

World Headquarters
Hach Company
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MSDS No: M00115

SAFETY DATA SHEET

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

Product Name: Amino Acid F Reagent
Catalog Number: 2254069

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: M00115

Chemical Name: Not applicable

Chemical Formula: Not applicable

Chemical Family: Not applicable

Use of the substance/preparation: Indicator for silica

CAS No.: Not applicable

Hazard: Allergen May cause irritation.

Date of MSDS Preparation:

Day: 19

Month: April

Year: 2007

Additional Emergency Response Numbers: Austria: +49 (0)6131 19240, Belgium: +32 -(0)70 -245245,
France: +33 -(0)1 -40370404, Italy: +39 -02-66101029, Netherlands: +31 -(0)30 -2748888, Switzerland: +41 -
(0)1 -2515151

2. COMPOSITION / INFORMATION ON INGREDIENTS

Fast Amino Acid (Trade Secret)

EEC Number: Confidential

CAS No.: Confidential

Percent Range: 1,0 - 5,0

Percent Range Units: weight / weight

Ingredient EEC Symbol: Not applicable

Ingredient R phrase(s) (R phrase details given in Heading 16): Not applicable

TLV: Handle as a nuisance dust.

PEL: Handle as a nuisance dust.

EU Occupational Exposure Limits: 3 mg/m³, Inhalable dust

Sodium Metabisulfite

EEC Number: 2316730

CAS No.: 7681 -57 -4

Percent Range: 90,0 - 100,0

Percent Range Units: weight / weight

Ingredient EEC Symbol: Xn - HARMFUL

Ingredient R phrase(s) (R phrase details given in Heading 16): R 22 R 31 R 41

TLV: 5 mg/m³ (ACGIH - TWA)

PEL: Not established

EU Occupation al Exposure Limits: 3 mg/m³, Inhalable dust

3. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Tan to Green powder

Odor: None

EU Symbols: Xn - HARMFUL

R PHRASES: R 22: Harmful if swallowed. R 31: Contact with acids liberates toxic gas. R 41: Risk of serious damage to eyes.

Protective Equipment:

Potential Health Effects:

Eye Contact (EC): Causes irritation

Skin Contact (EC): Causes irritation

Skin Absorption (EC): None Reported

Target Organs (SA E): None Reported

Ingestion (EC): Causes: irritation of the mouth and esophagus May cause allergic respiratory reaction if swallowed or inhaled. May cause: abdominal pain diarrhea vomiting headache central nervous system depression circulatory collapse respiratory arrest death

Target Organs (Ing E): Central nervous system Gastrointestinal tract

Inhalation: Causes: irritation of nose and throat May cause: allergic respiratory reaction

Target Organs (Inh E): Central nervous system

Medical Conditions Aggravated: Pre-existing: Eye conditions Skin conditions Respiratory conditions 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 respiratory tract damage Chronic ingestion of sodium metabisulfite caused anemia and reduced body weight gain in experimental animals.

Cancer / Reproductive Toxicity Information:

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

Additional Cancer / Reproductive Toxicity Information: Sodium metabisulfite has shown positive results in screening tests for mutagenicity.

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 for 15 minutes. Call physician immediately.

Ingestion (First Aid): Do not induce vomiting. Give 1-2 glasses of water under medical supervision. 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: During a fire, this product decomposes to form toxic gases.

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

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

Static Discharge: None reported.

Mechanical Impact: None reported

Extinguishing Media: Carbon dioxide Dry chemical. Alcohol foam.
Extinguishing Media NOT To Be Used: Not applicable 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. Cover spilled solid material with sand or other inert material.

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. Filter to remove solids. Flush reacted material to the drain with a large excess of water.

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.

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: moisture oxidizers acids / acid fumes.

Special Packaging Instructions: Not applicable

Use of the substance/preparation: Indicator for silica

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

Engineering Controls : Have an eyewash station 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: 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: oxidizers acids/acid fumes

TLV: Not established

PEL: Not established

EU Occupational Exposure Limits: 3 mg/m³, Inhalable dust

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Tan to Green powder

Physical State: Solid

Odor: None

pH: of 5% solution = 4,3

Vapor Pressure: Not applicable

Vapor Density (air = 1): Not applicable

Boiling Point: Not applicable

Melting Point : Decomposes

Flash Point: Not applicable

Method: Not applicable

Autoignition Temperature: Not determined

Flammability Limits:

Lower Explosion Limits: Not applicable

Upper Explosion Limits: Not applicable

Specific Gravity (water = 1): 1,48

Evaporation Rate (water = 1): Not applicable

Volatile Organic Compounds Content: Not applicable

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

Solubility:

Water: Mostly soluble

Acid: Soluble in HCl and H₂SO₄ solutions

Other: Soluble in NaOH solutions

Metal Corrosivity:

Steel: 0,033 in/yr

Aluminum: 0,001 in/yr

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.

Conditions to Avoid: Heating to decomposition. Excess moisture

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

Hazardous Decomposition: Toxic fumes of: carbon dioxide carbon monoxide sulfur oxides

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Product Toxicological Data:

LD50: None reported

LC50: None reported

Dermal Toxicity Data: Sodium metabisulfite: dermal guinea pig LD₅₀ > 1000 mg/kg.

Skin and Eye Irritation Data: None reported

Mutation Data: Sodium metabisulfite has shown positive results in screening tests for mutagenicity.

Sodium metabisulfite: Cytogenic analysis hamster ovary 180 µg/L; Sister chromatid exchange on hamster ovary at 200 µg/L

Reproductive Effects Data: Sodium metabisulfite: 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: Amino Acid F: Oral rat LD₅₀ > 2,000 mg/Kg; Sodium metabisulfite: Oral rat LD₅₀ = 1131 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: --

No ecological data available for the ingredients of this product.

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.

EEC Number: Not applicable

EEC LABEL COPY:

EU Symbols: Xn - HARMFUL

R PHRASES: R 22: Harmful if swallowed. R 31: Contact with acids liberates toxic gas. R 41: Risk of serious damage to eyes.

S PHRASES: S 25: Avoid contact with eyes. S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 39: Wear eye / face protection. S 45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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. 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. In-house information. The Merck Index, 11th Ed. Rahway, New Jersey: Merck and Co., Inc., 1989. Technical Judgment. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. Vendor Information. Hui, JY et al, "Comparative subchronic oral toxicity of sulfite and acetaldehyde hydroxysulfonate in rats", Food Cosmet. Toxicol., 27(6), pp. 349-59, 1989. Pekhov, AP and Reshetnikova, VN, "Test Strains of E.coli for the detection of chemical mutagens", Bull. Exp. Bio. Med. (USSR), 4, pp. 1043 -5, 1977. Subba Rao, V and Aiyar, AS, "Mutagenicity evaluation studies with food additives and radiolytic products", Proc. Symp. Muta. Carc.

Tera. Chem., pp. 104 -14, 1975. Til, HP, Feron, VJ and de Groot, AP, "The toxicity of sulphite. I. Long -term feeding and multigeneration studies in rats", Food Cosmet. Toxicol., 10, pp 291 -310, 1972.

R PHRASES: R 22: Harmful if swallowed. R 31: Contact with acids liberates toxic gas. R 41: Risk of serious damage to eyes.

Use of the substance/preparation: Indicator for silica

Revision Summary: European MSDS Only Updates in Heading(s) 2,

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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