

World Headquarters
Hach Company
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MSDS No: M00116

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Name: TPTZ Iron Reagent
Catalog Number: 2608799

HACH LANGE GmbH
Willstätterstrasse 11
40549 Düsseldorf, Germany
+49-(0)211-52880

Emergency Telephone Numbers:
(Poison Information Center Main)
(+49 (0) 6131 19240) 24 HR

SDS Number: M00116
Chemical Name: Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
Use of the substance/preparation: Iron determination
CAS No.: Not applicable
Hazard: Causes irritation. May cause allergic reaction.
Date of MSDS Preparation:
Day: 12
Month: 01
Year: 2006

Additional Emergency Response Numbers: Austria: +49 (0)6131 19240, Belgium: +32-(0)70-245245, France: +33 (0)1-40370404, Italy: +39-0266101029, Netherlands: +31 -(0)30-2748888, Switzerland: +41-(0)1-2515151

2. COMPOSITION / INFORMATION ON INGREDIENTS

Sodium Hydrosulfite

EEC Number: 2318900
CAS No.: 7775146
Percent Range: 10,0 - 20,0
Percent Range Units: weight / weight
Ingredient EEC Symbol: Xn - HARMFUL
Ingredient R phrase(s) (R phrase details given in Heading 16): R 22
TLV: Not established
PEL: Not established
EU Occupational Exposure Limits: 3 mg/m³, Inhalable dust

2,4,6-Tri-(2-Pyridyl)-1,3,5-Triazine 1:3 Salt with p-Toluenesulfonic acid

EEC Number: None
CAS No.: None
Percent Range: 0,5 - 3,0
Percent Range Units: weight / weight
Ingredient EEC Symbol: Not applicable
Ingredient R phrase(s) (R phrase details given in Heading 16): Not applicable
TLV: Not established
PEL: Not established
EU Occupational Exposure Limits: 3 mg/m³, Inhalable dust

Citric acid, monosodium salt

EEC Number: 2427346
CAS No.: 18996-35-5
Percent Range: 15,0 - 25,0
Percent Range Units: weight / weight

Ingredient EEC Symbol: Not applicable
Ingredient R phrase(s) (R phrase details given in Heading 16): Not applicable
TLV: Not established
PEL: Not established
EU Occupational Exposure Limits: 3 mg/m³, Inhalable dust

Sodium Thiosulfate

EEC Number: 2318675
CAS No.: 10102-17-7
Percent Range: 35,0 - 45,0
Percent Range Units: weight / weight
Ingredient EEC Symbol: Not applicable
Ingredient R phrase(s) (R phrase details given in Heading 16): Not applicable
TLV: Not established
PEL: Not established
EU Occupational Exposure Limits: 3 mg/m³, Inhalable dust

Sodium Metabisulfite

EEC Number: 2316730
CAS No.: 7684574
Percent Range: 15,0 - 25,0
Percent Range Units: weight / weight
Ingredient EEC Symbol: Xn - HARMFUL
Ingredient R phrase(s) (R phrase details given in Heading 16): R 22 R 36/37/38 R 31
TLV: 5 mg/m³ (ACGIH - TWA)
PEL: Not established
EU Occupational Exposure Limits: 3 mg/m³, Inhalable dust

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: White powder
Odor: Sulfur-like
EU Symbols: Xn - HARMFUL
R PHRASES: R 31: Contact with acids liberates toxic gas. R 22: Harmful if swallowed. R 36/37/38: Irritating to eyes, respiratory system and skin.

Protective Equipment:

Potential Health Effects:

Eye Contact (EC): Causes irritation
Skin Contact (EC): May cause irritation
Skin Absorption (EC): None Reported
Target Organs (SA E): None Reported
Ingestion (EC): May cause: allergic respiratory reaction gastrointestinal tract irritation abdominal pain diarrhea circulatory disturbances central nervous system depression Very large doses may cause: colic depression death
Target Organs (Ing E): None Reported
Inhalation: Causes: respiratory tract irritation May cause: allergic respiratory reaction difficult breathing sweating rapid pulse and respirations blood pressure changes coughing flushing hives
Target Organs (Inh E): 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.
Chronic Effects: Chronic overexposure may cause allergic respiratory reactions
Cancer / Reproductive Toxicity Information:
An ingredient of this mixture is: IARC Group 3: Non-classifiable
Metabisulfites
Additional Cancer / Reproductive Toxicity Information: Contains: an experimental mutagen.
Toxicologically Synergistic Products: None reported

4. FIRST AID MEASURES

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): Do not induce vomiting. Give 1-2 glasses of water. Call physician immediately. Never give anything by mouth to an unconscious person.
Inhalation: Remove to fresh air. Give artificial respiration if necessary. Call physician.

5. FIRE FIGHTING MEASURES

Flammable Properties: Can burn in fire, releasing toxic vapors.
Hazardous Combustion Products: Toxic fumes of: sulfur oxides. nitrogen oxides. sodium monoxide carbon monoxide, carbon dioxide.
Fire / Explosion Hazards: May react violently with: acids oxidizers
Static Discharge: None reported.
Mechanical Impact: None reported
Extinguishing Media: Water. Carbon dioxide
Extinguishing Media NOT To Be Used: Not applicable Not applicable
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 should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.
Containment Technique: Stop spilled material from being released to the environment.
Clean-up Technique: Work in an approved fume hood. 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. Flush reacted material to the drain with a large excess of water. Decontaminate the area of the spill with a soap solution.
Evacuation Procedure: Evacuate local area (15 foot radius or as directed by your facility's emergency response plan) when: any quantity is spilled. If conditions warrant, increase the size of the evacuation.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes skin clothing Do not breathe dust. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.
Storage: Protect from: heat moisture Keep away from: acids oxidizers Store between 10° and 25°C.
Special Packaging Instructions: Not applicable
Use of the substance/preparation: Iron determination

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 / Hand Protection: disposable latex gloves lab coat
Inhalation Protection: adequate ventilation
Precautionary Measures: Avoid contact with: eyes skin clothing Do not breathe: dust Wash thoroughly after handling. Protect from: heat moisture Keep away from: acids/acid fumes oxidizers
TLV: Not established
PEL: Not established
EU Occupational Exposure Limits: 3 mg/m³, Inhalable dust

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: White powder
Physical State: Solid
Odor: Sulfur-like
pH: 1% solution = 3,8

Vapor Pressure: Not applicable
Vapor Density (air = 1): Not applicable
Boiling Point: Not applicable
Melting Point: 180°-185° C
Flash Point: Not applicable
Method: Not applicable
Autoignition Temperature: Not available
Flammability Limits:
Lower Explosion Limits: Not applicable
Upper Explosion Limits: Not applicable
Specific Gravity (water = 1): 2,23
Evaporation Rate (water = 1): Not applicable
Volatile Organic Compounds Content: Not applicable
Partition Coefficient (n-octanol / water): Not applicable
Solubility:
Water: Soluble
Acid: Not determined
Other: Not determined
Metal Corrosivity:
Steel: 0,162 in/yr
Aluminum: 0,007 in/yr

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Conditions to Avoid: Heat Excess moisture
Reactivity / Incompatibility: Incompatible with: acids oxidizers
Hazardous Decomposition: Heating to decomposition releases toxic and/or corrosive fumes of: sulfur oxides nitrogen oxides sodium monoxide carbon dioxide carbon monoxide
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: Sodium Metabisulphite: Cytogenic analysis hamster ovary 180 µg/l; Sister chromatid exchange hamster ovary 200 µg/l

Reproductive Effects Data: Sodium Metabisulphite: Oral rat TDLo = 20 g/kg effects on newborn - stillbirth; Oral rat TDLo = 40 g/kg effects on newborn - weaning or lactation index

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Ingredient Toxicological Data: Sodium Thiosulphate Oral rat LD50 > 8 g/kg; Sodium Hydrosulphite Oral rat LD50 > 500 mg/kg

An ingredient of this mixture is: IARC Group 3: Non-classifiable
Metabisulfites

12. ECOLOGICAL INFORMATION

Product Ecological Information: --

No ecological data available for this product.

Ingredient Ecological Information: Sodium Thiosulphate Aquatic toxicity 24000 mg / l / 96 hours / mosquito fish / TLm / turbid water @ 22°C; Sodium Metabisulphite (converted from bisulfite) Aquatic toxicity 120 ppm / 24, 48 & 96 hours / mosquito fish / TLm / fresh water

13. DISPOSAL CONSIDERATIONS

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

I.C.A.O.:

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

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ICAO Hazard Class: NA

ICAO Subsidiary Risk: NA

ICAO UN/ID Number: NA

ICAO Packing Group: NA

I.M.O.:

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

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I.M.O. Hazard Class: NA

I.M.O. Subsidiary Risk: NA

I.M.O. UN Number: NA

I.M.O. Packing Group: NA

A.D.R.:

A.D.R. Proper Shipping Name: Not Currently Regulated

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A.D.R Hazard Class: NA

A.D.R. Subsidiary Risk: NA

A.D.R. UN-Number: NA

A.D.R. Packing Group: NA

Additional Information: This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit Hazard Class: 9 UN Number 3316

15. REGULATORY INFORMATION

National Inventories:

EEC Inventory Status: All ingredients used to make this product are listed on EINECS / ELINCS or are placed on the market in quantities less than 10 kg per year.

EEC Number: Not applicable

EEC LABEL COPY:

EU Symbols: Xn - HARMFUL

R PHRASES: R 31: Contact with acids liberates toxic gas. R 22: Harmful if swallowed. R 36/37/38: Irritating to eyes, respiratory system and skin.

S PHRASES: S 22: Do not breathe dust. S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 37/39: Wear suitable gloves and eye / face protection.

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. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. CCINFO RTECS. Canadian Centre for Occupational Health and Safety. Hamilton, Ontario Canada: 30 June 1993. IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans. World Health Organization (Volumes 1-42) Supplement 7. France: 1987. In-house information. Outside Testing. Technical Judgment. Gosselin, R. E. et al. Clinical Toxicology of Commercial Products, 5th Ed. Baltimore: The Williams and Wilkins Co., 1984.

R PHRASES: R 31: Contact with acids liberates toxic gas. R 22: Harmful if swallowed. R 36/37/38: Irritating to eyes, respiratory system and skin.

Use of the substance/preparation: Iron determination

Revision Summary: Updates in Section(s) 14,

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.
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