



Material Safety Data Sheet

Accepta 2117

Date issued: 01-06-2004

1. IDENTIFICATION OF THE PREPARATION AND OF THE COMPANY

Product Name: ACCEPTA 2117
Application: Heavy Metal Precipitant

Company Identification: Accepta Ltd.
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2. COMPOSITION/INFORMATION ON INGREDIENTS

This product is classified as dangerous in accordance with the Preparations Directive 1999/45/EC.

| Hazardous Substance(s) | EINECS /ELINCS NO | SYMBOL | R-PHRASES | % (w/w) |
|------------------------|-------------------|--------|---------------|---------|
| Sodium Sulphide | 215-211-5 | C, N | R31, R34, R50 | 0.1 - 1 |
| Sodium Hydroxide | 215-185-5 | C | R35 | 0.1 - 1 |

Refer to Section 16 for descriptions of relevant risk phrases and Notas.

3. HAZARD IDENTIFICATION

HAZARD CLASSIFICATION :

This product is classified as dangerous in accordance with the Preparations Directive 1999/45/EC.
Irritating to eyes and skin. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

HUMAN HEALTH HAZARDS - ACUTE :

INHALATION : May cause irritation of mucous membranes.

SKIN CONTACT : Can cause moderate irritation.

EYE CONTACT : Can cause moderate irritation.

INGESTION : May cause mucosal damage. There may be irritation to the gastro-intestinal tract with nausea and vomiting.

HUMAN HEALTH HAZARDS - CHRONIC : No adverse effects expected other than those mentioned above.

ENVIRONMENTAL HAZARDS : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.



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4. FIRST AID MEASURES

INHALATION :

Remove to fresh air, treat symptomatically. If symptoms develop, seek medical advice.

SKIN CONTACT :

Get immediate medical attention. Remove contaminated clothing. Wash off affected area immediately with soap and plenty of water.

EYE CONTACT :

Get immediate medical attention. Immediately flush eye with water for at least 15 minutes while holding eyelids open.

INGESTION :

Get medical attention. Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink. If reflexive vomiting occurs, rinse mouth and repeat administration of water.

NOTE TO PHYSICIAN :

Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms

5. FIRE FIGHTING MEASURES

FLASH POINT : Not flammable

EXTINGUISHING MEDIA :

This product would not be expected to burn unless all the water is boiled away. The remaining organics may be ignitable. Use extinguishing media appropriate for surrounding fire.

FIRE AND EXPLOSION HAZARD :

May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) and sulfur (SOx) under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :

In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS :

Restrict access to area as appropriate until clean-up operations are complete. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection). Stop or reduce any leaks if it is safe to do so. Ventilate spill area if possible. Ensure clean-up is conducted by trained personnel only. Do not touch spilled material. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Notify appropriate government, occupational health and safety and environmental authorities.

METHODS FOR CLEANING UP :

SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labelled container. Wash affected area. **LARGE SPILLS:** Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Clean contaminated surfaces with water or aqueous cleaning agents. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :

Prevent material from entering sewers or waterways. This product may pose a risk to the aquatic ecosystem if released.



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7. HANDLING AND STORAGE

HANDLING :

Do not get in eyes, on skin, on clothing. Do not take internally. Use with adequate ventilation. Do not breathe vapors/gases/dust. Keep the containers closed when not in use. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labelled. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection).

STORAGE CONDITIONS :

Protect product from freezing. Store in suitable labelled containers. Store the containers tightly closed. Store separately from acids. Store separately from oxidizers.

SUITABLE CONSTRUCTION MATERIAL :

HDPE (high density polyethylene), Stainless Steel 304, Compatibility with Plastic Materials can vary; we therefore recommend that compatibility is tested prior to use.

SPECIFIC USE(S) :

HEAVY METAL PRECIPITANT

8. EXPOSURE CONTROL/PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS

Exposure guidelines have not been established for this product. Available exposure limits for the substance(s) are shown below.

| Country/Source | Substance(s) | Category: | ppm | mg/m3 | |
|----------------|--|-----------------------------------|------|-------|--|
| BELGIUM | Hydrogen sulphide | TWA STEL | 10 | 14 | |
| | | | 15 | 21 | |
| DENMARK | Sodium Hydroxide | Ceiling | 2 | | |
| | Hydrogen sulphide | GV | 10 | 15 | |
| | Sodium Hydroxide | LOFT | 2 | | |
| FINLAND | Hydrogen sulphide | HTP 8H | 10 | 14 | |
| | | HTP 15MIN | 15 | 21 | |
| | | HTP 8H | 2 | | |
| FRANCE | Sodium Hydroxide | VME | 5 | 7 | |
| | Hydrogen sulphide | VLE | 10 | 14 | |
| | | VME | 2 | | |
| GERMANY | Hydrogen sulphide | MAK | 10 | 14 | |
| | Sodium Hydroxide (Inhalable fraction.) | MAK | 2 | | |
| | Hydrogen sulphide | TWA | 10 | 14 | |
| IRELAND | Hydrogen sulphide | STEL | 15 | 21 | |
| | | STEL | 2 | | |
| | | TWA | 10 | 14 | |
| | | STEL | 15 | 21 | |
| | | TWA | 10 | | |
| ITALY | Hydrogen sulphide | STEL | 15 | | |
| | | TWA | 10 | 14 | |
| | | STEL | 15 | 21 | |
| | | TWA | 10 | | |
| | | STEL | 15 | | |
| NETHERLANDS | Sodium Hydroxide | Ceiling | 2 | | |
| | Hydrogen sulphide | MAC TGG | 10 | 15 | |
| | Sodium Hydroxide | MAC-C | 2 | | |
| NORWAY | Hydrogen sulphide | CEIL | 10 | 15 | |
| | Sodium Hydroxide | CEIL | 2 | | |
| SPAIN | Hydrogen sulphide | VLA-ED | 10 | 14 | |
| | | VLA-EC | 15 | 21 | |
| | | VLA-EC | 2 | | |
| SWEDEN | Sodium Hydroxide | NGV | 10 | 14 | |
| | Hydrogen sulphide | TGV | 15 | 20 | |
| | | TGV | 2 | | |
| SWITZERLAND | Hydrogen sulphide | TWA | 10 | 15 | |
| | | STEL | 20 | 30 | |
| | | Sodium Hydroxide (Inhalable dust) | TWA | 2 | |
| | | STEL | 2 | | |
| GREAT BRITAIN | Hydrogen sulphide | TWA | 5 | 7 | |
| | | STEL | 10 | 14 | |
| | | Sodium Hydroxide | STEL | 2 | |
| | | | STEL | 2 | |

8. EXPOSURE CONTROL/PERSONAL PROTECTION

* A skin notation refers to the potential significant contribution to overall exposure by the cutaneous route, including mucous membranes and the eyes.

MONITORING MEASURES :

A small volume of air is drawn through an absorbant or barrier to trap the substance(s) which can then be desorbed or removed and analyzed as referenced below:

Substance(s) Method Analysis Absorbant

Hydrogen sulphide US NIOSH: 6013 Ion chromatography Charcoal

Sodium Hydroxide US NIOSH: 7401 Titration PTFE filter

ENGINEERING MEASURES :

General ventilation is recommended. Local exhaust ventilation may be necessary when dusts or mists are generated.

PERSONAL PROTECTION

GENERAL ADVICE :

The use and choice of personal protection equipment is related to the hazard of the product, the workplace and the way the product is handled. In general, we recommend as a minimum precaution that safety glasses with side-shields and workclothes protecting arms, legs and body be used. In addition any person visiting an area where this product is handled should at least wear safety glasses with side-shields. The applicable European standard can be found in EN 166.

RESPIRATORY PROTECTION :

No exposure limits have been assigned to this product or its components. Nalco recommend the use of a half face filter mask or air supplied breathing apparatus. A suitable filter material depends on the amount and type of chemicals being handled. Consider the use of filter type: A-B-E-K-P The applicable European standard can be found in EN 141, EN 143 and EN 371. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

HAND PROTECTION :

When handling this product, the use of chemical gauntlets is recommended. The choice of work glove depends on work conditions and what chemicals are handled, but we have positive experience under light handling conditions using gloves made from PVC Gloves should be replaced immediately if signs of degradation are observed. Breakthrough time not determined as preparation, consult PPE manufacturers. The applicable European standard can be found in EN 374.

SKIN PROTECTION :

When handling this product, the use of overalls, a chemical resistant apron and rubber boots is recommended. The applicable European standard can be found in EN 345.

EYE PROTECTION :

Wear chemical splash goggles. The applicable European standard can be found in EN 166.

HYGIENE RECOMMENDATIONS :

Use good work and personal hygiene practices to avoid exposure. Keep an eye wash fountain available. Keep a safety shower available. If clothing is contaminated, remove clothing and thoroughly wash the affected area. Launder contaminated clothing before reuse. Always wash thoroughly after handling chemicals. When handling this product never eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE Liquid

APPEARANCE Hazy Light yellow Green

ODOR Sulfurous

FLASH POINT : Not flammable

SPECIFIC GRAVITY 1.10 - 1.35 (25 °C)

SOLUBILITY IN WATER Complete

pH () 11.5 - 13.0

VISCOSITY Minimum 100 cps

VISCOSITY Max 500 cps



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10. STABILITY AND REACTIVITY

STABILITY :

Stable under normal conditions.

HAZARDOUS POLYMERIZATION :

Hazardous polymerization will not occur.

CONDITIONS TO AVOID :

Avoid extremes of temperature.

MATERIALS TO AVOID :

Acids, Contact with strong acids (e.g. sulfuric, phosphoric, nitric, hydrochloric, chromic, sulfonic) may generate heat, splattering or boiling and toxic vapors., Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.

HAZARDOUS DECOMPOSITION PRODUCTS :

Under fire conditions: Oxides of carbon, Oxides of nitrogen, Oxides of sulfur

11. TOXICOLOGICAL INFORMATION

No toxicity studies have been conducted on this product.

SENSITIZATION :

This product is not expected to be a sensitizer.

CARCINOGENICITY :

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

For additional information on the hazard of the preparation, please consult section 3 and 12.

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12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS :

The following results are for the product.

ACUTE FISH RESULTS :

| Species | Exposure | LC50 | Method | Test Descriptor |
|-------------------|----------|--------------|--------|-----------------|
| Rainbow Trout | 96 hrs | 20 mg/l | | Product |
| Sheepshead Minnow | 96 hrs | > 1,000 mg/l | | Product |
| Fathead Minnow | 96 hrs | > 1,000 mg/l | | Product |

ACUTE INVERTEBRATE RESULTS :

| Species | Exposure | LC50 | EC50 | Method | Test Descriptor |
|---------------------------------|----------|----------|---------|--------|-----------------|
| Mysid Shrimp (Mysidopsis bahia) | 96 hrs | 140 mg/l | | | Product |
| Daphnia magna | 48 hrs | 11 mg/l | 11 mg/l | | Product |

MOBILITY :

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models. If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

| Air | Water | Soil/Sediment |
|-----|----------|---------------|
| <5% | 30 - 50% | 50 - 70% |

The portion in water is expected to be soluble or dispersible.

PERSISTENCY AND DEGRADATION :

Chemical Oxygen Demand (COD) : 463,000 mg/l

Biological Oxygen Demand (BOD) :

| Incubation Period | Value | Method | Test Descriptor |
|-------------------|------------|--------|-----------------|
| 5 d | 3,100 mg/l | | Product |

The organic portion of this preparation is expected to be poorly biodegradable.

BIOACCUMULATION POTENTIAL

This preparation or material is not expected to bioaccumulate.



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13. DISPOSAL CONSIDERATIONS

If this preparation becomes a waste, the final user must define and assign the appropriate European Waste Catalogue code. Use only authorized contractors. Ensure compliance with EC, national and local regulations.

Dispose of wastes in an approved incinerator or waste treatment/disposal site, in accordance with all applicable regulations. Do not dispose of wastes in local sewer or with normal garbage. This product will generate an ash if burned. It can be burned directly in appropriate equipment. This product is NOT suitable for disposal via municipal sewers, drains, natural streams or rivers.

Empty drums should be taken for recycling, recovery, or disposal through a suitably qualified or licensed contractor.

EUROPE WASTE CODE :

16 03 03* - OFF SPECIFICATION BATCHES AND UNUSED PRODUCTS - Inorganic wastes containing dangerous substances. If this product is used in any further processes, the final user must redefine and assign the most appropriate European Waste Catalogue Code.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging,

properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

LAND TRANSPORT

Proper Shipping Name : CORROSIVE LIQUID, N.O.S.

Technical Name(s) : Sodium Hydroxide

UN/ID No : UN 1760

Hazard Class - Primary : 8

Packing Group : III

ADR/RID H.I.n. : 80

CLASSIFICATION CODE : C9

AIR TRANSPORT (ICAO/IATA)

Proper Shipping Name : CORROSIVE LIQUID, N.O.S.

Technical Name(s) : Sodium Hydroxide

UN/ID No : UN 1760

Hazard Class - Primary : 8

Packing Group : III

IATA Cargo Packing Instructions : 820

IATA Cargo Aircraft Limit : 60 L (Max net quantity per package)

IATA Passenger Packing Instructions : Y818 / 818

IATA Passenger Aircraft Limit : 1 L / 5 L

MARINE TRANSPORT (IMDG/IMO)

Proper Shipping Name : CORROSIVE LIQUID, N.O.S.

Technical Name(s) : Sodium Hydroxide

UN/ID No : UN 1760

Hazard Class - Primary : 8

Packing Group : III

OTHER APPLICABLE INFORMATION

CEFIC TREMCARD REFERENCE : 80GC9-II+III

EMERGENCY ACTION CODE : 2X

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15. REGULATORY INFORMATION

CLASSIFICATION AND LABELLING :

GOVERNING DIRECTIVE(S): Dangerous Substances Directive 67/548/EEC and Dangerous Preparations Directive 1999/45/EC.

HAZARD SYMBOLS



IRRITANT

Contains...Sodium Sulphide Sodium Hydroxide

RISK PHRASES

R36/38 - Irritating to eyes and skin.

R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SAFETY PHRASES

S23C - Do not breathe vapor.

S24/25 - Avoid contact with skin and eyes.

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S28 - After contact with skin, wash immediately with plenty of water.

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

S61 - Avoid release to the environment. Refer to special instructions/Safety Data sheets.

16. OTHER INFORMATION

Emergency Telephone Number +44 (0) 161 240 2100

RELEVANT RISK PHRASES AND NOTAS

R31 - Contact with acids liberates toxic gas.

R34 - Causes burns.

R35 - Causes severe burns.

R50 - Very toxic to aquatic organisms.

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations.