

# SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Triazole Reagent  
**Catalog Number:** 2141299

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:** M00096  
**Chemical Name:** Not applicable  
**CAS Number:** Not applicable  
**Additional CAS No. (for hydrated forms):** Not applicable  
**Chemical Formula:** Not applicable  
**Chemical Family:** Mixture  
**Intended Use:** Determination of benzotriazole and tolyltriazole

## 2. HAZARDS IDENTIFICATION

**GHS Classification:**

**Hazard categories:** Acute Toxicity: Acute Tox. 4-Orl . Skin Corrosion/Irritation: Skin Irrit. 2 Serious Eye Damage/Eye Irritation: Eye Dam. 1 . Respiratory or Skin Sensitization: Resp. Sens.1 Hazardous to the Aquatic Environment: Aquatic Chronic 3

**GHS Label Elements:**  
DANGER



**Hazard statements:** . . Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Harmful to aquatic life with long lasting effects.

**Precautionary statements:** Avoid breathing dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product. 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 occurs: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

**HMIS:**

**Health:** 3  
**Flammability:** 0  
**Reactivity:** 1  
**Protective Equipment:** X - See protective equipment, Section 8.

**NFPA:**

**Health:** 3  
**Flammability:** 0  
**Reactivity:** 1  
**Symbol:** Not applicable

**WHMIS Hazard Classification:** Class D, Division 2, Subdivision A - Very toxic materials (other toxic effects)

**WHMIS Symbols:** Other Toxic Effects

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### 3. COMPOSITION / INFORMATION ON INGREDIENTS

#### *Hazardous Components according to GHS:*

##### Disodium Succinate

**CAS Number:** 150-90-3

**Chemical Formula:** C<sub>4</sub>H<sub>4</sub>O<sub>4</sub>Na<sub>2</sub>

**GHS Classification:** Acute Tox. Orl. 4, H302

**Percent Range:** 45.0 - 55.0

**Percent Range Units:** weight / weight

**PEL:** 15 mg/m<sup>3</sup> as inhalable dust; 5 mg/m<sup>3</sup> as respirable dust

**TLV:** 10 mg/m<sup>3</sup> as inhalable dust; 3 mg/m<sup>3</sup> as respirable dust

**WHMIS Symbols:** Not applicable

##### Sodium Metabisulfite

**CAS Number:** 7681-57-4

**Chemical Formula:** Na<sub>2</sub>S<sub>2</sub>O<sub>5</sub>

**GHS Classification:** Acute Tox. Orl 4, H302; Acute Tox. Derm 5, H313; Acute Tox. Inh. 4, H332; Skin Irrit. 2, H315;

Eye Dam. 1, H318; Resp. Sens. 1, H334; Aquatic Chronic 3, H412

**Percent Range:** 25.0 - 35.0

**Percent Range Units:** weight / weight

**PEL:** 15 mg/m<sup>3</sup> as inhalable dust; 5 mg/m<sup>3</sup> as respirable dust

**TLV:** 5 mg/m<sup>3</sup>

**WHMIS Symbols:** Other Toxic Effects

##### Succinic Acid

**CAS Number:** 110-15-6

**Chemical Formula:** HOOCCH<sub>2</sub>CH<sub>2</sub>COOH

**GHS Classification:** Acute Tox 5-Orl, H303; Skin Irrit 2, H315; Eye Dam 1, H318; STOT Single 3, H335

**Percent Range:** 15.0 - 25.0

**Percent Range Units:** weight / weight

**PEL:** 15 mg/m<sup>3</sup> as inhalable dust; 5 mg/m<sup>3</sup> as respirable dust

**TLV:** 10 mg/m<sup>3</sup> as inhalable dust; 3 mg/m<sup>3</sup> as respirable dust

**WHMIS Symbols:** Other Toxic Effects

##### Cyclohexanediarninetetraacetic Acid, Disodium Salt

**CAS Number:** 5786-78-7

**Chemical Formula:** C<sub>14</sub>H<sub>20</sub>N<sub>2</sub>O<sub>8</sub>Na<sub>2</sub> · x H<sub>2</sub>O

**GHS Classification:** Eye Irrit. 2A, H319

**Percent Range:** 1.0 - 10.0

**Percent Range Units:** weight / weight

**PEL:** 15 mg/m<sup>3</sup> as inhalable dust; 5 mg/m<sup>3</sup> as respirable dust

**TLV:** 10 mg/m<sup>3</sup> as inhalable dust; 3 mg/m<sup>3</sup> as respirable dust

**WHMIS Symbols:** Not applicable

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### 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 immediately.

**Skin Contact (First Aid):** Wash skin with soap and plenty of water for 15 minutes. Remove contaminated clothing. Call physician if irritation develops. If you feel unwell, contact a physician.

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

**Ingestion (First Aid):** Give large quantities of water. Never give anything by mouth to an unconscious person. If vomiting occurs, avoid aspiration by keeping head below hips. If you feel unwell, contact a physician.

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## 5. FIRE FIGHTING MEASURES

**Flammable Properties:** Material is not classified as flammable according to GHS criteria. During a fire, irritating and highly toxic gases may be generated by thermal decomposition. May be combustible at high temperature.

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

**Extinguishing Media:** Dry chemical. Alcohol foam. Carbon dioxide

**Extinguishing Media NOT To Be Used:** Not applicable

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

**Hazardous Combustion Products:** Toxic fumes of: sodium monoxide sulfur oxides. carbon monoxide, carbon dioxide. nitrogen oxides.

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## 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. Releases of this material may contaminate the environment.

**Clean-up Technique:** Scoop up spilled material into a large beaker and dissolve with water. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Decontaminate the area of the spill with a soap solution. If permitted by regulation, Flush reacted material to the drain with a large excess of water. Otherwise, Dispose of in accordance with local, state and federal regulations or laws.

**Evacuation Procedure:** Evacuate local area (15 foot radius or as directed by your facility's emergency response plan) when: a pound or more of loose powder is spilled. 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 clothing Wash thoroughly after handling. Use with adequate ventilation. Do not breathe dust. Maintain general industrial hygiene practices when using this product.

**Storage:** Store in a cool, dark, dry place. Store at 10 - 30°C. Protect from: moisture light Keep away from: acids oxidizers

**Flammability Class:** Not applicable

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Have an eyewash station nearby. Have a safety shower nearby. Use general ventilation to minimize exposure to mist, vapor or dust. Maintain general industrial hygiene practices when using this product.

### **Personal Protective Equipment:**

**Eye Protection:** chemical splash goggles Suitable facilities (eyewash station or bottle) for flushing of the eyes

**Skin Protection:** nitrile gloves lab coat Suitable facilities for quickly drenching or flushing skin after chemical exposure should be available.

**Inhalation Protection:** adequate ventilation

**Precautionary Measures:** Avoid contact with: eyes skin clothing Wash thoroughly after handling. Use with adequate ventilation. Do not breathe: dust Protect from: heat moisture light Keep away from: acids/acid fumes oxidizers

**TLV:** Not established

**PEL:** 15 mg/m<sup>3</sup> as inhalable dust; 5 mg/m<sup>3</sup> as respirable dust

**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 powder

**Physical State:** Solid

**Molecular Weight:** Not applicable

**Odor:** Odorless

**Odor Threshold:** Not applicable

**pH:** 5% solution = 4.9

**Metal Corrosivity:**

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

**Steel:** Not applicable

**Aluminum:** Not applicable

**Specific Gravity/ Relative Density (water = 1; air =1):** 1.76

**Viscosity:** Not applicable

**Solubility:**

**Water:** Soluble

**Acid:** Soluble

**Other:** Not applicable

**Partition Coefficient (n-octanol / water):** Estimation:  $\log K_{ow} = -2.65$

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

**Melting Point:** 215 °C (419 °F)

**Decomposition Temperature:** Not applicable

**Boiling Point:** Not applicable

**Vapor Pressure:** Not applicable

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

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

**Volatile Organic Compounds Content:** Not applicable

**Flammable Properties:** Material is not classified as flammable according to GHS criteria. During a fire, irritating and highly toxic gases may be generated by thermal decomposition. May be combustible at high temperature.

**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.

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## 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable when stored under proper conditions.

**Mechanical Impact:** None reported

**Static Discharge:** None reported.

**Reactivity / Incompatibility:** May react violently in contact with: oxidizers Incompatible with: acids aluminum

**Hazardous Decomposition:** Heating to decomposition releases toxic and/or corrosive fumes of: sulfur oxides carbon dioxide carbon monoxide nitrogen oxides sodium oxides

**Conditions to Avoid:** Excess moisture Extreme temperatures Excessive heat Heating to decomposition. Exposure to light. Contact with acid or acid fumes Contact with oxidizers Avoid creating dust. Poor Ventilation Incompatibles

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## 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 Route Data Given Below

Oral Rat LD50 = 1008 mg/kg

Dermal Guinea Pig LD50 = 3440 mg/kg

Inhalation Rat LC50 = 7 mg/L/4 hr

**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:** Irritating to skin.

**Eye Damage:** Corrosive to eyes.

**Sensitization:** Respiratory Sensitizer Contains a sensitizing compound.

Sodium Metabisulfite (29%)

**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 NTP listed chemicals.

This product does NOT contain any OSHA listed carcinogens.

**Symptoms/Effects:**

**Ingestion:** Harmful if swallowed May cause: irritation of the mouth and esophagus nausea vomiting diarrhea weakness central nervous system depression circulatory disturbances May cause allergic respiratory reaction if swallowed or inhaled.

**Inhalation:** May cause: weakness central nervous system depression circulatory disturbances allergic respiratory reaction

**Skin Absorption:** May be harmful if absorbed through skin.

**Chronic Effects:** Chronic overexposure may cause allergic respiratory reactions central nervous system effects

Chronic ingestion of sodium metabisulfite caused anemia and reduced body weight gain in experimental animals.

**Medical Conditions Aggravated:** Pre-existing: Eye conditions Skin conditions Respiratory conditions Asthma 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.

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## 12. ECOLOGICAL INFORMATION

**Product Ecological Information:** --

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

Method Used for Estimation of Aquatic Toxicity of Mixture Summation Method M-factor (Multiplier) for highly toxic ingredients: 1

Estimation:  $\log K_{ow} = -2.65$ ; Estimation:  $\log K_{oc} = -0.02$

**Ingredient Ecological Information:** Sodium Metabisulfite: 96 hr Salmo gairdneri LC50 = 15-220 mg/L; 24 hr Daphnia magna EC50 = 89 mg/L; 96 hr Scenedesmus subspicatus EC50 = 40 mg/L; 96 hr Lepomis macrochirus LC50 = 32 mg/L; 96 hr fish LC50 > 12.5 mg/L; 96 hr Rainbow trout LC50 = 150 mg/L

CEPA categorization for ingredients are as follows:

CDTA, Disodium Salt, Disodium Succinate, Succinic Acid: Not persistent, bioaccumulative or inherently toxic to aquatic organisms; Sodium Metabisulfite: Persistent, not bioaccumulative or inherently toxic to aquatic organisms.

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## 13. DISPOSAL CONSIDERATIONS

**EPA Waste ID Number:** Not applicable

**Special Instructions (Disposal):** Dilute to 3 to 5 times the volume with cold water. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. If permitted by regulation, Open cold water tap completely, slowly pour the reacted material to the drain. Allow cold water to run for 5 minutes to completely flush the system. Otherwise, Check with local municipal and state authorities and waste contractors for pertinent local information regarding the proper disposal of chemicals.

**Empty Containers:** Working in a well-ventilated area, 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. 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.

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## 14. TRANSPORT INFORMATION

**D.O.T.:**

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

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**Hazard Class:** NA

**Subsidiary Risk:** NA

**ID Number:** NA

**Packing Group:** NA

**T.D.G.:**

**Proper Shipping Name:** Not Currently Regulated

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**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

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**Hazard Class:** NA

**Subsidiary Risk:** NA

**ID Number:** NA

**Packing Group:** NA

**I.M.O.:**

**Proper Shipping Name:** Not Currently Regulated

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**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.

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## 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:** 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:** Some ingredients are not 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:** Some ingredients are not listed or exempt.

**China (PRC) Inventory (MEP) Status:** Some ingredients are not listed or exempt.

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## 16. OTHER INFORMATION

**References:** TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans. World Health Organization (Volumes 1-42) Supplement 7. France: 1987. In-house information. Technical Judgment. Vendor Information.

**Complete Text of H phrases referred to in Section 3:** H302 Harmful if swallowed. Not applicable H318 Causes serious eye damage. 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:** 07

**Month:** October

**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).

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**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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