SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: zTKM C MicroCap
Catalog Number: TNT1880C

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 No: M02448
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 Reagent Determination of total nitrogen

2. HAZARDS IDENTIFICATION

GHS Classification:
Hazard categories: Acute Toxicity: Acute Tox. 4-Ore Hazardous to the Aquatic Environment: Aquatic Chronic 3

GHS Label Elements: WARNING

Hazard statements: Harmful if swallowed. Harmful to aquatic life with long lasting effects.
Contact with acids liberates toxic gas.

Precautionary statements: Handle environmental release according to local, state, federal, provincial requirements. Wear protective gloves/protective clothing/eye protection/face protection. If SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

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:
Sodium Sulfite

CAS Number: 7757-83-7
Chemical Formula: Na₂SO₃
GHS Classification: Acute Tox. 5 -Orl, H303; Acute Tox. 5 -Derm, H313; Acute Tox. 5 -Inh, H333; Aquatic Acute 3, H402;
Percent Range (Trade Secret): 80.0 - 90.0
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

WHMIS Symbols: Other Toxic Effects

Sodium Azide

CAS Number: 26628-22-8
Chemical Formula: NaN₃
GHS Classification: Acute Tox. 2-Orl, H300; Aquatic acute 1. H400; Aquatic chronic 1. H410
Percent Range (Trade Secret): 0.1 - 1.0
Percent Range Units: weight / weight
PEL: Not established
TLV: C: 0.29 mg/m³ as Sodium azide; C 0.11 ppm as Hydrazoic acid vapor

WHMIS Symbols: Acute Poison

Hazardous Components according to GHS: No

Dextran

CAS Number: 9004-54-0
Chemical Formula: (C₆H₁₀O₅)ₙ n
GHS Classification: Non-Haz
Percent Range (Trade Secret): 10.0 - 20.0
Percent Range Units: weight / weight
PEL: Not established
TLV: Not established

WHMIS Symbols: Other Toxic Effects

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 plenty of water. Call physician if irritation develops.
Inhalation: Remove to fresh air.
Ingestion (First Aid): Call physician immediately. Give 1-2 glasses of water under medical supervision. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Flammable Properties: Does not burn, but may melt in a fire, releasing 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: This product will not burn or explode.
Hazardous Combustion Products: carbon monoxide, carbon dioxide, nitrogen oxides, sulfur oxides.

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.

**Clean-up Technique:** Never put unreacted azides down the drain! Avoid contact with spilled material. If permitted by regulation, sweep up 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

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**7. HANDLING AND STORAGE**

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

**Storage:** Keep container tightly closed when not in use.

**Flammability Class:** Not applicable

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**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:** Avoid contact with: eyes skin. Do not breathe: dust. Wash thoroughly after handling.

**TLV:** Not established

**PEL:** Not established

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

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance:** White

**Physical State:** Solid

**Molecular Weight:** Not applicable

**Odor:** Odorless

**Odor Threshold:** Not applicable

**pH:** Solution: pH 10 at 20° C

**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):** Not determined

**Viscosity:** Not determined

**Solubility:**

- Water: Complete
- Acid: Reactive
- Other: Not determined

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

**Coefficient of Water / Oil:** Not applicable

**Melting Point:** Not determined

**Decomposition Temperature:** Not determined

**Boiling Point:** Not applicable

**Vapor Pressure:** Not determined

**Vapor Density (air = 1):** Not determined

**Evaporation Rate (water = 1):** Not determined

**Volatile Organic Compounds Content:** 15-20% (non-volatile)

**Flammable Properties:** Does not burn, but may melt in a fire, releasing toxic fumes.

**Flash Point:** Not applicable
Method: Not applicable
Flammability Limits:
  Lower Explosion Limits: Not determined
  Upper Explosion Limits: Not determined
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: acids oxidizers
Hazardous Decomposition: Heating to decomposition releases: sulfur oxides carbon monoxide carbon dioxide nitrogen oxides
Conditions to Avoid: Heating to decomposition. Excess moisture

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
  ATE Oral Rat LD50 = 1805 mg/kg
  ATE Dermal Rat LD50 = 3044 mg/kg
  ATE Inhalation Rat LC50 = 6783.3 mg/l
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: 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.
  This product does NOT contain any NTP listed chemicals.
  This product does NOT contain any OSHA listed carcinogens.
Symptoms/Effects:
  Ingestion: May cause: abdominal pain diarrhea colic circulatory disturbances central nervous system depression allergic reaction
  Inhalation: May cause: respiratory tract irritation sore throat coughing allergic respiratory reaction
  Skin Absorption: None Reported
  Chronic Effects: None reported
Medical Conditions Aggravated: Sulfites are strong sensitizers. Inhalation and ingestion may cause allergic respiratory reactions in asthmatics. Persons with respiratory conditions should take special care when working with products that contain sulfites. Pre-existing Eye conditions Skin conditions

12. ECOLOGICAL INFORMATION

Product Ecological Information: --
  No ecological data available for this product. Mobility in soil: No data available
Ingredient Ecological Information: Sodium sulfite: 96 hr Leuciscus idus LC50 = 170-370 mg/L; 48 hr Daphnia magna EC50 = 18 mg/L; Chlamydomonas reinhardtii EC50 = 63-126 mg/L;
Sodium Azide: 96 hr Oncorhynchus mykiss LC50 = 0.8 mg/L; 96 hr Lepomis macrochirus LC50 = 0.68 mg/L; 48 hr Daphnia pulex EC50 = 4.2 mg/L; 96 hr Selenastrum capricornutum ErC50 = 0.348 mg/L.
CEPA Statement: Sodium sulfate: Persistent, not bioaccumulative or inherently toxic to aquatic organisms; Sodium azide: Persistent, inherently toxic to aquatic organisms, not bioaccumulative.

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: Not applicable
Special Instructions (Disposal): Never put unreacted azides down the drain! Work in an approved fume hood. Dilute material with excess water making a weaker than 5% solution. Add an excess of 20% sodium nitrite solution and mix well. Slowly acidify the solution with sulfuric acid with constant stirring. Nitrogen oxide gas will evolve until the reaction is complete. Test for complete reaction with starch-iodine paper, it should turn blue. Open cold water tap completely, slowly pour the material to the drain. Allow cold water to run for 5 minutes to completely flush the system. Verification should be made that such disposal is not inconsistent with any pretreatment agreement your facility may have with the wastewater treatment facility.
Empty Containers: Rinse three times with an appropriate solvent. Rinse 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:
OSHA: 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): Sodium Azide 500 lbs.
- 304 CERCLA RQ (40 CFR 302.4): Sodium azide 1000 lbs.

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): 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).
- 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


Complete Text of H phrases referred to in Section 3: H302 Harmful if swallowed. H412 Harmful to aquatic life with long lasting effects.

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: 01
- Month: August
- Year: 2014

MSDS Prepared: MSDS prepared by Product Compliance Department extension 3350

CCOHS Evaluation Note: It is offered under exemption from WIMIS 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
- 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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