

World Headquarters
Hach Company
P.O.Box 389
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MSDS No: M01553

Safety Data Sheet

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

Product Name: AmVer™ High Range Ammonia Test 'N Tube™ Reagent
Catalog Number: 2606045VIAL

HACH LANGE GmbH
Willstätterstrasse 11
40549 Düsseldorf, Germany
+49-(0)211-52880
E-mail: SDS@hach-lange.de

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

Responsible Department:
HACH LANGE LTD
Pacific Way
Salford, GB-Manchester United Kingdom M50 1DL
+44 (0)161 872 14 87
E-mail: info@hach-lange.co.uk

Office numbers are not 24 hr numbers.

HACH LANGE LTD
Unit 1, Chestnut Road
Western Industrial Estate, IRL-Dublin 12 Ireland
+353(0)1 4602522
E-mail: info@hach-lange.ie

SDS Number: M01553
Chemical Name: Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
Use of the substance/preparation: Laboratory Use Determination of ammonium nitrogen
CAS No.: Not applicable
Hazard: No effects anticipated.
Safety Data Sheet written according to Regulation (EU) No. 1907/2006 (REACH):
Date of MSDS Preparation:
Day: 24
Month: June
Year: 2013

2. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Colorless liquid
Odor: None
EU Symbols: Not applicable
R PHRASES: Not applicable

Protective Equipment:

Potential Health Effects:

Eye Contact (EC): No effects are anticipated
Skin Contact (EC): No effects are anticipated
Skin Absorption (EC): No effects anticipated
Target Organs (SA E): Not applicable
Ingestion (EC): No Effects Anticipated

Target Organs (Ing E): Not applicable
Inhalation: No effects anticipated
Target Organs (Inh E): Not applicable
Medical Conditions Aggravated: None reported
Chronic Effects: No effects anticipated
Cancer / Reproductive Toxicity Information:
This product does NOT contain any IARC listed chemicals.
Additional Cancer / Reproductive Toxicity Information: None reported
Toxicologically Synergistic Products: None reported

3. COMPOSITION / INFORMATION ON INGREDIENTS

Sodium Hydroxide

EEC Number: 2151855
CAS No.: 1310-73-2
Percent Range: < 0,1
Percent Range Units: weight / weight
Ingredient EEC Symbol: C - CORROSIVE
Ingredient R phrase(s): R 35: Causes severe burns.
TLV: 2 mg/m³ Ceiling/STEL
PEL: 2 mg/m³
EU Occupational Exposure Limits: 2 mg/m³

Sodium Salicylate

EEC Number: 2001980.
CAS No.: 54-21-7
Percent Range: < 1,0
Percent Range Units: weight / weight
Ingredient EEC Symbol: Xn - HARMFUL
Ingredient R phrase(s): R 22: Harmful if swallowed. R 36: Irritating to eyes.
TLV: Respirable particles: 3 mg/m³; Inhalable particles: 10 mg/m³
PEL: Total dust: 15 mg/m³; Respirable fraction: 5 mg/m³
EU Occupational Exposure Limits: 3 mg/m³, Inhalable dust

Demineralized Water

EEC Number: 2317912
CAS No.: 7732-18-5
Percent Range: > 99,0
Percent Range Units: weight / weight
Ingredient EEC Symbol: Not applicable
Ingredient R phrase(s): Not applicable
TLV: Not established
PEL: Not established
EU Occupational Exposure Limits: Not established

4. FIRST AID MEASURES

Eye Contact: Flush eyes with water. Call physician if irritation develops.
Skin Contact (First Aid): Wash skin with plenty of water.
Ingestion (First Aid): Give large quantities of water. Call physician immediately.
Inhalation: None required.

5. FIRE FIGHTING MEASURES

Flammable Properties: Material will not burn.
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

Extinguishing Media NOT To Be Used: Not applicable

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 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: Cover spilled material with a dry acid, such as citric or boric. Scoop up slurry into a large beaker. Adjust to a pH between 6 and 9 with an acid, such as sulfuric or citric. Flush reacted material to the drain with a large excess of water.

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

7. HANDLING AND STORAGE

Handling: Maintain general industrial hygiene practices when using this product.

Storage: Keep container tightly closed when not in use.

Special Packaging Instructions: Not applicable

Use of the substance/preparation: Laboratory Use Determination of ammonium nitrogen

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 / Hand Protection: disposable latex gloves

Inhalation Protection: adequate ventilation

Precautionary Measures: Avoid contact with: eyes

TLV: Not established

PEL: Not established

EU Occupational Exposure Limits: Not established

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Colorless liquid

Physical State: Liquid

Odor: None

pH: 11

Vapor Pressure: Not determined

Vapor Density (air = 1): Not determined

Boiling Point: ~ 100° C (~212° F)

Melting Point: Not determined

Flash Point: Not applicable

Method: Not applicable

Autoignition Temperature: Not applicable

Flammability Limits:

Lower Explosion Limits: Not applicable

Upper Explosion Limits: Not applicable

Specific Gravity/ Relative Density (water = 1; air =1): ~1,00

Evaporation Rate (water = 1): Not determined

Volatile Organic Compounds Content: Not applicable

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: None reported
Hazardous Decomposition: None reported
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: None reported
Reproductive Effects Data: None reported
--
Ingredient Toxicological Data: --
No toxicological data available for the ingredients of this product.
This product does NOT contain any IARC listed chemicals.

12. ECOLOGICAL INFORMATION

Product Ecological Information: --
No ecological data available for this product. Mobility in soil: No data available
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
--
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
--
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: 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

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: Not applicable

R PHRASES: Not applicable

S PHRASES: Not applicable

Ingredients: N/A

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. Technical Judgment.

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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MSDS No: M00127

SAFETY DATA SHEET

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

Product Name: Ammonia Salicylate Reagent
Catalog Number: 2395266

HACH LANGE GmbH
Willstätterstrasse 11
40549 Düsseldorf, Germany
+49-(0)211-52880
E-mail:SDS@hach-lange.de

Emergency Telephone Numbers:
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(+49 (0) 6131 19240) 24 HR

Responsible Department:
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E-mail: info@hach-lange.ie

Office numbers are not 24 hr numbers.

HACH LANGE LTD
Pacific Way
Salford, GB-Manchester United Kingdom M50 1DL
+44 (0)161 872 14 87
E-mail: info@hach-lange.co.uk

SDS Number: M00127

Chemical Name: Not applicable

Chemical Formula: Not applicable

Chemical Family: Not applicable

Use of the substance/preparation: Reagent for ammonia test

CAS No.: Not applicable

Hazard: May cause irritation. Harmful if swallowed

Safety Data Sheet written according to Regulation (EU) No. 1907/2006 (REACH):

Date of MSDS Preparation:

Day: 01

Month: October

Year: 2010

2. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: Tan powder

Odor: None

EU Symbols: Xn - HARMFUL

R PHRASES: R 22: Harmful if swallowed.

Protective Equipment:

Potential Health Effects:

Eye Contact (EC): May cause irritation

Skin Contact (EC): May cause irritation

Skin Absorption (EC): Harmful if absorbed through the skin. Effects similar to those of ingestion. Sodium nitroferrocyanide produces a delayed cyanide poisoning reaction.

Target Organs (SA E): Central nervous system Blood
Ingestion (EC): Sodium nitroferrocyanide produces a delayed cyanide poisoning reaction. May cause: headache nausea vomiting central nervous system effects
Target Organs (Ing E): Central nervous system Blood
Inhalation: Sodium nitroferrocyanide produces a delayed cyanide poisoning reaction. May cause: headache nausea vomiting central nervous system effects
Target Organs (Inh E): Central nervous system Blood
Medical Conditions Aggravated: Allergies or sensitivity to aspirin or salicylates.
Chronic Effects: Chronic overexposure may cause confusion diarrhea fatigue weakness death Salicylates may cause ringing in the ears (tinnitus), abnormal bleeding, gastric ulceration, mental deterioration, skin eruption, temporary vision loss, and other optical effects.
Cancer / Reproductive Toxicity Information:
This product does NOT contain any IARC listed chemicals.
Additional Cancer / Reproductive Toxicity Information: Contains: an experimental mutagen. an experimental teratogen.
Toxicologically Synergistic Products: None reported

3. COMPOSITION / INFORMATION ON INGREDIENTS

Sodium Salicylate

EEC Number: 2001980.
CAS No.: 54-21-7
Percent Range: 40,0 - 50,0
Percent Range Units: weight / weight
Ingredient EEC Symbol: Xn - HARMFUL
Ingredient R phrase(s): R 22: Harmful if swallowed.
TLV: Respirable particles: 3 mg/m³; Inhalable particles: 10 mg/m³
PEL: Total dust: 15 mg/m³; Respirable fraction: 5 mg/m³
EU Occupational Exposure Limits: 3 mg/m³, Inhalable dust

Sodium Nitroferrocyanide

EEC Number: 2383739
CAS No.: 14402-89-2
Percent Range: < 1,0
Percent Range Units: weight / weight
Ingredient EEC Symbol: Not applicable
Ingredient R phrase(s): Not applicable
TLV: 5 mg/m³ as CN⁻
PEL: 5 mg/m³ as CN⁻
EU Occupational Exposure Limits: 3 mg/m³, Inhalable dust. Cyanides are on the Priority List for OELs.

Other components, each

EEC Number: Not applicable
CAS No.: Not applicable
Percent Range: 0,1 - 1,0
Percent Range Units: weight / weight
Ingredient EEC Symbol: Not applicable
Ingredient R phrase(s): Not applicable
TLV: Not established
PEL: Not established
EU Occupational Exposure Limits: Not established

Sodium Citrate

EEC Number: 2006753
CAS No.: 68-04-2
Percent Range: 40,0 - 50,0
Percent Range Units: weight / weight
Ingredient EEC Symbol: Not applicable
Ingredient R phrase(s): Not applicable
TLV: Not established
PEL: Not established
EU Occupational Exposure Limits: 3 mg/m³, Inhalable dust

Sodium Tartrate

EEC Number: 2127733

CAS No.: 6106-24-7

Percent Range: 10,0 - 20,0

Percent Range Units: weight / weight

Ingredient EEC Symbol: Not applicable

Ingredient R phrase(s): Not applicable

TLV: Not established

PEL: Not established

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

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. Remove contaminated clothing. Call physician immediately.

Ingestion (First Aid): Never give anything by mouth to an unconscious person. Call physician immediately.

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: May emit acrid smoke and fumes.

Fire / Explosion Hazards: This product will not burn or explode.

Static Discharge: None reported.

Mechanical Impact: None reported

Extinguishing Media: Dry chemical. Carbon dioxide. 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. 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 should respond to a spill involving chemicals. See Section 13, Special Instructions for disposal assistance.

Containment Technique: Releases of this material may contaminate the environment. Stop spilled material from being released to the environment.

Clean-up Technique: Avoid contact with spilled material. Sweep up material. Dilute with a large excess of water. Flush the spilled 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: 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: Store between 10° and 25°C. Keep away from: acids / acid fumes, oxidizers

Special Packaging Instructions: Not applicable

Use of the substance/preparation: Reagent for ammonia test

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

Engineering Controls: Have an eyewash station nearby. Use a fume hood to avoid exposure to dust, mist or vapor.

Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields

Skin / Hand Protection: lab coat, disposable latex gloves

Inhalation Protection: laboratory fume hood

Precautionary Measures: eyes skin clothing Do not breathe: dust Wash thoroughly after handling. Use with adequate ventilation. 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: Tan powder
Physical State: Solid
Odor: None
pH: 7,84 (5% solution)
Vapor Pressure: Not applicable
Vapor Density (air = 1): Not applicable
Boiling Point: Not applicable
Melting Point: 97°C (206,6°F)
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/ Relative Density (water = 1; air =1): 1,689
Evaporation Rate (water = 1): Not applicable
Volatile Organic Compounds Content: None.
Partition Coefficient (n-octanol / water): Not applicable
Solubility:
Water: Soluble.
Acid: Soluble.
Other: Not determined.
Metal Corrosivity:
Steel: Not applicable
Aluminum: Not applicable

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Conditions to Avoid: Heating to decomposition. Extreme temperatures
Reactivity / Incompatibility: Incompatible with: acids iodine iron salts lead acetate organic materials oxidizers silver nitrate sodium phosphate
Hazardous Decomposition: Heating to decomposition releases toxic and/or corrosive fumes of: cyanide nitrogen oxides sodium 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: None reported.
Reproductive Effects Data: None reported.
--
Ingredient Toxicological Data: Sodium Salicylate: Oral rat LD₅₀ = 1200 mg/kg; Sodium Citrate: Oral rat LD₅₀ > 8 g/kg; Sodium Tartrate: Oral rabbit LD₅₀ = 5290 mg/kg; Sodium Nitroferricyanide: Oral rat LD₅₀ = 99 mg/kg.
This product does NOT contain any IARC listed chemicals.

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

--

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: 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

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.

S PHRASES: S 24/25: Avoid contact with skin and eyes. S 37: Wear suitable gloves.

Ingredients: Sodium Salicylate;

16. OTHER INFORMATION

References: TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Technical Judgment. Sixth Annual Report on Carcinogens, 1991. U.S. Department of Health and Human Services. Rockville, MD: Technical Resources, Inc. 1991. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 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. In-house information. IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans. World Health Organization (Volumes 1-42) Supplement 7. France: 1987. Gosselin, R. E. et al. Clinical Toxicology of

Commercial Products, 5th Ed. Baltimore: The Williams and Wilkins Co., 1984. Cassaret and Doull's Toxicology, 3rd Ed. New York: Macmillan Publishing Co., Inc., 1986. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor).

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: M00128

Safety Data Sheet

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

Product Name: Ammonia Cyanurate Reagent
Catalog Number: 2395466

HACH LANGE GmbH
Willstätterstrasse 11
40549 Düsseldorf, Germany
+49-(0)211-52880
E-mail:SDS@hach-lange.de

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

Responsible Department:
HACH LANGE LTD
Pacific Way
Salford, GB-Manchester United Kingdom M50 1DL
+44 (0)161 872 14 87
E-mail: info@hach-lange.co.uk

Office numbers are not 24 hr numbers.

HACH LANGE LTD
Unit 1, Chestnut Road
Western Industrial Estate, IRL-Dublin 12 Ireland
+353(0)1 4602522
E-mail: info@hach-lange.ie

SDS Number: M00128

Chemical Name: Not Applicable

Chemical Formula: Not Applicable

Chemical Family: Not applicable

Use of the substance/preparation: Laboratory Use Reagent for ammonia test

CAS No.: Not Applicable

Hazard: Causes burns.

Safety Data Sheet written according to Regulation (EU) No. 1907/2006 (REACH):

Date of MSDS Preparation:

Day: 08

Month: April

Year: 2014

2. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance: White powder

Odor: Chlorine

EU Symbols: C - CORROSIVE

R PHRASES: R 34: Causes burns.

Protective Equipment:

Potential Health Effects:

Eye Contact (EC): Causes burns

Skin Contact (EC): Causes burns

Skin Absorption (EC): None Reported

Target Organs (SA E): None Reported

Ingestion (EC): Causes: burns May cause: dizziness nausea kidney damage liver damage

Target Organs (Ing E): Liver Kidneys Central nervous system Bone marrow

Inhalation: Causes: burns May cause: shortness of breath coughing

Target Organs (Inh E): None Reported

Medical Conditions Aggravated: Pre-existing: Eye conditions Skin conditions Respiratory conditions

Chronic Effects: Lithium compounds have been implicated in development of aplastic anemia. Signs of lithium poisoning include dehydration, extreme weight loss, fine tremor of hands, nausea, vomiting and diarrhea, Chronic overexposure may cause central nervous system effects kidney damage liver damage

Cancer / Reproductive Toxicity Information:

This product does NOT contain any IARC listed chemicals.

Additional Cancer / Reproductive Toxicity Information: None reported

Toxicologically Synergistic Products: None reported

3. COMPOSITION / INFORMATION ON INGREDIENTS

Sodium Dichloroisocyanurate

EEC Number: 220-767-7

CAS No.: 2893-78-9

Percent Range: 1-3

Percent Range Units: weight / weight

Ingredient EEC Symbol: Not applicable

Ingredient R phrase(s): Not applicable

TLV: Not established

PEL: Not established

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

Lithium Hydroxide, Anhydrous

EEC Number: 2151834

CAS No.: 1310-65-2

Percent Range: 1,0 - 5,0

Percent Range Units: weight / weight

Ingredient EEC Symbol: C - CORROSIVE

Ingredient R phrase(s): R 34: Causes burns.

TLV:

PEL:

EU Occupational Exposure Limits: 3 mg/m³ as inhalable dust

Sodium Citrate

EEC Number: 2006753

CAS No.: 68-04-2

Percent Range: 80,0 - 90,0

Percent Range Units: weight / weight

Ingredient EEC Symbol:

Ingredient R phrase(s):

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

PEL: 15 mg/m³ as inhalable dust; 3 mg/m³ as respirable dust

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

Sodium Tartrate

EEC Number:

CAS No.: 868-18-8

Percent Range: 5,0 - 15,0

Percent Range Units: weight / weight

Ingredient EEC Symbol: Not applicable

Ingredient R phrase(s): Not applicable

TLV:

PEL:

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

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. Remove contaminated clothing. Call physician immediately.

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: During a fire, irritating and highly toxic gases may be generated by thermal decomposition. Material is not classified as flammable according to GHS criteria.

Hazardous Combustion Products: May emit toxic and corrosive fumes.

Fire / Explosion Hazards: Not combustible.

Static Discharge: None reported.

Mechanical Impact: None reported

Extinguishing Media: Dry chemical. Carbon dioxide. Water.

Extinguishing Media NOT To Be Used: 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: Cover spilled solid material with sand or other inert material. Stop spilled material from being released to the environment.

Clean-up Technique: If permitted by regulation, Scoop up spilled material into a large beaker and dissolve with water. Adjust to a pH between 6 and 9 with an acid, such as sulfuric or citric. Flush reacted material to the drain with a large excess of water. Otherwise, Decontaminate the area of the spill with a soap solution. 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 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 Store away from: acids / acid fumes.

Special Packaging Instructions: Not applicable

Use of the substance/preparation: Laboratory Use Reagent for ammonia test

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Have an eyewash station nearby. Have a safety shower nearby. Use a fume hood to avoid exposure to dust, mist or vapor. 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 In the EU, the selected gloves must satisfy the specifications of EU Directive 89/686/EEC and standard EN 374 derived from it. lab coat

Inhalation Protection: adequate ventilation

Precautionary Measures: Avoid contact with: eyes skin clothing Do not breathe: dust Wash thoroughly after handling. Keep away from: acids/acid fumes metals

TLV: 3mg/m³ Respirable Particles; 10 mg/m³ Inhalable particles

PEL: 5 mg/m³ Respirable Fraction; 15 mg/m³ Total Dust

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

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: White powder
Physical State: Solid
Odor: Chlorine
pH: of a 5% solution = 12,33
Vapor Pressure: Not applicable
Vapor Density (air = 1): Not applicable
Boiling Point: Not applicable
Melting Point: >240 °C; >464 °F
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/ Relative Density (water = 1; air =1): 1,783
Evaporation Rate (water = 1): Not applicable
Volatile Organic Compounds Content: None reported
Partition Coefficient (n-octanol / water): Not applicable
Solubility:
Water: Soluble
Acid: Soluble
Other: Not determined
Metal Corrosivity:
Steel: 0,00 in/yr
Aluminum: 0,803 in/yr

10. STABILITY / REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
Conditions to Avoid: Heating to decomposition. Extreme temperatures Excess moisture
Reactivity / Incompatibility: Incompatible with: acids
Hazardous Decomposition: Contact with acids releases toxic and/or corrosive fumes of: chlorides 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: None Reported
Reproductive Effects Data: None Reported

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Ingredient Toxicological Data: Sodium Citrate Oral rat LD50 > 8 g/kg; Sodium Tartrate Oral rabbit LD50 = 5290 mg/kg;
Lithium Hydroxide Oral rat LD50 = 225 mg/kg; Sodium Dichloroisocyanurate Oral rat LD50 = 1400 mg/kg
This product does NOT contain any IARC listed chemicals.

12. ECOLOGICAL INFORMATION

Product Ecological Information: --

Do not release into the environment. Do not place in landfill. Recycle appropriately. Mobility in soil: No data available
Method Used for Estimation of Aquatic Toxicity of Mixture Summation Method M-factor (Multiplier) for highly toxic ingredients: 1

Ingredient Ecological Information:

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: Lithium Hydroxide Mixture

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ICAO Hazard Class: 8

ICAO Subsidiary Risk: NA

ICAO UN/ID Number: UN2680

ICAO Packing Group: II

I.M.O.:

I.M.O. Proper Shipping Name: Lithium Hydroxide Mixture

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I.M.O. Hazard Class: 8

I.M.O. Subsidiary Risk: NA

I.M.O. UN Number: UN2680

I.M.O. Packing Group: II

A.D.R.:

A.D.R. Proper Shipping Name: Lithium Hydroxide Mixture

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A.D.R Hazard Class: 8

A.D.R. Subsidiary Risk: NA

A.D.R. UN-Number:: UN2680

A.D.R. Packing Group: II

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

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: C - CORROSIVE

R PHRASES: R 34: Causes burns.

S PHRASES: S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S

36/37/39: Wear suitable protective clothing, gloves and eye/face protection. S 45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Ingredients: Lithium Hydroxide, Anhydrous;

16. OTHER INFORMATION

References: NIOSH Registry of Toxic Effects of Chemical Substances, 1985-86. Cincinnati: U.S. Department of Health and Human Services, April, 1987. Patty, Frank A. Industrial Hygiene and Toxicology, 3rd Revised Edition. Volume 2. New York: A Wiley-Interscience Publication, 1981. Gosselin, R. E. et al. Clinical Toxicology of Commercial Products, 5th Ed. Baltimore: The Williams and Wilkins Co., 1984. Technical Judgment. In-house information. 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.

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.

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