coles

Coles Disinfectant Bleach Cleaner

Coles Supermarkets

Chemwatch Hazard Alert Code: 3

Chemwatch: **5228-18**
Version No: **2.1.1.1**
Safety Data Sheet according to WHS and ADG requirements

Issue Date: **31/10/2016**
Print Date: **14/11/2016**
S.GHS.AUS.EN

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

Product Identifier

Product name	Coles Disinfectant Bleach Cleaner
Proper shipping name	CHLORITE SOLUTION
Other means of identification	APN Barcode: 9310645179568

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Hard surface cleaning.

Details of the supplier of the safety data sheet

Registered company name	Coles Supermarkets
Address	800 Toorak Road Hawthorn East VIC 3123 Australia
Telephone	Customer Care: Free Call 1800 061 562 ; Business Hours Weekdays 8:30am-6:00pm AEST)
Fax	Not Available
Website	https://www.coles.com.au/Products/Material-Safety-Data-Sheets.aspx
Email	Not Available

Emergency telephone number

Association / Organisation	POISONS INFORMATION CENTRE
Emergency telephone numbers	Poisons Information Centre (phone 13 11 26), First Aid 24 Hour
Other emergency telephone numbers	Not Available

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

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

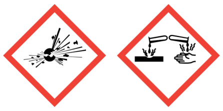
CHEMWATCH HAZARD RATINGS

		Min	Max
Flammability	**0**		
Toxicity	**1**	▬	
Body Contact	**3**	▬▬▬	
Reactivity	**0**		
Chronic	**0**		

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

Poisons Schedule	S5
Classification [1]	Self Reactive Type A, Metal Corrosion Category 1, Skin Corrosion/Irritation Category 1B, Serious Eye Damage Category 1, Acute Aquatic Hazard Category 2
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)

Continued...

H240	Heating may cause an explosion.
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H401	Toxic to aquatic life
AUH031	Contact with acid liberates toxic gas

Precautionary statement(s) Prevention

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P234	Keep only in original container.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P220	Keep/Store away from clothing/organic material/combustible materials.
P273	Avoid release to the environment.

Precautionary statement(s) 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.
P370+P380+P375	In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.
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.
P370+P378	In case of fire: Use alcohol resistant foam or fine spray/water fog for extinction.

Precautionary statement(s) Storage

P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P411	Store at temperatures not exceeding 30°C/86°F (see storage requirements on SDS).
P420	Store away from other materials.

Precautionary statement(s) 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
7681-52-9	5-6	sodium hypochlorite
70592-80-2	<10	cocodimethylamine oxide
68891-38-3	<5	sodium linear-(C12-14)alkyl ether sulfate
1310-73-2	<5	sodium hydroxide
7732-18-5	>80	water

SECTION 4 FIRST AID MEASURES

Description of first aid measures

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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Inhalation	▸ If fumes or combustion products are inhaled remove from contaminated area. ▸ Lay 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 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)
Ingestion	▸ 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. ▸ Observe the patient carefully. ▸ 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

For chlorates:
For severe intoxication: Empty the stomach by lavage and aspiration or by emesis, give demulcents or sweetened drinks and maintain respiration. Pethidine may be given if required. A 1% solution of sodium thiosulfate may be used for lavage and may also be given by intravenous infusion. Haemodialysis, peritoneal dialysis or exchange perfusions may be of value in removing chlorate from the blood. Forced diuresis should not be attempted if there is inadequate urine input.
MARTINDALE: The Extra Pharmacopoeia, 27th Edition
The high sensitivity of glucose-6-phosphate dehydrogenase to denaturation by chlorate explains the inefficacy of methylene blue to reduce methaemoglobin formed, as the antidotal effect of methylene blue depends on NADPH formed mainly by the oxidation of glucose-6-phosphate. The observed changes occur only in the presence of methaemoglobin which forms a destabilising complex with chlorate. Methaemoglobin thus autocatalytically increases methaemoglobin formation and destruction of the erythrocyte.
Treatment regime for bromates may also act as a guide for chlorate poisonings.

- Syrup of ipecac or gastric lavage with tap water or perhaps a 1% solution of sodium thiosulfate
- Administer a demulcent and an analgesic like meperidine (Demerol). Avoid morphine.
- If readily available, the prompt use of haemodialysis or peritoneal lavage may serve to remove absorbed but unreacted chlorate in significant amounts.
- Administer oxygen. If methaemoglobinaemia becomes severe a replacement transfusion with whole blood may become necessary.
- **DO NOT** attempt to correct methaemoglobinaemia with methylene blue as the dye may enhance the toxicity.
- Sodium thiosulfate solution (100 to 500 ml of 1%) by intravenous drip has been recommended by some authors.
- Correct dehydration by infusing intravenously a glucose solution (5% in water). Avoid electrolytes (except as above) unless acid-base imbalance or shock becomes severe.
- Supportive treatment of acute renal failure. [GOSSELIN et al, Clinical Toxicology of Commercial Products, Fifth Edition]

For acute or repeated exposures to hypochlorite solutions:

- Release of small amounts of hypochlorous acid and acid gases from the stomach following ingestion, is usually too low to cause damage but may be irritating to mucous membranes. Buffering with antacid may be helpful if discomfort is evident.
- Evaluate as potential caustic exposure.
- Decontaminate skin and eyes with copious saline irrigation. Check exposed eyes for corneal abrasions with fluorescein staining.
- Emesis or lavage and catharsis may be indicated for mild caustic exposure.
- Chlorine exposures require evaluation of acid/base and respiratory status.
- Inhalation of vapours or mists may result in pulmonary oedema.

ELLENHORN and BARCELOUX: Medical Toxicology.
Treat symptomatically.
For acute or short-term repeated exposures to highly alkaline materials:

- Respiratory stress is uncommon but present occasionally because of soft tissue edema.
- Unless endotracheal intubation can be accomplished under direct vision, cricothyroidotomy or tracheotomy may be necessary.
- Oxygen is given as indicated.
- The presence of shock suggests perforation and mandates an intravenous line and fluid administration.
- Damage due to alkaline corrosives occurs by liquefaction necrosis whereby the saponification of fats and solubilisation of proteins allow deep penetration into the tissue.

Alkalis continue to cause damage after exposure.
INGESTION:

- Milk and water are the preferred diluents

No more than 2 glasses of water should be given to an adult.

- Neutralising agents should never be given since exothermic heat reaction may compound injury.

* Catharsis and emesis are absolutely contra-indicated.
* Activated charcoal does not absorb alkali.
* Gastric lavage should not be used.
Supportive care involves the following:

- Withhold oral feedings initially.
- If endoscopy confirms transmucosal injury start steroids only within the first 48 hours.
- Carefully evaluate the amount of tissue necrosis before assessing the need for surgical intervention.
- Patients should be instructed to seek medical attention whenever they develop difficulty in swallowing (dysphagia).

SKIN AND EYE:

- Injury should be irrigated for 20-30 minutes.

Eye injuries require saline. [Ellenhorn & Barceloux: Medical Toxicology]
Excellent warning properties force rapid escape of personnel from chlorine vapour thus most inhalations are mild to moderate. If escape is not possible, exposure to high concentrations for a very short time can result in dyspnea, haemophysis and cyanosis with later complications being tracheobroncho-pneumonitis and pulmonary oedema. Oxygen, intermittent positive pressure breathing apparatus and aerosolysed bronchodilators are of therapeutic value where chlorine inhalation has been light to moderate. Severe inhalation should result in hospitalisation and treatment for a respiratory emergency.
Any chlorine inhalation in an individual with compromised pulmonary function (COPD) should be regarded as a severe inhalation and a respiratory emergency. [CCINFO, Dow 1988]
Effects from exposure to chlorine gas include pulmonary oedema which may be delayed. Observation in hospital for 48 hours is recommended
Diagnosed asthmatics and those people suffering from certain types of chronic bronchitis should receive medical approval before being employed in occupations involving chlorine exposure.
If burn is present, treat as any thermal burn, after decontamination.
Chlorite intoxication may respond to the treatment regime advised for chlorates, viz::

For severe intoxication: Empty the stomach by lavage and aspiration or by emesis, give demulcents or sweetened drinks and maintain respiration. Pethidine may be given if required. A 1% solution of sodium thiosulfate may be used for lavage and may also be given by intravenous infusion. Haemodialysis, peritoneal dialysis or exchange perfusions may be of value in removing chlorate from the blood. Forced diuresis should not be attempted if there is inadequate urine input.

MARTINDALE: The Extra Pharmacopoeia, 27th Edition

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The high sensitivity of glucose-6-phosphate dehydrogenase to denaturation by chlorate explains the inefficacy of methylene blue to reduce methaemoglobin formed, as the antidotal effect of methylene blue depends on NADPH formed mainly by the oxidation of glucose-6-phosphate. The observed changes occur only in the presence of methaemoglobin which forms a destabilising complex with chlorate. Methaemoglobin thus autocatalytically increases methaemoglobin formation and destruction of the erythrocyte.
Depending on the degree of exposure, periodic medical examination is indicated. The symptoms of lung oedema often do not manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation is therefore essential. Immediate administration of an appropriate spray, by a doctor or a person authorised by him/her should be considered.
(ICSC24419/24421

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas.
Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances.
In such an event consider:

- foam.
- dry chemical powder.
- carbon dioxide.

Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.

Advice for firefighters

Fire Fighting	▸ 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. ▸ 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.
Fire/Explosion Hazard	, , , , , , The emulsion is not combustible under normal conditions. However, it will break down under fire conditions and the hydrocarbon component will burn. Decomposes on heating and produces toxic fumes of: carbon dioxide (CO2) hydrogen chloride phosgene sulfur oxides (SOx) metal oxides other pyrolysis products typical of burning organic material. May emit corrosive fumes.
HAZCHEM	2X

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	▸ 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. ▸ 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.

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	▸ **DO NOT** allow clothing wet with material to stay in contact with skin

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	▸ 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. ▸ Avoid physical damage to containers.
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. ▸ **DO NOT** store near acids, or oxidising agents ▸ No smoking, naked lights, heat or ignition sources.

Conditions for safe storage, 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. HDPE 1.25L bottle with CRC.
Storage incompatibility	▸ Contact with acids produces toxic fumes ▸ Avoid contact with copper, aluminium and their alloys. ▸ Chlorites are much less stable than corresponding chlorates and most will explode under shock or on heating to around 100 deg. C. These include chlorites of copper (violent on impact), hydrazine (monochlorite, inflames when dry), nickel (explodes at 100 deg. C but not on impact), silver (at 105 deg. C or on impact), sodium, tetramethylammonium and thallium (which show detonator properties). Several other chlorites not isolated and unstable in solution include ammonium chlorite and its mono-, di-, and tri-methyl derivatives. ▸ Metal salts of chlorites are powerful oxidants. ▸ Intimate mixes of solid chlorites with finely divided or fibrous organic matter may be explosive and very sensitive to heat, impact or friction. ▸ In the presence of oils chlorites may be friction and shock-sensitive. ▸ Under normal conditions solutions of chlorites, when acidified, do not evolve chlorine dioxide in dangerous amounts. However, explosive concentrations may result if acid is dropped onto solid chlorites.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

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 hypochlorite	Sodium hypochlorite pentahydrate	4.6 mg/m3	51 mg/m3	290 mg/m3
sodium hypochlorite	Sodium hypochlorite	2 mg/m3	20 mg/m3	630 mg/m3
sodium hydroxide	Sodium hydroxide	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
sodium hypochlorite	Not Available	Not Available
cocodimethylamine oxide	Not Available	Not Available
sodium linear-(C12-14)alkyl ether sulfate	Not Available	Not Available
sodium hydroxide	250 mg/m3	10 mg/m3
water	Not Available	Not 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

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	"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. General exhaust is adequate under normal operating conditions.
Personal protection	
Eye and face protection	▸ 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 wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and 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. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly.
Skin protection	See Hand protection below
Hands/feet protection	▸ 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. **NOTE:** ▸ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. ▸ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. 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. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended. Suitability and durability of glove type is dependent on usage. ▸ Do NOT wear natural rubber (latex gloves).
Body protection	See Other protection below
Other protection	▸ Overalls. ▸ PVC Apron. ▸ PVC protective suit may be required if exposure severe. ▸ Eyewash unit. ▸ Ensure there is ready access to a safety shower.
Thermal hazards	Not Available

Respiratory protection

Type ABK-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, 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 Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	ABK-AUS P2	-	ABK-PAPR-AUS / Class 1 P2
up to 50 x ES	-	ABK-AUS / Class 1 P2	-
up to 100 x ES	-	ABK-2 P2	ABK-PAPR-2 P2 ^

^ - Full-face
A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content. The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Clear, pale yellow, low viscosity alkaline liquid with a bleach odour; soluble in water

Physical state	Liquid	**Relative density (Water = 1)**	1.09
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not Applicable
pH (as supplied)	12.5-13.5	**Decomposition temperature**	Not Available
Melting point / freezing point (°C)	Not Available	**Viscosity (cSt)**	500-1500
Initial boiling point and boiling range (°C)	Not Available	**Molecular weight (g/mol)**	Not Applicable

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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)	Not Available	**Gas group**	Not Available
Solubility in water (g/L)	Miscible	**pH as a solution (1%)**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	Not Available

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	The material is not thought to produce adverse health effects following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. Not normally a hazard due to non-volatile nature of product
Ingestion	The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion. Accidental ingestion of the material may be damaging to the health of the individual. Nonionic surfactants may produce localised irritation of the oral or gastrointestinal lining and induce vomiting and mild diarrhoea. Chlorite may cause and worsen destruction of the red blood cells. Intoxication should be managed as an emergency in a hospital and may require emptying the stomach, maintaining respiration, and dialysis. Ingestion of hypochlorites may cause burning in the mouth and throat, abdominal cramps, nausea, vomiting, diarrhoea, pain and inflammation of the mouth and stomach, fall of blood pressure, shock, confusion, and delirium. Severe poisonings may lead to convulsion, coma and death. Ingestion irritates the mouth, throat, and stomach. The hypochlorous acid liberated in the stomach can cause wall perforation, toxemia, haemorrhage and death. Necrosis and haemorrhage of the upper digestive tract, oedema and pulmonary emphysema were found on autopsy after suicidal ingestion, and methaemoglobinaemia was also reported in another fatal case
Skin Contact	The material can produce chemical burns following direct contact with the skin. One of the mechanisms of skin irritation caused by surfactants is considered to be denaturation of the proteins of skin. It has also been established that there is a connection between the potential of surfactants to denature protein in vitro and their effect on the skin. Nonionic surfactants do not carry any net charge and, therefore, they can only form hydrophobic bonds with proteins. For this reason, proteins are not deactivated by nonionic surfactants, and proteins with poor solubility are not solubilized by nonionic surfactants Open cuts, abraded or irritated skin should not be exposed to this material Contact may cause severe itchiness, skin lesions and mild eczema. A 5.25% solution of sodium hypochlorite applied to intact human skin for 4 hours and observed at 4, 24 and 48 hours resulted in exudation an slight sloughing of the skin on 4 of 7 subjects. Two patients were reported with chronic allergic dermatitis of the hand related to sensitisation to sodium hypochlorite as the active component of laundry bleach 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. Non-ionic surfactants can cause numbing of the cornea, which masks discomfort normally caused by other agents and leads to corneal injury. Irritation varies depending on the duration of contact, the nature and concentration of the surfactant. Hypochlorite in pool water at concentrations of 1 ppm chlorine or less is non irritating to eyes if the pH is higher than 7.2 (slightly alkaline); At lower pH sensation of stinging, smarting of eyes with transient reddening may occur but generally no injury. Eye contact with a 5% hypochlorite solution may produce a temporary burning discomfort and slight irritation of the corneal epithelium with no injury
Chronic	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. There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. There is some evidence that inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population. There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population. Prolonged exposure to chlorites might cause anaemia and kidney or liver damage. Consumption of chlorite in drinking water caused small changes in thyroid hormone levels �[CCINFO] Prolonged or repeated skin contact may cause degreasing with drying, cracking and dermatitis following. Reduced respiratory capacity may result from chronic low level exposure to chlorine gas. Chronic poisoning may result in coughing, severe chest pains, sore throat and haemoptysis (bloody sputum). Moderate to severe exposures over 3 years produced decreased lung capacity in a number of workers. Delayed effects can include shortness of breath, violent headaches, pulmonary oedema and pneumonia. Amongst chloralkali workers exposed to mean concentrations of 0.15 ppm for an average of 10.9 years a generalised pattern of fatigue (exposures of 0.5 ppm and above) and a modest increased incidence of anxiety and dizziness were recorded. Leukocytosis and a lower haematocrit showed some relation to exposure.

Coles Disinfectant Bleach Cleaner	TOXICITY	IRRITATION

Continued...

	Not Available	Not Available
sodium hypochlorite	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >10000 mg/kg[1]	Eye (rabbit): 10 mg - moderate
	Oral (rat) LD50: >237 mg/kg[1]	Eye (rabbit): 100 mg - moderate
		Skin (rabbit): 500 mg/24h-moderate
cocodimethylamine oxide	TOXICITY	IRRITATION
	Not Available	Not Available
sodium linear-(C12-14)alkyl ether sulfate	TOXICITY	IRRITATION
	dermal (rat) LD50: >2000 mg/kg[1]	Not Available
	Oral (rat) LD50: 4100 mg/kg[1]	
sodium hydroxide	TOXICITY	IRRITATION
	Oral (rabbit) LD50: 325 mg/kg[1]	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
water	TOXICITY	IRRITATION
	Oral (rat) LD50: >90000 mg/kg[2]	Not Available

Legend:	*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*

SODIUM HYPOCHLORITE	Hypochlorite salts are classified by IARC as Group 3: **NOT** classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing. The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. Hypochlorite salts are extremely corrosive and can cause severe damage to the eyes and skin. A number of skin cancers have been observed in mice, when applied to their skin. as sodium hypochlorite pentahydrate
COCODIMETHYLAMINE OXIDE	Amine oxides are readily metabolised and excreted after oral intake. They produced no mortality or skin sensitization on exposure but caused reversible irritation of the eyes, skin and airways. They may also cause cataracts. Repeat dosing showed no abnormal changes except for diarrhoea and weight loss. They are not noted to cause cancer, reproductive, genetic or developmental defects. 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.
SODIUM LINEAR-(C12-14)ALKYL ETHER SULFATE	Alcohol ethoxysulfates (AES) are of low acute toxicity. Neat AES are irritant to the skin and eyes.
SODIUM HYDROXIDE	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.
SODIUM HYPOCHLORITE & COCODIMETHYLAMINE OXIDE & SODIUM HYDROXIDE	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 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 dyspnea, cough and mucus production.
COCODIMETHYLAMINE OXIDE & SODIUM LINEAR-(C12-14)ALKYL ETHER SULFATE & WATER	No significant acute toxicological data identified in literature search.
COCODIMETHYLAMINE OXIDE & SODIUM HYDROXIDE	The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

Acute Toxicity	⊘	**Carcinogenicity**	⊘
Skin Irritation/Corrosion	✓	**Reproductivity**	⊘
Serious Eye Damage/Irritation	✓	**STOT - Single Exposure**	⊘
Respiratory or Skin sensitisation	⊘	**STOT - Repeated Exposure**	⊘
Mutagenicity	⊘	**Aspiration Hazard**	⊘

Legend:
✗ *– Data available but does not fill the criteria for classification*
✓ *– Data required to make classification available*
⊘ *– Data Not Available to make classification*

Continued...

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
sodium hypochlorite	LC50	96	Fish	0.032mg/L	4
sodium hypochlorite	EC50	48	Crustacea	0.026mg/L	2
sodium hypochlorite	EC50	72	Algae or other aquatic plants	0.0183mg/L	2
sodium hypochlorite	EC50	0.08	Crustacea	0.002mg/L	4
sodium hypochlorite	NOEC	72	Algae or other aquatic plants	0.0054mg/L	2
cocodimethylamine oxide	EC50	504	Crustacea	0.88mg/L	4
cocodimethylamine oxide	NOEC	504	Fish	0.5mg/L	4
sodium linear-(C12-14)alkyl ether sulfate	EC50	72	Algae or other aquatic plants	27mg/L	2
sodium linear-(C12-14)alkyl ether sulfate	EC50	504	Crustacea	0.37mg/L	2
sodium linear-(C12-14)alkyl ether sulfate	NOEC	504	Crustacea	0.18mg/L	2
sodium hydroxide	LC50	96	Fish	4.16158mg/L	3
sodium hydroxide	EC50	96	Algae or other aquatic plants	1034.10043mg/L	3
sodium hydroxide	EC50	384	Crustacea	27901.643mg/L	3
sodium hydroxide	NOEC	96	Fish	56mg/L	4
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*				

Toxic to aquatic organisms.
Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.
Wastes resulting from use of the product must be disposed of on site or at approved waste sites.
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	▸ Containers may still present a chemical hazard/ danger when empty. ▸ Return to supplier for reuse/ recycling if possible. Otherwise: ▸ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. ▸ Where possible retain label warnings and SDS and observe all notices pertaining to the product. 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 ▸ Reuse ▸ Recycling ▸ Disposal (if all else fails) 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.

Continued...

- **DO NOT** allow wash water from cleaning or process equipment to enter drains.
- 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.
- Where in doubt contact the responsible authority.

FOR DISPOSAL OF SMALL QUANTITIES:

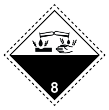
- Cautiously acidify a 3% solution or a suspension of the material to pH 2 with sulfuric acid.
- Gradually add a 50% excess of aqueous sodium bisulfite with stirring at room temperature. (Other reducers such as thiosulfate or ferrous salts may substitute; **do NOT** use carbon, sulfur or other strong reducing agents). An increase in temperature indicates reaction is taking place. If no reaction is observed on the addition of about 10% of the sodium bisulfite solution, initiate it by cautiously adding more acid.
- If manganese, chromium or molybdenum are present adjust the pH of the solution to 7 and treat with sulfide to precipitate for burial as a hazardous waste. Destroy excess sulfide, neutralise and flush the solution down the drain (subject to State and Local Regulation).

[Sigma/Aldrich]

- 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 land-fill specifically licenced to accept chemical and / or pharmaceutical wastes 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.

SECTION 14 TRANSPORT INFORMATION

Labels Required

	
Marine Pollutant	NO
HAZCHEM	2X

Land transport (ADG)

UN number	1908	
UN proper shipping name	CHLORITE SOLUTION	
Transport hazard class(es)	Class	8
	Subrisk	Not Applicable
Packing group	III	
Environmental hazard	Not Applicable	
Special precautions for user	Special provisions	223
	Limited quantity	5 L

Air transport (ICAO-IATA / DGR)

UN number	1908	
UN proper shipping name	Chlorite solution	
Transport hazard class(es)	ICAO/IATA Class	8
	ICAO / IATA Subrisk	Not Applicable
	ERG Code	8L
Packing group	III	
Environmental hazard	Not Applicable	
Special precautions for user	Special provisions	A3A803
	Cargo Only Packing Instructions	856
	Cargo Only Maximum Qty / Pack	60 L
	Passenger and Cargo Packing Instructions	852
	Passenger and Cargo Maximum Qty / Pack	5 L
	Passenger and Cargo Limited Quantity Packing Instructions	Y841
	Passenger and Cargo Limited Maximum Qty / Pack	1 L

Sea transport (IMDG-Code / GGVSee)

UN number	1908	
UN proper shipping name	CHLORITE SOLUTION	
Transport hazard class(es)	IMDG Class	8
	IMDG Subrisk	Not Applicable
Packing group	III	
Environmental hazard	Not Applicable	

Continued...

Special precautions for user	EMS Number	F-A, S-B
	Special provisions	223
	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 HYPOCHLORITE(7681-52-9) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists
Australia Inventory of Chemical Substances (AICS)
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

COCODIMETHYLAMINE OXIDE(70592-80-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

SODIUM LINEAR-(C12-14)ALKYL ETHER SULFATE(68891-38-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists
Australia Inventory of Chemical Substances (AICS)

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

Australia Exposure Standards
Australia Hazardous Substances Information System - Consolidated Lists
Australia Inventory of Chemical Substances (AICS)

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 (cocodimethylamine oxide; sodium linear-(C12-14)alkyl ether sulfate; water; sodium hypochlorite; sodium hydroxide)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
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 hypochlorite	7681-52-9, 10022-70-5
sodium linear-(C12-14)alkyl ether sulfate	68891-38-3, 9004-82-4
sodium hydroxide	1310-73-2, 12200-64-5

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.

end of SDS