Auto Klene Solutions

Print Date: 06/04/2016

Safety Data Sheet according to WHS and ADG requirements

Initial Date: Not Available

S.GHS.AUS.EN

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

| Product Identifier | | |
|-----------------------------------|---|--|
| Product name | Auto Klene Magic Degreaser | |
| Synonyms | Not Available | |
| Proper shipping name | CAUSTIC ALKALI LIQUID, N.O.S. (contains sodium hydroxide) | |
| Other means of identification | Not Available | |
| Relevant identified uses of the | ne substance or mixture and uses advised against | |
| Relevant identified uses | All purpose heavy duty cleaner used in the automotive industry. | |
| Details of the supplier of the | safety data sheet | |
| Registered company name | Auto Klene Solutions | |
| Address | 1/83 Merrindale Drive VIC Croydon 3136 Australia | |
| Telephone | +61 3 8761 1900 | |
| Fax | +61 3 8761 1955 | |
| Website | https://www.autoklene.com/msds/ | |
| Email | Not Available | |
| Emergency telephone number | er | |
| Association / Organisation | Not Available | |
| Emergency telephone numbers | 131 126 (Poisons Information Centre) | |
| Other emergency telephone numbers | 0408 406 968 (Mark Adams mobile) | |
| SECTION 2 HAZARDS ID | ENTIFICATION | |

Classification of the substance or mixture

HAZARDOUS CHEMICAL. DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

CHEMWATCH HAZARD RATINGS

| | Min | Max | |
|--------------|-----|-----|-------------------------|
| Flammability | 0 | | |
| Toxicity | 0 | | 0 = Minimum |
| Body Contact | 3 | | 1 = Low 2 = Moderate |
| Reactivity | 0 | | 3 = High |
| Chronic | 0 | | 4 = Extreme |

| Poisons Schedule | S5 |
|-----------------------|--|
| [1] Classification | Metal Corrosion Category 1, Skin Corrosion/Irritation Category 1B, Serious Eye Damage Category 1 |
| Legend: | 1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI |
| Label elements | |

GHS label elements



SIGNAL WORD **DANGER**

Hazard statement(s)

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| H290 | May be corrosive to metals. |
|------------------------------|--|
| H314 | Causes severe skin burns and eye damage. |
| H318 | Causes serious eye damage. |
| Precautionary statement(s) P | revention |
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P234 | Keep only in original container. |
| Precautionary statement(s) R | Response |
| P301+P330+P331 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. |
| P303+P361+P353 | IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310 | Immediately call a POISON CENTER or doctor/physician. |
| P363 | Wash contaminated clothing before reuse. |
| P390 | Absorb spillage to prevent material damage. |
| P304+P340 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| Precautionary statement(s) S | Storage |
| P405 | Store locked up. |
| Precautionary statement(s) D | Disposal |
| P501 | Dispose of contents/container in accordance with local regulations. |

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

| CAS No | %[weight] | Name |
|---------------|-----------|--|
| Not Available | 0-10 | alkaline salts, proprietary |
| Not Available | 0-10 | surfactant blend (proprietary non-hazardous) |
| Not Available | 0-10 | Ingredients determined not to be hazardous |
| 1310-73-2 | 0-3 | sodium hydroxide |
| 7732-18-5 | >60 | water |

SECTION 4 FIRST AID MEASURES

| Description of first aid meas | ures |
|-------------------------------|---|
| Eye Contact | If this product comes in contact with the eyes: Immediately hold eyelids apart and flush the eye continuously with running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| Skin Contact | If skin or hair contact occurs: ▶ Immediately flush body and clothes with large amounts of water, using safety shower if available. ▶ Quickly remove all contaminated clothing, including footwear. ▶ Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. ▶ Transport to hospital, or doctor. |

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If fumes or combustion products are inhaled remove from contaminated area. Lav patient down. Keep warm and rested ▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor. Inhalation ▶ Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema. ▶ Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs). As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (yet) manifested. ▶ Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered. This must definitely be left to a doctor or person authorised by him/her. (ICSC13719) ▶ For advice, contact a Poisons Information Centre or a doctor at once. Urgent hospital treatment is likely to be needed. ▶ If swallowed do NOT induce vomiting ▶ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Ingestion ▶ Observe the patient carefully. $\blacktriangleright \ \text{Never give liquid to a person showing signs of being sleepy or with reduced awareness}; \ i.e. \ becoming$ unconscious. • Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Transport to hospital or doctor without delay.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

for corrosives:

ioi comosives.

BASIC TREATMENT

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 l/min.
- Monitor and treat, where necessary, for pulmonary oedema.
- ▶ Monitor and treat, where necessary, for shock. ▶

Anticipate seizures.

- Where eyes have been exposed, flush immediately with water and continue to irrigate with normal saline during transport to hospital.
- ▶ DO NOT use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.
- ▶ Skin burns should be covered with dry, sterile bandages, following decontamination.
- ▶ DO NOT attempt neutralisation as exothermic reaction may occur.

ADVANCED TREATMENT

▶ Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred. ▶ Positive-pressure ventilation using a bag-valve mask might be of use. ▶ Monitor and treat, where necessary, for arrhythmias.

- Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- ▶ Drug therapy should be considered for pulmonary oedema.
- ▶ Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications. ▶ Treat seizures with diazepam.
- ▶ Proparacaine hydrochloride should be used to assist eye irrigation.

EMERGENCY DEPARTMENT

Laboratory analysis of complete blood count, serum electrolytes, BUN, creatinine, glucose, urinalysis, baseline for serum aminotransferases (ALT and AST), calcium, phosphorus and magnesium, may assist in establishing a treatment regime.

▶ Positive end-expiratory pressure (PEEP)-assisted ventilation may be required for acute parenchymal injury or adult respiratory distress syndrome. ▶ Consider endoscopy to evaluate oral injury. ▶ Consult a toxicologist as necessary.

BRONSTEIN, A.C. and CURRANCE, P.L. EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

- Water spray or fog.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide

Special hazards arising from the substrate or mixture

Fire Incompatibility

None known.

Advice for firefighters

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▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear full body protective clothing with breathing apparatus. ▶ Prevent, by any means available, spillage from entering drains or water course. Fire Fighting ▶ Use fire fighting procedures suitable for surrounding area. ▶ **Do not** approach containers suspected to be hot. ▶ Cool fire exposed containers with water spray from a protected location. ▶ If safe to do so, remove containers from path of fire. Non combustible. Fire/Explosion ▶ Not considered a significant fire risk, however containers may burn. Hazard May emit corrosive fumes.

SECTION 6 ACCIDENTAL RELEASE MEASURES

| Personal precautions, protec | ▶ Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material. ▶ Check regularly for spills and leaks. ▶ Clean up all spills immediately. ▶ Avoid breathing vapours and contact with skin and eyes. ▶ Control personal contact with the substance, by using protective equipment. ▶ Contain and absorb spill with sand, earth, inert material or vermiculite. ▶ Wipe up. ▶ Place in a suitable, labelled container for waste disposal. |
|------------------------------|--|
| Major Spills | Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Stop leak if safe to do so. Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. |

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

| SECTION / HANDLING A | |
|------------------------------|---|
| Precautions for safe handlin | g |
| Safe handling | ▶ DO NOT allow clothing wet with material to stay in contact with skin ▶ Avoid all personal contact, including inhalation. ▶ Wear protective clothing when risk of exposure occurs. ▶ Use in a well-ventilated area. ▶ Avoid contact with moisture. ▶ Avoid contact with incompatible materials. ▶ When handling, DO NOT eat, drink or smoke. ▶ Keep containers securely sealed when not in use. |
| Other information | Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this SDS. including any incompatibilities |
| Suitable container | ▶ Lined metal can, lined metal pail/ can. ▶ Plastic pail. ▶ Polyliner drum. ▶ Packing as recommended by manufacturer. ▶ Check all containers are clearly labelled and free from leaks. For low viscosity materials ▶ Drums and jerricans must be of the non-removable head type. ▶ Where a can is to be used as an inner package, the can must have a screwed enclosure. For materials with a viscosity of at least 2680 cSt. (23 deg. C) and solids (between 15 C deg. and 40 deg C.): ▶ Removable head packaging; ▶ Cans with friction closures and ▶ low pressure tubes and cartridges may be used. Where combination packages are used, and the inner packages are of glass, porcelain or stoneware, there must be sufficient inert cushioning material in contact with inner and outer packages unless the outer packaging is a close fitting moulded plastic box and the substances are not incompatible with the plastic. |
| Storage incompatibility | ▶ Avoid strong acids, acid chlorides, acid anhydrides and chloroformates. CONTROLS / PERSONAL PROTECTION |

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Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|---------------------------------|------------------|------------------|---------------|---------------|---------|---------------|
| Australia Exposure Standards | sodium hydroxide | Sodium hydroxide | Not Available | Not Available | 2 mg/m3 | Not Available |

EMERGENCY LIMITS

| Ingredient | Material name | TEEL-1 | | TEEL-2 | TEEL-3 | |
|--|------------------|---------------|---------------|---------------|---------------|--|
| sodium hydroxide | Sodium hydroxide | Not Available | | Not Available | Not Available | |
| Ingredient | Original IDLH | | Re | Revised IDLH | | |
| alkaline salts, proprietary | Not Available | | No | Not Available | | |
| surfactant blend (proprietary non-hazardous) | Not Available | | No | Not Available | | |
| Ingredients determined not to be hazardous | Not Available | | Not Available | | | |
| sodium hydroxide | 250 mg/m3 | | 10 mg/m3 | | | |
| water | Not Available | | No | t Available | | |

Exposure controls

Appropriate engineering controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.

Employers may need to use multiple types of controls to prevent employee overexposure.

Personal protection











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a Chemical goggles. ▶ Full face shield may be required for supplementary but never for primary protection of eyes. ▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the Eve and face wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and protection adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Skin protection See Hand protection below ▶ Wear chemical protective gloves, e.g. PVC. a Wear safety footwear or safety gumboots, e.g. Rubber When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots, The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: Hands/feet protection a frequency and duration of contact, a chemical resistance of glove material, a glove thickness and a dexterity Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent). a When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. a When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended. **Body protection** See Other protection below a Overalls. a PVC Apron. @ PVC protective suit may be required if exposure severe. Other protection Eyewash unit. @ Ensure there is ready access to a safety shower. Thermal hazards Not Available

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the *computergenerated* selection:

Auto Klene Ripp Off

| Material | СРІ |
|-------------------|-----|
| BUTYL | А |
| NEOPRENE | А |
| NAT+NEOPR+NITRILE | С |
| NATURAL RUBBER | С |
| NATURAL+NEOPRENE | С |
| NEOPRENE/NATURAL | С |
| NITRILE | С |
| NITRILE+PVC | С |
| PE | С |
| PE/EVAL/PE | С |
| PVA | С |
| PVC | С |
| SARANEX-23 | С |

| SARANEX-23 2-PLY | С |
|-------------------|---|
| TEFLON | С |
| VITON | С |
| VITON/CHLOROBUTYL | С |

^{*} CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES Respiratory protection

Particulate. (AS/NZS 1716 & 1715, EN 143:000 & 149:001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required. Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

| Required Minimum Protection Factor | Half-Face | Full-Face | Powered Air |
|------------------------------------|------------|------------|---------------------------|
| | Respirator | Respirator | Respirator |
| up to 10 x ES | -AUS P2 | - | -PAPR-AUS / Class 1 P2 |

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|--|-----------------------------------|--------------------------|---|--|
| Physical state | Liquid | | Relative density (Water = 1) | 1.055 Print Date: 06/04/2016 |
| Odour | Not Available | | Partition coefficient n- octanol / water | Not Available |
| Odour threshold | Not Available | | Auto-ignition temperature (°C) | Not Applicable |
| pH (as supplied) | ~13.2 | | Decomposition temperature | Not Available |
| Melting point / freezing point (°C) | ~0 | | Viscosity (cSt) | Not Available |
| Initial boiling point and boiling range (°C) | ~100 | | Molecular weight (g/mol) | Not Applicable |
| Flash point (°C) | Not Applicable | | Taste | Not Available |
| Evaporation rate | Not Available | | Explosive properties | Not Available |
| Flammability | Not Applicable | | Oxidising properties | Not Available |
| Upper Explosive Limit (%) | Not Applicable | | Surface Tension (dyn/cm or mN/m) | Not Available |
| Lower Explosive Limit (%) | Not Applicable | | Volatile Component (%vol) | Not Available |
| Vapour pressure (kPa) | 2 @ 20 degC | | Gas group | Not Available |
| Solubility in water (g/L) | Miscible | Miscible | | ~11.3 |
| Vapour density (Air = 1) | Not Available | | VOC g/L | Not Available |
| Appearance | Clear fluorescent orange / pink l | iquid with citrus odour; | mixes with water. | |
| up to 50 x ES | -AUS / Class 1 - P2 | - | | rs, B AUS or B1 = Acid gasses, B2 = Acid gas or Acid gas or hydrogen cyanide(HCN), E = Sulfur |
| up to 100 x ES | 2 P2 | -PAPR-2 P2 ^ | Agricultural chemicals, K = Amr MB = | monia(NH3), Hg = Mercury, NO = Oxides of nitrogen, |
| ^ - Full-face | | | | ng point organic compounds(below 65 degC) |

Information on basic physical and chemical properties SECTION 10 STABILITY AND REACTIVITY

| Reactivity | See section 7 |
|------------------------------------|--|
| Chemical stability | ▶ Unstable in the presence of incompatible materials. ▶ Product is considered stable. ▶ Hazardous polymerisation will not occur. |
| Possibility of hazardous reactions | See section 7 |
| Conditions to avoid | See section 7 |
| Incompatible materials | See section 7 |
| Hazardous decomposition products | See section 5 |

SECTION 11 TOXICOLOGICAL INFORMATION

| Information on toxicological | effects |
|------------------------------|---|
| Inhaled | Not normally a hazard due to non-volatile nature of product Inhaling corrosive bases may irritate the respiratory tract. Symptoms include cough, choking, pain and damage to the mucous membrane. |

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| Ingestion | The material can produce chemical burns within the c | oral cavity and gastrointestinal tract following ingestion. | |
|------------------------|---|---|--|
| Skin Contact | The material can produce chemical burns following direct contact with the skin. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. | | |
| Eye | The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating. If applied to the eyes, this material causes severe eye damage. | | |
| Chronic | (rarely) of the jaw. Bronchial irritation, with cough, and | esult in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necros d frequent attacks of bronchial pneumonia may ensue. cur and may cause some concern following repeated or long-term occupational exposure. | |
| | TOXICITY | IRRITATION | |
| Auto Klene Ripp Off | Not Available | Not Available | |
| | Not Available | Hot Available | |
| | TOXICITY | IRRITATION | |
| sodium hydroxide | Oral (rabbit) LD50: 325 mg/kg | Eye (rabbit): 0.05 mg/24h SEVERE | |
| | | Eye (rabbit):1 mg/24h SEVERE | |
| | | Eye (rabbit):1 mg/30s rinsed-SEVERE Skin (rabbit): 500 mg/24h SEVERE | |
| | TOXICITY | IRRITATION | |
| water | | | |
| | [2] Oral (rat) LD50: >90000 mg/kgNot Available | | |
| | 1 Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances | | |

| То | xic | ity |
|----|-----|-----|
| | | |

| Ingredient | Endpoint | Test Duration (hr) | Species | Value | Source |
|------------------|--|--------------------|-------------------------------|----------------|--------|
| sodium hydroxide | EC50 | 384 | Crustacea | 27901.643mg/L | 3 |
| sodium hydroxide | EC50 | 96 | Algae or other aquatic plants | 1034.10043mg/L | 3 |
| sodium hydroxide | LC50 | 96 | Fish | 4.16158mg/L | 3 |
| sodium hydroxide | NOEC | 96 | Fish | 56mg/L | 4 |
| sodium hydroxide | EC50 | 48 | Crustacea | 40.4mg/L | 2 |
| water | EC50 | 384 | Crustacea | 199.179mg/L | 3 |
| water | EC50 | 96 | Algae or other aquatic plants | 8768.874mg/L | 3 |
| water | LC50 | 96 | Fish | 897.520mg/L | 3 |
| Legend: | Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data | | | | |

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The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

Print Date: 06/04/2016 С Vers conjunctivitis. The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration. Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key SODIUM criteria for the diagnosis **HYDROXIDE** of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production. WATER No significant acute toxicological data identified in literature search. **Acute Toxicity** Carcinogenicity Skin Irritation/Corrosion Reproductivity Serious Eye 0 STOT - Single Exposure Damage/Irritation Respiratory or Skin sensitisation 0 STOT - Repeated Exposure 0 **Aspiration Hazard** Mutagenicity Data available but does not fill the criteria for Legend:

 Data available but does not till the criteria for classification

- Data required to make classification available
- Data Not Available to make classification

Prevent, by any means available, spillage from entering drains or water courses. **DO NOT** discharge into sewer or waterways.

Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air | |
|----------------------------|-------------------------|------------------|--|
| sodium hydroxide | LOW | LOW | |
| water | LOW | LOW | |
| Bioaccumulative potential | | | |
| Ingredient | Bioaccumulation | | |
| sodium hydroxide | LOW (LogKOW = -3.8796) | | |
| water | LOW (LogKOW = -1.38) | | |
| Mobility in soil | | | |
| Ingredient | Mobility | | |
| sodium hydroxide | LOW (KOC = 14.3) | | |
| water | LOW (KOC = 14.3) | | |
| SECTION 13 DISPOSAL | CONSIDERATIONS | | |

Waste treatment methods

| Product / Packaging disposal | Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate: Reduction | |
|---------------------------------|---|--|
| Land transport (ADG) | | |
| UN number | 1719 | |
| Packing group | III | |
| UN proper shipping name | CAUSTIC ALKALI LIQUID, N.O.S. (contains sodium hydroxide) | |
| Environmental hazard | Not Applicable | |
| Transport hazard class(es) | Class 8 Subrisk Not Applicable | |

 C

 ^a Reuse
 ^a Recycling
 ^a Recycling
 ^a Page 10 of 12
 ^a Disposal (if all else fails)
 ^a Reuse
 ^a Reuse
 ^a Reuse
 ^a Reuse
 ^a Reuse
 ^a Recycling
 ^b Page 10 of 12
 ^a Disposal (if all else fails)
 ^a Dispo

Disposal (in all least entropy) and in a least entropy (in all least entropy). Print Date: 06/04/2016
This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type.

Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

- ^a DO NOT allow wash water from cleaning or process equipment to enter drains
- $^{\mbox{\tiny 2}}$ It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- ^a Where in doubt contact the responsible authority.
- ▶ Recycle wherever possible.
- Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
- Treat and neutralise at an approved treatment plant. Treatment should involve: Neutralisation followed by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus (after admixture with suitable combustible material)
- ^a Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

| SECTION 14 TRANSPOR | T INFORMATION | |
|-------------------------------|--|---|
| Labels Required | | |
| | CORROSIVE 8 | |
| Marine Pollutant | NO | |
| HAZCHEM | 2R | |
| Special precautions for user | Special provisions 223 274 Limited quantity 5 L | |
| Air transport (ICAO-IATA / Do | GR) | |
| UN number | 1719 | |
| Packing group | Ш | |
| UN proper shipping name | Caustic alkali liquid, n.o.s. * (contains sodium hydroxide) | |
| Environmental hazard | Not Applicable | |
| Transport hazard class(es) | ICAO/IATA Class 8 ICAO / IATA Subrisk Not Applicable ERG Code 8L | |
| Special precautions for user | Special provisions Cargo Only Packing Instructions Cargo Only Maximum Qty / Pack Passenger and Cargo Packing Instructions Passenger and Cargo Maximum Qty / Pack Passenger and Cargo Limited Quantity Packing Instruction | A3A803 856 60 L 852 5 L ons Y841 |
| | Passenger and Cargo Limited Maximum Qty / Pack | 1L |
| Sea transport (IMDG-Code / 0 | GGVSee) | |
| UN number | 1719 | |
| Packing group | Ш | |
| UN proper shipping name | CAUSTIC ALKALI LIQUID, N.O.S. (contains sodium hydro: | xide) |
| Environmental hazard | Not Applicable | |
| Transport hazard class(es) | IMDG Class 8 IMDG Subrisk Not Applicable | |

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| Special precautions for user | EMS Number | F-A, S-B |
|------------------------------|--------------------|----------|
| | Special provisions | 223 274 |
| | Limited Quantities | 5 L |

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture

SODIUM HYDROXIDE(1310-73-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

Australia Hazardous Substances Information System - Consolidated Lists

WATER(7732-18-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

| National Inventory | Status |
|----------------------------------|---|
| Australia - AICS | Y |
| Canada - DSL | Y |
| Canada - NDSL | N (water; sodium hydroxide) |
| China - IECSC | Y |
| Europe - EINEC / ELINCS / NLP | Υ |
| Japan - ENCS | N (water) |
| Korea - KECI | Y |
| New Zealand - NZIoC | Y |
| Philippines - PICCS | Y |
| USA - TSCA | Y |
| Legend: | Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets) |

SECTION 16 OTHER INFORMATION

Other information

Ingredients with multiple cas numbers

| Name | CAS No |
|------------------|-----------------------|
| sodium hydroxide | 12200-64-5, 1310-73-2 |

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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