



Section 1 – Identification of the substance/preparation and the company

Product Name: Protosolv
Company: Donaghys Ltd
Address: 16 Sheffield Crescent
PO Box 20 449
Christchurch
Telephone Number: 0800 942 006
Manufacturer Product Code: APS0020/0100/0200
Recommended Use: A heavy duty chlorinated alkaline solution for cleaning stainless plants in the dairy and food industries

Section 2 – Hazard Identification

HSNO Classes: 6.1D (O), 8.1A, 8.2B, 8.3A, 9.1D

GHS Classifications:



Acute oral toxicity Category 4
Corrosive to metals Category 1
Skin corrosion Category 1B
Serious eye damage Category 1
Hazardous to the aquatic environment chronic Category 4

Hazard Statements:
H302 - Harmful if swallowed
H290 - May be corrosive to metals
H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H402 - Harmful to aquatic life

Precaution Statements:
P102 - Keep out of reach of children
P103 - Read label before use
P260 - Do not breathe dust/fume/gas/mist/vapours/spray
P234 - Keep only in original container
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection

Signal Word: DANGER

EPA NZ Approval Code: HSR002526
Cleaning Products (Corrosive) Group Standard

Section 3 – Composition Information

Chemical Entity	CAS No.	Content [%]
Sodium hydroxide	1310-73-2	10-60%
Sodium hypochlorite	7681-52-9	1-10%

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Section 4 – First Aid Measures

If Swallowed:	NEVER give anything by mouth to an unconscious person. Rinse mouth. Do NOT induce vomiting. Give water or milk to drink. Immediately call a POISON CENTRE or doctor/physician.
If in eyes:	Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so, continue rinsing. Immediately call a POISON CENTRE or doctor / physician.
If on skin:	Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before re-use. Immediately call a POISON CENTRE or doctor/physician
If inhaled:	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms, immediately call a POISON CENTRE or doctor / physician.
Advice to Doctor:	Treat symptomatically.

If medical advice is needed, have product container or label at hand.
POISON CENTRE CONTACT: 0800 764 766 (National Poisons Information Centre)

Section 5 – Fire-fighting Measures

Flashpoint:	Not applicable
Combustion Products:	Decomposes on heating and may produce toxic fumes of chlorine caustic compounds
Flammability Limits:	Not applicable
Protective Equipment:	Wear full body protective clothing with breathing apparatus
Extinguishing Media:	Water spray or fog. Foam. Dry chemical powder. BCF (where regulations permit). Carbon dioxide
Special Fire Fighting Methods:	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. Equipment should be thoroughly decontaminated after use. When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 800 metres in all directions.

Section 6 – Accidental Release Measures

Spills and Disposal:	MINOR SPILLS Clean up all spills immediately. Absorb spillage to prevent material damage. Avoid breathing vapours and contact with skin and eyes. Control personal contact by using protective equipment.
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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.

Consider evacuation (or protect in place).

Stop leak if safe to do so.

Contain spill with sand, earth or vermiculite.

Collect recoverable product into labelled containers for recycling.

Neutralise/decontaminate residue.

Collect solid residues and seal in labelled drums for disposal.

Wash area and prevent runoff into drains.

After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.

If contamination of drains or waterways occurs, advise emergency services.

DISPOSAL

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 with suitable dilute acid followed by:

Burial in a licenced landfill or Incineration in a licenced apparatus (after admixture with suitable combustible material).

Decontaminate empty containers. Observe all label safeguards until containers

are cleaned and destroyed.

Puncture containers to prevent re-use and bury at an authorised landfill.

**Protective
Equipment:
Environmental
Precautions:**

Wear neoprene gloves and boots, overalls and face/eye protection

Avoid entry into waterways or streams. Prevent washings from entering waterways.

Section 7– Handling and Storage

Storage:

SUITABLE CONTAINER

Packing as recommended by manufacturer. Check all containers are clearly labelled and free from leaks.

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. Store in corrosive resistant container with a resistant inner liner.

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STORAGE INCOMPATIBILITY

Avoid strong acids.

STORAGE REQUIREMENTS

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 storing and handling recommendations.

DO NOT store near acids, or oxidising agents

Protect containers against physical damage

Check regularly for spills and leaks

No smoking, naked lights, heat or ignition sources.

Handling:

Do not handle until all safety instructions have been read and understood.

Wear eye / face protection.

In case of inadequate ventilation wear respiratory protection.

Contaminated work clothing should not be allowed out of the workplace.

Avoid release to the environment.

Section 8 – Exposure Controls/Personal Protection

These precautions are suggested for conditions where the potential for exposure to the product exists. Emergency conditions may require additional precautions.

Exposure Limits: Composite Exposure Standard for Mixture (TWA) (mg/m³): 1.5 mg/m³

SODIUM HYDROXIDE:

TLV C: 2 mg/m³ [ACGIH]

PEL TWA: 2 mg/m³ [OSHA Z1]

TLV C: 2 mg/m³ [ACGIH]

PEL TWA: 2 mg/m³ [OSHA Z1]

TLV C: 2 mg/m³ ES Peak: 2 mg/m³

OES STEL: 2 mg/m³

IDLH Level: 10 mg/m³

The TLV-C is recommended based on concentrations that produce noticeable but not excessive, ocular and upper respiratory tract irritation.

SODIUM HYPOCHLORITE:

available chlorine, as chlorine

TLV TWA: 0.5 ppm, 1.5 mg/m³:

STEL: 1 ppm, 2.9 mg/m³

ES Peak: 1 ppm, 3 mg/m³ (Under review)

CEL TWA: 2 mg/m³ (compare WEEL TWA)

The odour threshold is likely to be similar to that of chlorine, 0.3 ppm. Acute, sub chronic, and chronic toxicity studies have shown no significant treatment related effects. High concentrations may produce moderate to severe eye irritation, but not permanent injury.

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High doses also appear to be embryotoxic. Since nearly all sodium hypochlorite is handled as aqueous solution, airborne exposure is likely to be as an aerosol, or mist.

Sodium hypochlorite dissociates in water to form free hypochlorous acid in equilibrium. The toxic effects are likely to be similar to those of chlorine or sodium hydroxide.

Protective Equipment:

EYES

Chemical goggles. Full face shield. Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them.

HANDS / FEET

Wear chemical protective gloves, e.g. PVC. 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.

OTHER

Overalls. PVC Apron. PVC protective suit may be required if exposure severe. Eyewash unit. Ensure there is ready access to a safety shower. Use respirator as required (see Engineering Controls)

**Hygiene Precautions:
Engineering Controls:**

Do not eat, drink or smoke when using this product.

General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in special circumstances. If risk of overexposure exists, wear approved respirator. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection.

Section 9 – Physical and Chemical Properties

Appearance:	Pale amber liquid
Odour:	Chlorine odour
Specific Gravity:	1.27
pH:	N/A
Vapour Pressure:	N/A
Flash Point:	N/A
Autoignition Temperature:	N/A
Flammability Limits:	N/A
Solubility:	miscible

Section 10 – Stability and Reactivity

Stability:	Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Conditions to Avoid:	None
Materials to Avoid:	Acidic compounds, water
Hazardous Decomposition Products:	None

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Section 11 – Toxicological Information

No adverse health effects are expected if the product is handled in accordance with this Safety Data Sheet and the product label.

- Ingestion:** The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion.
- Inhalation:** Not normally a hazard due to non-volatile nature of product. The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhaling corrosive bases may irritate the respiratory tract. Symptoms include cough, choking, pain and damage to the mucous membrane. In severe cases, lung swelling may develop, sometimes after a delay of hours to days. There may be low blood pressure, a weak and rapid pulse, and crackling sounds. The material may produce respiratory tract irritation, and result in damage to the lung including reduced lung function.
- Dermal:** The material can produce chemical burns following direct contact with the skin. Entry into the bloodstream, 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. The material may cause 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.
- Ocular:** The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating. The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
- Chronic Effects:** Repeated or prolonged exposure to corrosives may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue. Gastrointestinal disturbances may also occur. Chronic exposures may result in dermatitis and/or conjunctivitis. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a nonallergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis 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 dyspnoea, cough and mucous production.

Section 12 - Ecological Information

EPA Classification: 9.1D
Ecotoxicity: May be harmful to aquatic life
Bioaccumulation: Not known to bioaccumulate

Section 13 – Disposal Considerations

Product Disposal: If possible, dispose of by using according to the label, otherwise puncture to prevent re-use dispose of in an approved landfill or bury below 50 cm in a disposal pit specifically marked and set up for this purpose clear of waterways
Container Disposal: Triple rinse container and add residue to feed system. If circumstances, especially wind direction, permit the empty containers may be burned, otherwise crush and bury in a suitable landfill.

Section 14 – Transport Information

Proper Shipping Name: CAUSTIC ALKALI LIQUID, N.O.S.
UN Number: 1719
DG Class: 8
Subsidiary Risk Class: None
Packing Group: II
HAZCHEM Code: 2R

Section 15 – Regulatory Information

EPA NZ Approval Number: HSR002526
See <http://www.epa.govt.nz> for approval conditions
NZFSA Registration Number: H1859

Section 16 – Other Information

The information in this MSDS is provided in good faith, but no warranty, expressed or implied is made. Contact Donaghys Ltd for more information.

EMERGENCY CONTACT No.: 0800 764 766 (National Poisons Information Centre)

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