SAFETY DATA SHEET

HARDNESS PRECIPITANT A

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

Product name: HARDNESS PRECIPITANT A

Product code: APP-HPA

Synonyms: HARDNESS REAGENT A

Use / description of product: Solution. Corrosive, alkaline solutions. The regulatory information is dependent upon the concentration limit of the specific substance.

2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient 1: POTASSIUM HYDROXIDE 10-30%

CAS: 1310-58-3

EINECS: 215-181-3

[Xn] R22; [C] R35;

3. HAZARDS IDENTIFICATION

4. FIRST

Main hazards: Causes severe burns.

4. FIRST AID MEASURES (SYMPTOMS)

| Skin contact: | Irritation or pain may occur at the site of contact. There may be redness or whiteness of | | |
|------------------------|--|--|--|
| | the skin in the area of exposure. Blistering may occur. Severe burns may occur. | | |
| Eye contact: | There may be irritation and redness. There may be severe pain. The eyes may water | | |
| | profusely. Corneal burns may occur. | | |
| Ingestion: | There may be soreness and redness of the mouth and throat. There may be difficulty | | |
| | swallowing. Corrosive burns may appear around the lips. Nausea and stomach pain may | | |
| | occur. There may be vomiting. Blood may be vomited. | | |
| Inhalation: | There may be irritation of the throat with a feeling of tightness in the chest. There may | | |
| | be coughing and a sore throat. There may be congestion of the lungs causing severe | | |
| | shortness of breath. There may be loss of consciousness. | | |
| TAID MEASURES (ACTION) | | | |
| Skin contact: | Remove all contaminated clothes and footwear immediately unless stuck to skin. | | |
| | Drench the affected skin with running water for 10 minutes or longer if substance is still | | |
| | on skin. Transfer to hospital if there are burns or symptoms of poisoning. | | |

Eye contact: Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist examination.

Ingestion: Do not induce vomiting. If substance swallowed is corrosive, give 1 cup of water to drink every 10 minutes. If unconscious, check for breathing and apply artificial

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| | respiration if necessary. If unconscious and breathing is OK, place in the recovery | | | | |
|-------------------------------------|--|--|--|--|--|
| | position. Transfer to hospital as soon as possible. | | | | |
| Inhalation: | Remove casualty from exposure ensuring one's own safety whilst doing so. If | | | | |
| | unconscious, check for breathing and apply artificial respiration if necessary. If | | | | |
| | unconscious and breathing is OK, place in the recovery position. If conscious, ensure | | | | |
| | the casualty sits or lies down. If breathing becomes bubbly, have the casualty sit and | | | | |
| | provide oxygen if available. Transfer to hospital as soon as possible. | | | | |
| 5. FIRE-FIGHTING MEASURES | | | | | |
| Extinguishing media: | Carbon dioxide. | | | | |
| Exposure hazards: | Corrosive. In combustion emits toxic fumes. | | | | |
| Protection of fire-fighters: | Wear self-contained breathing apparatus. Wear protective clothing to prevent contact | | | | |
| | with skin and eyes. | | | | |
| 6. ACCIDENTAL RELEASE MEASURES | | | | | |
| Personal precautions: | Refer to section 8 of SDS for personal protection details. | | | | |
| Environmental precautions: | Do not discharge into drains or rivers. Contain the spillage using bunding. | | | | |
| Clean-up procedures: | Neutralise with dilute hydrochloric acid testing with litmus paper periodically. Carefully | | | | |
| | add to a large volume of water. Wash down the drain with large amounts of water. | | | | |
| 7. HANDLING AND STOR | AGE | | | | |
| Handling requirements: | Ensure there is sufficient ventilation of the area. Avoid direct contact with the | | | | |
| | substance. | | | | |
| Storage conditions: | Store in cool, well ventilated area. Keep container tightly closed. | | | | |
| 8. EXPOSURE CONTROL | S / PERSONAL PROTECTION | | | | |
| Engineering measures: | Ensure there is sufficient ventilation of the area. | | | | |
| Respiratory protection: | Self-contained breathing apparatus must be available in case of emergency. | | | | |
| Hand protection: | Protective gloves. | | | | |
| Eye protection: | Safety goggles. Face-shield. Ensure eye bath is to hand. | | | | |
| Skin protection: | Protective clothing with elasticated cuffs and closed neck. | | | | |
| STEL (15 min exposure limit): | 2 (NaOH) | | | | |
| 9. PHYSICAL AND CHEMICAL PROPERTIES | | | | | |
| State: | Liquid | | | | |
| Colour: | Colourless | | | | |
| Odour: | Odourless | | | | |
| Viscosity: | Non-viscous | | | | |
| Oxidising: | Non-oxidising (by EC criteria) | | | | |
| Evaporation rate: | Negligible | | | | |
| Solubility in water: | Miscible in all proportions | | | | |
| pH: | 13-14 | | | | |
| | | | | | |

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions.

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| Conditions to avoid: | Direct sunlight. Heat. | | | | |
|--------------------------------|---|--|--|--|--|
| Materials to avoid: | Strong acids. Finely powdered metals. | | | | |
| | In combustion emits toxic fumes. | | | | |
| 11. TOXICOLOGICAL INF | TORMATION | | | | |
| | POTASSIUM HYDROXIDE | | | | |
| | ORL RAT LD50 273mg/kg | | | | |
| 12. ECOLOGICAL INFOR | 12. ECOLOGICAL INFORMATION | | | | |
| Mobility: | Non-volatile. Soluble in water. | | | | |
| Persistence and degradability: | Biodegradable. | | | | |
| Bioaccumulative potential: | No bioaccumulation potential. | | | | |
| Other adverse effects: | Negligible ecotoxicity. | | | | |
| 13. DISPOSAL CONSIDER | ATIONS | | | | |
| Waste disposal: | Neutralise with dilute hydrochloric acid. Flush liquors to drain, local regulations | | | | |
| | permitting, or send to a waste water treatment plant. | | | | |
| Disposal of packaging | Dispose of as normal industrial waste. | | | | |
| NB: | The user's attention is drawn to the possible existence of regional or national regulations | | | | |
| | regarding disposal. | | | | |
| 14. TRANSPORT INFORM | ATION | | | | |
| ADR / RID | | | | | |
| UN no: | 1824 | | | | |
| ADR Class: | 8 | | | | |
| Hazard ID no: | 80 | | | | |
| Labelling: | 8 | | | | |
| Shipping name: | SODIUM HYDROXIDE, SOLUTION | | | | |
| IMDG / IMO | | | | | |
| UN no: | 1824 | | | | |
| Class: | 8 | | | | |
| Packing group: | III | | | | |
| EmS: | 8-06 | | | | |
| Marine pollutant: | NO | | | | |
| Labelling: | 8 | | | | |
| IATA / ICAO | | | | | |
| UN no: | | | | | |
| Class: | 8 | | | | |
| 00 1 | III | | | | |
| Packing instructions: | | | | | |
| Quantity | 60 L | | | | |
| | | | | | |
| Labelling: | 8 | | | | |

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| 15. REGULATORY INFORMATION | | | | |
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| Hazard symbols: | Corrosive. | | | |
| | | | | |
| Risk phrases: | R35: Causes severe burns. | | | |
| Safety phrases: | S2: Keep out of the reach of children. | | | |
| | S24/25: Avoid contact with skin and eyes. | | | |
| | S36/37/39: Wear suitable protective clothing, gloves and eye / face protection. | | | |
| | S45: In case of accident or if you feel unwell, seek medical advice immediately (show | | | |
| | the label where possible). | | | |
| Note: | The regulatory information given above only indicates the principal regulations | | | |
| | specifically applicable to the product described in the safety data sheet. The user's | | | |
| | attention is drawn to the possible existence of additional provisions which complete | | | |
| | these regulations. Refer to all applicable national, international and local regulations or | | | |
| | provisions. | | | |
| 16. ADDITIONAL INFORMATION | | | | |
| Risk phrases used in s.2: | R22: Harmful if swallowed. | | | |
| | R35: Causes severe burns. | | | |
| Legal disclaimer: | The above information is believed to be correct but does not purport to be all inclusive | | | |
| | and shall be used only as a guide. This company shall not be held liable for any damage | | | |
| | resulting from handling or from contact with the above product. | | | |
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