory Use Standard solution

References: 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Association, 1991. IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans. World Health Organization (Volumes 1-42) Supplement 7. France: 1987. Lefevre, Marc J. First Aid Manual for Chemical Accidents, 2nd Ed. New York: Van Nostrand Reinhold Company, 1989. List of Dangerous Substances Classified in Annex I of the EEC Directive (67/548) - Classification, Packaging and Labeling of Dangerous Substances, Amended July 1992. Sixth Annual Report on Carcinogens, 1991. U.S. Department of Health and Human Services. Rockville, MD: Technical Resources, Inc. 1991. Technical Judgment. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Verschueren, Karel. Handbook of Environmental Data on Organic Chemicals. New York: Van Nostrand Reinhold Co., 1977.

Revision Summary: Substantially Revised MSDS

Legend:

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

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.**

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Loveland, CO USA 80539
(970) 669-3050

MSDS No: M00833

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Silicone Oil
Catalog Number: 126936

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

Emergency Telephone Numbers:
(Medical and Transportation)
(303) 623-5716 24 Hour Service
(515)232-2533 8am - 4pm CST

MSDS Number: M00833
Chemical Name: Silicone Oil
CAS Number: 63148-62-9
Additional CAS No. (for hydrated forms): Not applicable
Chemical Formula: Proprietary
Chemical Family: Silicones
Intended Use: Laboratory Reagent Lubricant

2. HAZARDS IDENTIFICATION

This substance is not classified as hazardous per GHS (UN publication ST/SG/AC.10/36/Add.3)

GHS Classification:

Hazard categories: Serious Eye Damage/Eye Irritation:Eye Irrit. 2 .

GHS Label Elements:

WARNING



Hazard statements: . Causes serious eye irritation.

Precautionary statements: Wear eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If skin irritation occurs: Get medical advice/attention.

HMIS:

Health: 1

Flammability: 1

Reactivity: 0

Protective Equipment: X - See protective equipment, Section 8.

NFPA:

Health: 1

Flammability: 1

Reactivity: 0

Symbol: Not applicable

WHMIS Hazard Classification: Not applicable

WHMIS Symbols: Not applicable

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components according to GHS:

Silicone Oil

CAS Number: 63148-62-9

Chemical Formula: Proprietary

GHS Classification: Skin Irrit. 3, H316; Eye Irrit. 2, H319;

Percent Range: 100.0

Percent Range Units: weight / weight

PEL: Not established

TLV: Not established

WHMIS Symbols: Not applicable

4. FIRST AID MEASURES

General Information: In the event of exposure, show this Material Safety Data Sheet and label (where possible) to a doctor.

Advice to doctor: Treat symptomatically.

Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician.

Skin Contact (First Aid): Wash skin with soap and plenty of water.

Inhalation: Remove to fresh air.

Ingestion (First Aid): Do not induce vomiting. Call physician immediately.

5. FIRE FIGHTING MEASURES

Flammable Properties: Combustion generates toxic fumes.

Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

Extinguishing Media: Use media appropriate to surrounding fire conditions

Extinguishing Media NOT To Be Used: Not applicable

Fire / Explosion Hazards: May react violently with: strong oxidizers

Hazardous Combustion Products: Toxic fumes of: silicon dioxide carbon monoxide, carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

Spill Response 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.

Containment Technique: Absorb spilled liquid with non-reactive sorbent material. Stop spilled material from being released to the environment.

Clean-up Technique: If permitted by regulation, Absorb spilled liquid with non-reactive sorbent material. Dispose of material in government approved hazardous waste facility. Otherwise, Pick up spill for disposal and place in a closed container. Dispose of in accordance with local, state and federal regulations or laws.

Evacuation Procedure: Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.

DOT Emergency Response Guide Number: Not applicable

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes. Maintain general industrial hygiene practices when using this product.

Storage: Keep away from: oxidizers

Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields

Skin Protection: disposable latex gloves In the EU, the selected gloves must satisfy the specifications of EU Directive 89/686/EEC and standard EN 374 derived from it.

Inhalation Protection: adequate ventilation

Precautionary Measures: Keep away from: oxidizers

TLV: Not established

PEL: Not established

For Occupational Exposure Limits (OEL) for ingredients, see section 3 - Composition/Information on Ingredients.:

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, colorless liquid

Physical State: Liquid

Molecular Weight: Not available

Odor: None

Odor Threshold: Odorless

pH: Not applicable

Metal Corrosivity:

Corrosivity Classification: Not classified as corrosive to metals according to GHS criteria.

Steel: Not determined

Aluminum: Not determined

Specific Gravity/ Relative Density (water = 1; air =1): 0.98

Viscosity: Not determined

Solubility:

Water: less than 0.1%

Acid: Not determined

Other: Not determined

Partition Coefficient (n-octanol / water): Not applicable

Coefficient of Water / Oil: Not applicable

Melting Point: Not applicable

Decomposition Temperature: Not determined

Boiling Point: >140°C/0.002mm

Vapor Pressure: <5mm at 25°C

Vapor Density (air = 1): > 1

Evaporation Rate (water = 1): < 1 (Ether = 1)

Volatile Organic Compounds Content: Not determined

Flammable Properties: Combustion generates toxic fumes.

Flash Point: >204°C; >400°F

Method: Open cup

Flammability Limits:

Lower Explosion Limits: Not applicable

Upper Explosion Limits: Not applicable

Autoignition Temperature: Not determined

Explosive Properties:

Not classified according to GHS criteria.

Oxidizing Properties:

Not classified according to GHS criteria.

Reactivity Properties:

Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.

Gas under Pressure:

Not classified according to GHS criteria.

Not determined

10. STABILITY AND REACTIVITY

Chemical Stability: Stable when stored under proper conditions.

Mechanical Impact: None reported

Static Discharge: None reported.

Reactivity / Incompatibility: Incompatible with: oxidizers

Hazardous Decomposition: Toxic fumes of: silicon dioxide carbon monoxide carbon dioxide

Conditions to Avoid: Not applicable

11. TOXICOLOGICAL INFORMATION

Toxicokinetics, Metabolism and Distribution: No information available

Toxicologically Synergistic Products: None reported

Acute Toxicity: Based on classification principles, the classification criteria are not met.

Oral Rat LD50 > 35000 mg/kg

Dermal Rabbit LD50 > 3000 mg/kg

Inhalation Rat LC50 > 3000 mg/kg

Specific Target Organ Toxicity - Single Exposure (STOT-SE): Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity - Repeat Exposure (STOT-RE): Based on classification principles, the classification criteria are not met.

Skin Corrosion/Irritation: Mildly irritating to skin.

Eye Damage: Moderate reversible irritation to the eye

Eye Rabbit : 100 mg/1h = Mild

Sensitization: Based on classification principles, the classification criteria are not met.

CMR Effects/Properties (carcinogenic, mutagenic or toxic to reproduction): No germ cell mutagenicity, carcinogenicity or reproductive toxicity data found.

NTP Listed: No

O.S.H.A. Listed: No

Symptoms/Effects:

Ingestion: No Effects Anticipated

Inhalation: No effects anticipated

Skin Absorption: No effects anticipated

Chronic Effects: None reported

Medical Conditions Aggravated: None reported

12. ECOLOGICAL INFORMATION

Product Ecological Information: Fish 96hr LC50 = 10000 mg/l; LD50

Mobility in soil: No data available

CEPA Categorization: Persistent Bioaccumulative Not inherently toxic to aquatic organisms

Ingredient Ecological Information: --

Not applicable

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: Not applicable

Special Instructions (Disposal): Incinerate material at an E.P.A. approved hazardous waste facility.

Empty Containers: Rinse three times with an appropriate solvent. Collect rinsate and dispose of according to local, state or federal regulations. Dispose of empty container as normal trash. In the US, rinsate from empty containers is classified as hazardous waste and should be disposed of at an E.P. A. approved facility. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste.

NOTICE (Disposal): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

14. TRANSPORT INFORMATION

D.O.T.:

D.O.T. Proper Shipping Name: Not Currently Regulated

--

Hazard Class: NA

Subsidiary Risk: NA

ID Number: NA

Packing Group: NA

T.D.G.:

Proper Shipping Name: Not Currently Regulated

--
Hazard Class: NA
Subsidiary Risk: NA
UN Number/PIN: NA
Packing Group: NA
I.C.A.O.:
I.C.A.O. Proper Shipping Name: Not Currently Regulated

--
Hazard Class: NA
Subsidiary Risk: NA
ID Number: NA
Packing Group: NA
I.M.O.:
Proper Shipping Name: Not Currently Regulated

--
Hazard Class: NA
Subsidiary Risk: NA
ID Number: NA
Packing Group: NA
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 set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

O.S.H.A.: This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

E.P.A.:

S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370): Immediate (Acute) Health Hazard

S.A.R.A. Title III Section 313 (40 CFR 372): This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.

--

302 (EHS) TPQ (40 CFR 355): Not applicable

304 CERCLA RQ (40 CFR 302.4): Not applicable

304 EHS RQ (40 CFR 355): Not applicable

Clean Water Act (40 CFR 116.4): Not applicable

RCRA: Not applicable

State Regulations:

California Prop. 65: No Prop. 65 listed chemicals are present in this product.

Identification of Prop. 65 Ingredient(s): None

California Perchlorate Rule CCR Title 22 Chap 33: Not applicable

Trade Secret Registry: Not applicable

National Inventories:

U.S. Inventory Status: TSCA Listed: Yes

CAS Number: 63148-62-9

Canadian Inventory Status: All ingredients of this product are DSL Listed.

EEC Inventory Status: This product is classified as a polymer. All constituent monomers are EINECS listed.

Australian Inventory (AICS) Status: Listed

New Zealand Inventory (NZIoC) Status: Listed

Korean Inventory (KECI) Status: Listed

Japan (ENCs) Inventory Status: Listed

China (PRC) Inventory (MEP) Status: Listed

16. OTHER INFORMATION

References: 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. In-house information. Technical Judgment. Vendor Information.
Complete Text of H phrases referred to in Section 3: H316 Causes mild skin irritation. H319 Causes serious eye irritation.

Revision Summary: Substantial revision to comply with EU Reg 1272/2008, Reg 1907/2006 and UN GHS (ST/SG/AC.10/36/Add.3).

Date of MSDS Preparation:

Day: 05

Month: June

Year: 2014

MSDS Prepared: MSDS prepared by Product Compliance Department extension 3350

CCOHS Evaluation Note: It is offered under exemption from WHMIS labeling as specified in the Controlled Products Regulation (CPR) Section 17. It is offered under the interim policy that was established by Health Canada permitting use of GHS-formatted safety data sheets in Canada prior to revision of CPR to GHS. This product has been classified and labeled in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3). This SDS has been prepared in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3).

Legend:

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

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.

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(970) 669-3050

MSDS No: M01360

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: STABLCAL® FORMAZIN STANDARD 20 NTU
Catalog Number: 2684801

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

Emergency Telephone Numbers:
(Medical and Transportation)
(303) 623-5716 24 Hour Service
(515)232-2533 8am - 4pm CST

MSDS Number: M01360
Chemical Name: Not applicable
CAS Number: Not applicable
Additional CAS No. (for hydrated forms): Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
Intended Use: Laboratory Use Standard solution

2. HAZARDS IDENTIFICATION

GHS Classification:
Hazard categories: Respiratory or Skin Sensitization: Resp. Sens.1
GHS Label Elements:



Hazard statements: May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Precautionary statements: Wear protective gloves / protective clothing / eye protection / face protection. . If skin irritation or rash occurs: Get medical advice/attention. Use only outdoors or in a well-ventilated area. IF exposed or concerned: Get medical advice/attention. Avoid breathing dust/fume/gas/mist/vapours/spray. P285: In case of inadequate ventilation wear respiratory protection. P272: Contaminated work clothing should not be allowed out of the workplace. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. P321 Specific treatment (see supplemental first aid instructions on this label). Take off contaminated clothing and wash before reuse.

HMIS:
Health: 2
Flammability: 0
Reactivity: 0
Protective Equipment: X - See protective equipment, Section 8.

NFPA:
Health: 1
Flammability: 0
Reactivity: 0
Symbol: Not applicable

WHMIS Hazard Classification: Class D, Division 2, Subdivision B - Toxic material (other toxic effects)
WHMIS Symbols: Other Toxic Effects

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components according to GHS:

Hexamethylenetetramine

CAS Number: 100-97-0

Chemical Formula: C₆H₁₂N₄

GHS Classification: Flam. Sol. 2, H228; Acute Tox. 4 -Orl, H302; Resp. Sens. 1, H334; Skin Sens. 1, H317

Percent Range: < 5.0

Percent Range Units: weight / weight

PEL: Not established

TLV: Not established

WHMIS Symbols: Flammable / Combustible Other Toxic Effects

Hazardous Components according to GHS: No

Demineralized Water

CAS Number: 7732-18-5

Chemical Formula: H₂O

GHS Classification: Not applicable

Percent Range: 90.0 - 100.0

Percent Range Units: weight / weight

PEL: Not established

TLV: Not established

WHMIS Symbols: Not applicable

Other components, each

CAS Number: Not applicable

Chemical Formula: Not applicable.

GHS Classification: Not applicable

Percent Range: < 1.0

Percent Range Units: weight / weight

PEL: Not established

TLV: Not established

WHMIS Symbols: Not applicable

Formazin Polymer

CAS Number: Not applicable

Chemical Formula: Not available

GHS Classification: Not applicable

Percent Range: < 1.0

Percent Range Units: weight / weight

PEL: Not established.

TLV: Not established.

WHMIS Symbols: Not applicable

4. FIRST AID MEASURES

General Information: In the event of exposure, show this Material Safety Data Sheet and label (where possible) to a doctor.

Advice to doctor: Treat symptomatically.

Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician.

Skin Contact (First Aid): Wash skin with soap and plenty of water. Call physician if irritation develops.

Inhalation: Remove to fresh air.

Ingestion (First Aid): Give 1-2 glasses of water under medical supervision. Never give anything by mouth to an unconscious person. Call physician immediately.

5. FIRE FIGHTING MEASURES

Flammable Properties: During a fire, this product decomposes to form toxic gases.

Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear. Evacuate area and fight fire from a safe distance.

Extinguishing Media: Use media appropriate to surrounding fire conditions

Extinguishing Media NOT To Be Used: Not applicable

Fire / Explosion Hazards: None reported

Hazardous Combustion Products: This material will not burn.

6. ACCIDENTAL RELEASE MEASURES

Spill Response 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.

Containment Technique: Absorb spilled liquid with non-reactive sorbent material. Dike large spills to keep spilled material from entering sewage and drainage systems or bodies of water.

Clean-up Technique: Absorb spilled liquid with non-reactive sorbent material. Sweep up material. Place material in a plastic bag. Mark bag 'Non-hazardous trash', and dispose of as normal refuse. Decontaminate the area of the spill with a soap solution.

Evacuation Procedure: Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.

DOT Emergency Response Guide Number: Not applicable

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes skin. Do not breathe mist or vapors. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

Storage: Store between 5 - 25 °C. Keep away from: direct sunlight. Protect from: heat

Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Have an eyewash station nearby. Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields

Skin Protection: disposable latex gloves

Inhalation Protection: adequate ventilation

Precautionary Measures: Avoid contact with: eyes skin. Do not breathe: mist/vapor. Wash thoroughly after handling.

TLV: Not established

PEL: Not established

For Occupational Exposure Limits (OEL) for ingredients, see section 3 - Composition/Information on Ingredients.:

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Turbid, milky suspension

Physical State: Liquid

Molecular Weight: Not applicable

Odor: None

Odor Threshold: Odorless

pH: 8.14

Metal Corrosivity:

Corrosivity Classification: Not classified as corrosive to metals according to GHS criteria.

Steel: Not determined

Aluminum: Not determined

Specific Gravity/ Relative Density (water = 1; air =1): 1.01

Viscosity: Not determined

Solubility:

Water: Miscible
Acid: Miscible
Other: Not determined
Partition Coefficient (n-octanol / water): Not applicable
Coefficient of Water / Oil: Not applicable
Melting Point: Not applicable
Decomposition Temperature: Not applicable
Boiling Point: 100°C
Vapor Pressure: Not determined
Vapor Density (air = 1): Not determined
Evaporation Rate (water = 1): Not determined
Volatile Organic Compounds Content: Not determined
Flammable Properties: During a fire, this product decomposes to form toxic gases.
Flash Point: Not applicable
Method: Not applicable
Flammability Limits:
Lower Explosion Limits: Not applicable
Upper Explosion Limits: Not applicable
Autoignition Temperature: Not determined
Explosive Properties:
Not classified according to GHS criteria.
Oxidizing Properties:
Not classified according to GHS criteria.
Reactivity Properties:
Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.
Gas under Pressure:
Not classified according to GHS criteria.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Mechanical Impact: None reported
Static Discharge: None reported.
Reactivity / Incompatibility: Incompatible with: oxidizers
Hazardous Decomposition: Heating to decomposition releases: ammonia carbon monoxide formaldehyde nitrogen oxides
Conditions to Avoid: Extreme temperatures

11. TOXICOLOGICAL INFORMATION

Toxicokinetics, Metabolism and Distribution: No information available for mixture.
Toxicologically Synergistic Products: None reported
Acute Toxicity: Based on classification principles, the classification criteria are not met.
Hexamethylenetetramine: LD 50 OrL Rat - 9200 mg/kg bw
Specific Target Organ Toxicity - Single Exposure (STOT-SE): Based on classification principles, the classification criteria are not met.
Specific Target Organ Toxicity - Repeat Exposure (STOT-RE): Based on classification principles, the classification criteria are not met.
Skin Corrosion/Irritation: Based on classification principles, the classification criteria are not met.
Eye Damage: Based on classification principles, the classification criteria are not met.
Sensitization: Contains a sensitizing compound. Respiratory Sensitizer Skin Sensitizer
Hexamethylenetetramine: skin sensitizer; in water, has been reported as a respiratory sensitizer.
CMR Effects/Properties (carcinogenic, mutagenic or toxic to reproduction): No germ cell mutagenicity, carcinogenicity or reproductive toxicity data found.
This product does NOT contain any IARC listed chemicals.
This product does NOT contain any NTP listed chemicals.
This product does NOT contain any OSHA listed carcinogens.
Symptoms/Effects:
Ingestion: May cause: gastrointestinal tract irritation kidney damage
Inhalation: May cause: allergic respiratory reaction allergic skin reaction

Skin Absorption: None Reported
Chronic Effects: Chronic overexposure may cause symptoms similar to acute exposure.
Medical Conditions Aggravated: Allergies or sensitivity to hexamethylenetetramine.

12. ECOLOGICAL INFORMATION

Product Ecological Information: --

No ecological data available for this product. Mobility in soil: No data available

Ingredient Ecological Information: Hexamethylenetetramine: Water Pollution Factors: BOD₅: 0.015, 0.026, std. dil. sew.

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: Not applicable

Special Instructions (Disposal): Dilute material with excess water making a weaker than 5% solution. Open cold water tap completely, slowly pour the material to the drain. Flush system with plenty of water.

Empty Containers: Rinse three times with an appropriate solvent. Dispose of empty container as normal trash.

NOTICE (Disposal): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

14. TRANSPORT INFORMATION

D.O.T.:

D.O.T. Proper Shipping Name: Not Currently Regulated

--

Hazard Class: NA

Subsidiary Risk: NA

ID Number: NA

Packing Group: NA

T.D.G.:

Proper Shipping Name: Not Currently Regulated

--

Hazard Class: NA

Subsidiary Risk: NA

UN Number/PIN: NA

Packing Group: NA

I.C.A.O.:

I.C.A.O. Proper Shipping Name: Not Currently Regulated

--

Hazard Class: NA

Subsidiary Risk: NA

ID Number: NA

Packing Group: NA

I.M.O.:

Proper Shipping Name: Not Currently Regulated

--

Hazard Class: NA

Subsidiary Risk: NA

ID Number: NA

Packing Group: NA

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 set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

O.S.H.A.: This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

E.P.A.:

S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370): Immédiat (aigu) Danger pour la santé Delayed (Chronic) Health Hazard

S.A.R.A. Title III Section 313 (40 CFR 372): This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.

--

302 (EHS) TPQ (40 CFR 355): Not applicable

304 CERCLA RQ (40 CFR 302.4): Not applicable

304 EHS RQ (40 CFR 355): Not applicable

Clean Water Act (40 CFR 116.4): Not applicable

RCRA: Contains no RCRA regulated substances.

State Regulations:

California Prop. 65: No Prop. 65 listed chemicals are present in this product.

Identification of Prop. 65 Ingredient(s): Not applicable

California Perchlorate Rule CCR Title 22 Chap 33: Not applicable

Trade Secret Registry: Not applicable

National Inventories:

U.S. Inventory Status: All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).

CAS Number: Not applicable

Canadian Inventory Status: All ingredients of this product are DSL Listed.

EEC Inventory Status: All ingredients used to make this product are listed on EINECS / ELINCS.

Australian Inventory (AICS) Status: All ingredients are listed.

New Zealand Inventory (NZIoC) Status: All components either listed or exempt.

Korean Inventory (KECI) Status: All components of this product are either listed, listed as the anhydrous compound or exempt.

Japan (ENCS) Inventory Status:

China (PRC) Inventory (MEP) Status:

16. OTHER INFORMATION

References: 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Association, 1991. IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans. World Health Organization (Volumes 1-42) Supplement 7. France: 1987. Lefevre, Marc J. First Aid Manual for Chemical Accidents, 2nd Ed. New York: Van Nostrand Reinhold Company, 1989. List of Dangerous Substances Classified in Annex I of the EEC Directive (67/548) - Classification, Packaging and Labeling of Dangerous Substances, Amended July 1992. Sixth Annual Report on Carcinogens, 1991. U.S. Department of Health and Human Services. Rockville, MD: Technical Resources, Inc. 1991. Technical Judgment. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Verschueren, Karel. Handbook of Environmental Data on Organic Chemicals. New York: Van Nostrand Reinhold Co., 1977.

Complete Text of H phrases referred to in Section 3:

Revision Summary: . Substantially Revised MSDS

Date of MSDS Preparation:

Day: 18

Month: April

Year: 2013

MSDS Prepared: MSDS prepared by Product Compliance Department extension 3350

CCOHS Evaluation Note: This product has been classified and labeled in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3). It is offered under exemption from WHMIS labeling as specified in the Controlled Products Regulation (CPR) Section 17. It is offered under the interim policy that was established by Health Canada permitting use of GHS-formatted safety data sheets in Canada prior to revision of CPR to GHS.

Legend:

NA - Not Applicable

ND - Not Determined

NV - Not Available

w/w - weight/weight

w/v - weight/volume

v/v - volume/volume

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.**

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Loveland, CO USA 80539
(970) 669-3050

MSDS No: M01360

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: STABLCAL® FORMAZIN STANDARD 100 NTU
Catalog Number: 2684901

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

Emergency Telephone Numbers:
(Medical and Transportation)
(303) 623-5716 24 Hour Service
(515)232-2533 8am - 4pm CST

MSDS Number: M01360
Chemical Name: Not applicable
CAS Number: Not applicable
Additional CAS No. (for hydrated forms): Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
Intended Use: Laboratory Use Standard solution

2. HAZARDS IDENTIFICATION

GHS Classification:
Hazard categories: Respiratory or Skin Sensitization: Resp. Sens.1
GHS Label Elements:



Hazard statements: May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Precautionary statements: Wear protective gloves / protective clothing / eye protection / face protection. . If skin irritation or rash occurs: Get medical advice/attention. Use only outdoors or in a well-ventilated area. IF exposed or concerned: Get medical advice/attention. Avoid breathing dust/fume/gas/mist/vapours/spray. P285: In case of inadequate ventilation wear respiratory protection. P272: Contaminated work clothing should not be allowed out of the workplace. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. P321 Specific treatment (see supplemental first aid instructions on this label). Take off contaminated clothing and wash before reuse.

HMIS:
Health: 2
Flammability: 0
Reactivity: 0
Protective Equipment: X - See protective equipment, Section 8.

NFPA:
Health: 1
Flammability: 0
Reactivity: 0
Symbol: Not applicable

WHMIS Hazard Classification: Class D, Division 2, Subdivision B - Toxic material (other toxic effects)
WHMIS Symbols: Other Toxic Effects

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components according to GHS:

Hexamethylenetetramine

CAS Number: 100-97-0

Chemical Formula: C₆H₁₂N₄

GHS Classification: Flam. Sol. 2, H228; Acute Tox. 4 -Orl, H302; Resp. Sens. 1, H334; Skin Sens. 1, H317

Percent Range: < 5.0

Percent Range Units: weight / weight

PEL: Not established

TLV: Not established

WHMIS Symbols: Flammable / Combustible Other Toxic Effects

Hazardous Components according to GHS: No

Demineralized Water

CAS Number: 7732-18-5

Chemical Formula: H₂O

GHS Classification: Not applicable

Percent Range: 90.0 - 100.0

Percent Range Units: weight / weight

PEL: Not established

TLV: Not established

WHMIS Symbols: Not applicable

Other components, each

CAS Number: Not applicable

Chemical Formula: Not applicable.

GHS Classification: Not applicable

Percent Range: < 1.0

Percent Range Units: weight / weight

PEL: Not established

TLV: Not established

WHMIS Symbols: Not applicable

Formazin Polymer

CAS Number: Not applicable

Chemical Formula: Not available

GHS Classification: Not applicable

Percent Range: < 1.0

Percent Range Units: weight / weight

PEL: Not established.

TLV: Not established.

WHMIS Symbols: Not applicable

4. FIRST AID MEASURES

General Information: In the event of exposure, show this Material Safety Data Sheet and label (where possible) to a doctor.

Advice to doctor: Treat symptomatically.

Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician.

Skin Contact (First Aid): Wash skin with soap and plenty of water. Call physician if irritation develops.

Inhalation: Remove to fresh air.

Ingestion (First Aid): Give 1-2 glasses of water under medical supervision. Never give anything by mouth to an unconscious person. Call physician immediately.

5. FIRE FIGHTING MEASURES

Flammable Properties: During a fire, this product decomposes to form toxic gases.

Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear. Evacuate area and fight fire from a safe distance.

Extinguishing Media: Use media appropriate to surrounding fire conditions

Extinguishing Media NOT To Be Used: Not applicable

Fire / Explosion Hazards: None reported

Hazardous Combustion Products: This material will not burn.

6. ACCIDENTAL RELEASE MEASURES

Spill Response 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.

Containment Technique: Absorb spilled liquid with non-reactive sorbent material. Dike large spills to keep spilled material from entering sewage and drainage systems or bodies of water.

Clean-up Technique: Absorb spilled liquid with non-reactive sorbent material. Sweep up material. Place material in a plastic bag. Mark bag 'Non-hazardous trash', and dispose of as normal refuse. Decontaminate the area of the spill with a soap solution.

Evacuation Procedure: Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.

DOT Emergency Response Guide Number: Not applicable

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes skin Do not breathe mist or vapors. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

Storage: Store between 5 - 25 °C. Keep away from: direct sunlight Protect from: heat

Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Have an eyewash station nearby. Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields

Skin Protection: disposable latex gloves

Inhalation Protection: adequate ventilation

Precautionary Measures: Avoid contact with: eyes skin Do not breathe: mist/vapor Wash thoroughly after handling.

TLV: Not established

PEL: Not established

For Occupational Exposure Limits (OEL) for ingredients, see section 3 - Composition/Information on Ingredients.:

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Turbid, milky suspension

Physical State: Liquid

Molecular Weight: Not applicable

Odor: None

Odor Threshold: Odorless

pH: 8.14

Metal Corrosivity:

Corrosivity Classification: Not classified as corrosive to metals according to GHS criteria.

Steel: Not determined

Aluminum: Not determined

Specific Gravity/ Relative Density (water = 1; air =1): 1.01

Viscosity: Not determined

Solubility:

Water: Miscible
Acid: Miscible
Other: Not determined
Partition Coefficient (n-octanol / water): Not applicable
Coefficient of Water / Oil: Not applicable
Melting Point: Not applicable
Decomposition Temperature: Not applicable
Boiling Point: 100°C
Vapor Pressure: Not determined
Vapor Density (air = 1): Not determined
Evaporation Rate (water = 1): Not determined
Volatile Organic Compounds Content: Not determined
Flammable Properties: During a fire, this product decomposes to form toxic gases.
Flash Point: Not applicable
Method: Not applicable
Flammability Limits:
Lower Explosion Limits: Not applicable
Upper Explosion Limits: Not applicable
Autoignition Temperature: Not determined
Explosive Properties:
Not classified according to GHS criteria.
Oxidizing Properties:
Not classified according to GHS criteria.
Reactivity Properties:
Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.
Gas under Pressure:
Not classified according to GHS criteria.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Mechanical Impact: None reported
Static Discharge: None reported.
Reactivity / Incompatibility: Incompatible with: oxidizers
Hazardous Decomposition: Heating to decomposition releases: ammonia carbon monoxide formaldehyde nitrogen oxides
Conditions to Avoid: Extreme temperatures

11. TOXICOLOGICAL INFORMATION

Toxicokinetics, Metabolism and Distribution: No information available for mixture.
Toxicologically Synergistic Products: None reported
Acute Toxicity: Based on classification principles, the classification criteria are not met.
Hexamethylenetetramine: LD 50 Orl Rat - 9200 mg/kg bw
Specific Target Organ Toxicity - Single Exposure (STOT-SE): Based on classification principles, the classification criteria are not met.
Specific Target Organ Toxicity - Repeat Exposure (STOT-RE): Based on classification principles, the classification criteria are not met.
Skin Corrosion/Irritation: Based on classification principles, the classification criteria are not met.
Eye Damage: Based on classification principles, the classification criteria are not met.
Sensitization: Contains a sensitizing compound. Respiratory Sensitizer Skin Sensitizer
Hexamethylenetetramine: skin sensitizer; in water, has been reported as a respiratory sensitizer.
CMR Effects/Properties (carcinogenic, mutagenic or toxic to reproduction): No germ cell mutagenicity, carcinogenicity or reproductive toxicity data found.
This product does NOT contain any IARC listed chemicals.
This product does NOT contain any NTP listed chemicals.
This product does NOT contain any OSHA listed carcinogens.
Symptoms/Effects:
Ingestion: May cause: gastrointestinal tract irritation kidney damage
Inhalation: May cause: allergic respiratory reaction allergic skin reaction

Skin Absorption: None Reported
Chronic Effects: Chronic overexposure may cause symptoms similar to acute exposure.
Medical Conditions Aggravated: Allergies or sensitivity to hexamethylenetetramine.

12. ECOLOGICAL INFORMATION

Product Ecological Information: --

No ecological data available for this product. Mobility in soil: No data available

Ingredient Ecological Information: Hexamethylenetetramine: Water Pollution Factors: BOD₅: 0.015, 0.026, std. dil. sew.

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: Not applicable

Special Instructions (Disposal): Dilute material with excess water making a weaker than 5% solution. Open cold water tap completely, slowly pour the material to the drain. Flush system with plenty of water.

Empty Containers: Rinse three times with an appropriate solvent. Dispose of empty container as normal trash.

NOTICE (Disposal): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

14. TRANSPORT INFORMATION

D.O.T.:

D.O.T. Proper Shipping Name: Not Currently Regulated

--

Hazard Class: NA

Subsidiary Risk: NA

ID Number: NA

Packing Group: NA

T.D.G.:

Proper Shipping Name: Not Currently Regulated

--

Hazard Class: NA

Subsidiary Risk: NA

UN Number/PIN: NA

Packing Group: NA

I.C.A.O.:

I.C.A.O. Proper Shipping Name: Not Currently Regulated

--

Hazard Class: NA

Subsidiary Risk: NA

ID Number: NA

Packing Group: NA

I.M.O.:

Proper Shipping Name: Not Currently Regulated

--

Hazard Class: NA

Subsidiary Risk: NA

ID Number: NA

Packing Group: NA

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 set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

O.S.H.A.: This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

E.P.A.:

S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370): Immédiat (aigu) Danger pour la santé Delayed (Chronic) Health Hazard

S.A.R.A. Title III Section 313 (40 CFR 372): This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.

--

302 (EHS) TPQ (40 CFR 355): Not applicable

304 CERCLA RQ (40 CFR 302.4): Not applicable

304 EHS RQ (40 CFR 355): Not applicable

Clean Water Act (40 CFR 116.4): Not applicable

RCRA: Contains no RCRA regulated substances.

State Regulations:

California Prop. 65: No Prop. 65 listed chemicals are present in this product.

Identification of Prop. 65 Ingredient(s): Not applicable

California Perchlorate Rule CCR Title 22 Chap 33: Not applicable

Trade Secret Registry: Not applicable

National Inventories:

U.S. Inventory Status: All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).

CAS Number: Not applicable

Canadian Inventory Status: All ingredients of this product are DSL Listed.

EEC Inventory Status: All ingredients used to make this product are listed on EINECS / ELINCS.

Australian Inventory (AICS) Status: All ingredients are listed.

New Zealand Inventory (NZIoC) Status: All components either listed or exempt.

Korean Inventory (KECI) Status: All components of this product are either listed, listed as the anhydrous compound or exempt.

Japan (ENCS) Inventory Status:

China (PRC) Inventory (MEP) Status:

16. OTHER INFORMATION

References: 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Association, 1991. IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans. World Health Organization (Volumes 1-42) Supplement 7. France: 1987. Lefevre, Marc J. First Aid Manual for Chemical Accidents, 2nd Ed. New York: Van Nostrand Reinhold Company, 1989. List of Dangerous Substances Classified in Annex I of the EEC Directive (67/548) - Classification, Packaging and Labeling of Dangerous Substances, Amended July 1992. Sixth Annual Report on Carcinogens, 1991. U.S. Department of Health and Human Services. Rockville, MD: Technical Resources, Inc. 1991. Technical Judgment. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Verschueren, Karel. Handbook of Environmental Data on Organic Chemicals. New York: Van Nostrand Reinhold Co., 1977.

Complete Text of H phrases referred to in Section 3:

Revision Summary: . Substantially Revised MSDS

Date of MSDS Preparation:

Day: 18

Month: April

Year: 2013

MSDS Prepared: MSDS prepared by Product Compliance Department extension 3350

CCOHS Evaluation Note: This product has been classified and labeled in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3). It is offered under exemption from WHMIS labeling as specified in the Controlled Products Regulation (CPR) Section 17. It is offered under the interim policy that was established by Health Canada permitting use of GHS-formatted safety data sheets in Canada prior to revision of CPR to GHS.

Legend:

NA - Not Applicable

ND - Not Determined

NV - Not Available

w/w - weight/weight

w/v - weight/volume

v/v - volume/volume

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.**

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Hach Company
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Loveland, CO USA 80539
(970) 669-3050

MSDS No: M01361

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: STABLCAL® FORMAZIN STANDARD 800 NTU
Catalog Number: 2660501

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

Emergency Telephone Numbers:
(Medical and Transportation)
(303) 623-5716 24 Hour Service
(515)232-2533 8am - 4pm CST

MSDS Number: M01361
Chemical Name: Not applicable
CAS Number: Not applicable
Additional CAS No. (for hydrated forms): Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
Intended Use: Laboratory Use Standard solution

2. HAZARDS IDENTIFICATION

GHS Classification:

Hazard categories: Respiratory or Skin Sensitization: Skin Sens.1 Respiratory or Skin Sensitization: Resp. Sens.1

GHS Label Elements:

DANGER



Hazard statements: May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements: Avoid breathing dust/fume/gas/mist/vapours/spray. Wear protective gloves / protective clothing / eye protection / face protection. IF INHALED: Remove victim/person to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention.

HMIS:

Health: 2

Flammability: 0

Reactivity: 0

Protective Equipment: X - See protective equipment, Section 8.

NFPA:

Health: 2

Flammability: 0

Reactivity: 0

Symbol: Not applicable

WHMIS Hazard Classification: Class D, Division 2, Subdivision B - Toxic material (other toxic effects)

WHMIS Symbols: Other Toxic Effects

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components according to GHS:

Hexamethylenetetramine

CAS Number: 100-97-0

Chemical Formula: C₆H₁₂N₄

GHS Classification: Flam. Sol.1, H228; Acute Tox. 4-Orl, H302; Skin Sens. 1, H317; Resp. Sens. 1, H334

Percent Range: 1.0 - 10.0

Percent Range Units: weight / weight

PEL: 15 mg/m³ as inhalable dust; 5 mg/m³ as respirable dust

TLV: 10 mg/m³ as inhalable dust; 3 mg/m³ as respirable dust

WHMIS Symbols: Flammable / Combustible Other Toxic Effects

Hazardous Components according to GHS: No

Demineralized Water

CAS Number: 7732-18-5

Chemical Formula: H₂O

GHS Classification: Non hazardous

Percent Range: 90.0 - 100.0

Percent Range Units: weight / weight

PEL: Not established

TLV: Not established

WHMIS Symbols: Not applicable

Other components, each

CAS Number: Not applicable

Chemical Formula: Not applicable.

GHS Classification: Not applicable

Percent Range: < 1.0

Percent Range Units: weight / weight

PEL: Not established

TLV: Not established

WHMIS Symbols: Not applicable

Formazin Polymer

CAS Number: Not applicable

Chemical Formula: Not applicable

GHS Classification: Not applicable

Percent Range: < 1.0

Percent Range Units: weight / weight

PEL: Not established.

TLV: Not established.

WHMIS Symbols: Not applicable

4. FIRST AID MEASURES

General Information: In the event of exposure, show this Material Safety Data Sheet and label (where possible) to a doctor.

Advice to doctor: Treat symptomatically.

Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician if irritation develops.

Skin Contact (First Aid): Wash skin with soap and plenty of water. Call physician if irritation develops.

Inhalation: Remove to fresh air. Give artificial respiration if necessary. If you feel unwell, contact a physician. If concerned contact a physician.

Ingestion (First Aid): Never give anything by mouth to an unconscious person. Rinse mouth with plenty of water. Give large quantities of water. If you feel unwell, contact a physician. If concerned contact a physician.

5. FIRE FIGHTING MEASURES

Flammable Properties: Material is not classified as flammable according to GHS criteria. During a fire, this product decomposes to form toxic gases.

Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear. Evacuate area and fight fire from a safe distance.

Extinguishing Media: Use media appropriate to surrounding fire conditions

Extinguishing Media NOT To Be Used: Not applicable

Fire / Explosion Hazards: May react violently with: strong acids oxidizers

Hazardous Combustion Products: This material will not burn.

6. ACCIDENTAL RELEASE MEASURES

Spill Response 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.

Containment Technique: Stop spilled material from being released to the environment. Absorb spilled liquid with non-reactive sorbent material. Dike large spills to keep spilled material from entering sewage and drainage systems or bodies of water.

Clean-up Technique: Absorb spilled liquid with non-reactive sorbent material. Sweep up material. Place material in a plastic bag. Dispose of material in government approved hazardous waste facility. Decontaminate the area of the spill with a soap solution.

Evacuation Procedure: Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.

DOT Emergency Response Guide Number: Not applicable

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes skin. Do not breathe mist or vapors. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

Storage: Store between 5 - 25 °C. Keep away from: direct sunlight. Protect from: heat acids oxidizers

Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Have an eyewash station nearby. Maintain general industrial hygiene practices when using this product.

Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields

Skin Protection: disposable latex gloves. In the EU, the selected gloves must satisfy the specifications of EU Directive 89/686/EEC and standard EN 374 derived from it.

Inhalation Protection: adequate ventilation

Precautionary Measures: Avoid contact with: eyes skin. Do not breathe: mist/vapor. Wash thoroughly after handling. Keep away from: acids/acid fumes oxidizers

TLV: Not established

PEL: Not established

For Occupational Exposure Limits (OEL) for ingredients, see section 3 - Composition/Information on Ingredients.:

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Turbid, milky suspension

Physical State: Liquid

Molecular Weight: Not applicable

Odor: Odorless

Odor Threshold: Not applicable

pH: 7.47

Metal Corrosivity:

Corrosivity Classification: Not classified as corrosive to metals according to GHS criteria.

Steel: Not determined

Aluminum: Not determined

Specific Gravity/ Relative Density (water = 1; air =1): 1.015

Viscosity: Not determined

Solubility:

Water: Miscible

Acid: Miscible

Other: Not determined

Partition Coefficient (n-octanol / water): Not applicable

Coefficient of Water / Oil: Not applicable

Melting Point: 0 °C (32 °F)

Decomposition Temperature: Not determined

Boiling Point: 100 °C (212 °F)

Vapor Pressure: Not determined

Vapor Density (air = 1): Not determined

Evaporation Rate (water = 1): Not determined

Volatile Organic Compounds Content: Not determined

Flammable Properties: Material is not classified as flammable according to GHS criteria. During a fire, this product decomposes to form toxic gases.

Flash Point: Not applicable

Method: Not applicable

Flammability Limits:

Lower Explosion Limits: Not applicable

Upper Explosion Limits: Not applicable

Autoignition Temperature: Not applicable

Explosive Properties:

Not classified according to GHS criteria.

Oxidizing Properties:

Not classified according to GHS criteria.

Reactivity Properties:

Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.

Gas under Pressure:

Not classified according to GHS criteria.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable when stored under proper conditions.

Mechanical Impact: None reported

Static Discharge: None reported.

Reactivity / Incompatibility: Incompatible with: oxidizers ammonia salts acids

Hazardous Decomposition: Heating to decomposition releases: ammonia carbon monoxide formaldehyde nitrogen oxides

Conditions to Avoid: Extreme temperatures Heating to decomposition.

11. TOXICOLOGICAL INFORMATION

Toxicokinetics, Metabolism and Distribution: No information available for mixture.

Toxicologically Synergistic Products: None reported

Acute Toxicity: Acute Toxicity Estimate (ATE) - Calculated from Ingredient Toxicity Data Practically Non-toxic Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity - Single Exposure (STOT-SE): Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity - Repeat Exposure (STOT-RE): Based on classification principles, the classification criteria are not met.

Skin Corrosion/Irritation: Based on classification principles, the classification criteria are not met.

Eye Damage: Based on classification principles, the classification criteria are not met.

Sensitization: Skin Sensitizer Respiratory Sensitizer Contains a sensitizing compound.

Hexamethylenetetramine

CMR Effects/Properties (carcinogenic, mutagenic or toxic to reproduction): Based on classification principles, the classification criteria are not met.

This product does NOT contain any IARC listed chemicals.

This product does NOT contain any NTP listed chemicals.

This product does NOT contain any OSHA listed carcinogens.

Symptoms/Effects:

Ingestion: May cause: gastrointestinal tract irritation nausea vomiting Very large doses may cause: kidney damage

Inhalation: May cause: allergic respiratory reaction

Skin Absorption: None Reported

Chronic Effects: Chronic overexposure may cause symptoms similar to acute exposure.

Medical Conditions Aggravated: Allergies or sensitivity to hexamethylenetetramine.

12. ECOLOGICAL INFORMATION

Product Ecological Information: --

Mobility in soil: No data available No ecological data available for this product. Based on classification principles, not classified as hazardous to the environment.

Ingredient Ecological Information: --

Ecological data for ingredients is not indicative of likely ecological harm. CEPA categorization for ingredients are as follows:

Hexamethylenetetramine, Water: Persistent, not bioaccumulative or inherently toxic to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: Not applicable

Special Instructions (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. Otherwise, Check with national, local municipal and state authorities and waste contractors for pertinent local information on the disposal of this article.

Empty Containers: Rinse three times with an appropriate solvent. Collect rinsate and dispose of according to local, state or federal regulations. In the US, rinsate from empty containers is classified as hazardous waste and should be disposed of at an E.P. A. approved facility. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste.

NOTICE (Disposal): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

14. TRANSPORT INFORMATION

D.O.T.:

D.O.T. Proper Shipping Name: Not Currently Regulated

--

Hazard Class: NA

Subsidiary Risk: NA

ID Number: NA

Packing Group: NA

T.D.G.:

Proper Shipping Name: Not Currently Regulated

--

Hazard Class: NA

Subsidiary Risk: NA

UN Number/PIN: NA

Packing Group: NA

I.C.A.O.:

I.C.A.O. Proper Shipping Name: Not Currently Regulated

--

Hazard Class: NA

Subsidiary Risk: NA

ID Number: NA

Packing Group: NA

I.M.O.:

Proper Shipping Name: Not Currently Regulated

--

Hazard Class: NA

Subsidiary Risk: NA

ID Number: NA

Packing Group: NA

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 set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

O.S.H.A.: This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

E.P.A.:

S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370): Immediate (Acute) Health Hazard

S.A.R.A. Title III Section 313 (40 CFR 372): This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.

--

302 (EHS) TPQ (40 CFR 355): Not applicable

304 CERCLA RQ (40 CFR 302.4): Not applicable

304 EHS RQ (40 CFR 355): Not applicable

Clean Water Act (40 CFR 116.4): Not applicable

RCRA: Contains no RCRA regulated substances.

State Regulations:

California Prop. 65: No Prop. 65 listed chemicals are present in this product.

Identification of Prop. 65 Ingredient(s): Not applicable

California Perchlorate Rule CCR Title 22 Chap 33: Not applicable

Trade Secret Registry: Not applicable

National Inventories:

U.S. Inventory Status: All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).

CAS Number: Not applicable

Canadian Inventory Status: All ingredients of this product are DSL Listed.

EEC Inventory Status: All ingredients used to make this product are listed on EINECS / ELINCS.

Australian Inventory (AICS) Status: All ingredients are listed.

New Zealand Inventory (NZIoC) Status: All components either listed or exempt.

Korean Inventory (KECI) Status: All components of this product are either listed, listed as the anhydrous compound or exempt.

Japan (ENCs) Inventory Status: All components either listed or exempt.

China (PRC) Inventory (MEP) Status: All components either listed or exempt.

16. OTHER INFORMATION

References: 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Association, 1991. IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans. World Health Organization (Volumes 1-42) Supplement 7. France: 1987. Lefevre, Marc J. First Aid Manual for Chemical Accidents, 2nd Ed. New York: Van Nostrand Reinhold Company, 1989. List of Dangerous Substances Classified in Annex I of the EEC Directive (67/548) - Classification, Packaging and Labeling of Dangerous Substances, Amended July 1992. Sixth Annual Report on Carcinogens, 1991. U.S. Department of Health and Human Services. Rockville, MD: Technical Resources, Inc. 1991. Technical Judgment. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Verschueren, Karel. Handbook of Environmental Data on Organic Chemicals. New York: Van Nostrand Reinhold Co., 1977.

Complete Text of H phrases referred to in Section 3: H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H317 May cause an allergic skin reaction. H228 Flammable solid.

Revision Summary: . Substantially Revised MSDS Substantial revision to comply with EU Reg 1272/2008, Reg 1907/2006 and UN GHS (ST/SG/AC.10/36/Add.3).

Date of MSDS Preparation:

Day: 28

Month: January

Year: 2014

MSDS Prepared: MSDS prepared by Product Compliance Department extension 3350

CCOHS Evaluation Note: This product has been classified and labeled in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3). It is offered under exemption from WHMIS labeling as specified in the Controlled Products Regulation (CPR) Section 17. It is offered under the interim policy that was established by Health Canada permitting use of GHS-formatted safety data sheets in Canada prior to revision of CPR to GHS.

Legend:

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

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.**

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