

1. Identification


Product identifier	Detergent, Lemon Fresh	
Recommended use of the chemical and restrictions on use	A medium viscous dishwashing detergent designed to remove soil and grease commonly found on dishes, cutlery and glassware. This product is gentle on hands, easy to use and biodegradable. It is ideal for domestic, commercial and industrial cleaning and well as food preparation areas.	
Details of manufacturer or importer	Company Name	Chemwell Pty Ltd ABN 94 155 544 040
	Address	3 Clive St, Springvale, VIC, 3171
	Phone	03 9558 5678
	Email	chemwell@chemwell.com.au
	Website	www.chemwell.com.au
Emergency phone number	Police, Fire & Ambulance	000
	Poisons Information Centre	13 11 26

2. Hazard(s) Identification

This material is hazardous according to criteria of Safe Work Australia.

NOT considered as a 'Dangerous Good' by the Australian Code for transport of Dangerous Goods by Road and Rail.

At recommended dilution solution is NOT hazardous.

Classification of the hazardous chemical	Acute Toxicity, Oral 5 Eye Damage/Irritation 2B Skin Corrosion/Irritation 2 Skin Sensitization 1
Hazard symbols	
Signal word(s)	Warning
Hazard statement(s)	H303 - May be harmful if swallowed H315 - Causes skin irritation H317 - May cause an allergic skin reaction H320 - Causes eye irritation

Precautionary statement(s)	Prevention	<p>P261 - Avoid breathing dust/fumes/gas/mist/vapours/spray.</p> <p>P272 - Contaminated work clothing should not be allowed out of the workplace.</p> <p>P280 - Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P264 - Wash thoroughly after handling.</p>
	Response	<p>P312 - Call a POISON CENTER or doctor if you feel unwell.</p> <p>P302+352 - IF ON SKIN: Wash with plenty of water.</p> <p>P321 - Specific treatment (see ... on this label).</p> <p>P332+313 - If skin irritation occurs: Get medical advice/attention.</p> <p>P362 - Take off contaminated clothing.</p> <p>P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.</p> <p>P337+313 - If eye irritation persists get medical advice/attention.</p> <p>P333+313 - If skin irritation or a rash occurs: Get medical advice/attention.</p> <p>P363 - Wash contaminated clothing before reuse.</p>
	Storage	
	Disposal	P501 - Dispose of contents/container to in accordance with local regulation.

3. Composition and Information on Ingredients

Name	Proportion
Dodecylbenzene Sulfonic Acid	10-30%
Cocodiethanolamide	<10%

Disclosure of ingredients is only required if an ingredient causes the classification of the chemical to include a hazard class and hazard category in the following list:

- Acute toxicity (oral, dermal and inhalation) – Category 1 to 4
- Respiratory sensitiser – Category 1
- Skin sensitiser – Category 1
- Mutagenicity – Category 1 or 2
- Carcinogenicity – Category 1 or 2
- Toxic to reproduction – Category 1 or 2
- Target organ toxicity (single exposure) – Category 1 or 2
- Target organ toxicity (repeat exposure) – Category 1 or 2
- Aspiration hazards – Category 1
- Skin corrosion or irritation – Category 1 or 2
- Serious eye damage or eye irritation – Category 1 or 2A

4. First Aid Measures

Swallowed	Immediately rinse mouth out thoroughly with water and give water to drink. DO NOT induce vomiting. Seek medical advice.
Eye	Immediately irrigate eyes with large amounts of water for at least 15 minutes with eyelids held open. Take care not to rinse contaminated water into the non-affected eye. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. Seek medical advice.
Skin	Immediately wash affected area with large amounts of water. Remove any contaminated clothing and wash before re-use. Seek medical advice if pain or irritation persists.
Inhaled	For all but minor symptoms seek medical advice. Not considered a normal feature of use.
First Aid Facilities	Standard first aid facilities.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of patient.

5. Fire Fighting Measures

Suitable extinguishing equipment	Use water spray, alcohol-resistant foam, dry agent (carbon dioxide, dry chemical powder).
Specific hazards arising from the chemical	<p>During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Hazardous products of combustion for each ingredient are:</p> <p>Ingredient 1) Reacts with aluminium, tin, zinc and their alloys, copper, lead, etc. giving off hydrogen.</p> <p>Ingredient 2) On burning will emit toxic fumes, including those of oxides of carbon, and oxides of sulfur.</p> <p>Ingredient 3) On combustion, may emit toxic fumes of carbon monoxide (CO).</p> <p>Ingredient 4) Carbon monoxide, carbon dioxide, oxides of nitrogen and various hydrocarbons.</p> <p>Ingredient 5) May liberate toxic fumes in fire including formic acid, methanol, carbon monoxide and carbon dioxide.</p>
Special protective equipment and precautions for fire fighters	<p>Wear positive-pressure, self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant section.</p> <p>Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.</p> <p>HazChem (EAC): 2R</p>

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	<p>Personnel involved in the clean-up should wear protective clothing as listed in section 8. Use clean, non-sparking tools and equipment. Avoid breathing vapours and contact with skin and eyes. Remove contaminated clothing and wash before reuse.</p> <p>Eliminate all sources of ignition. Increase ventilation.</p> <p>Avoid walking through spilled product as it may be slippery. Stop leak if safe to do so. Clean up all spills immediately. Clear area of all unnecessary personnel.</p>
Environmental precautions	Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.
Methods and materials for containment and cleaning up	<p>Avoid walking through spilled product as it may be slippery. Stop leak if safe to do so. This may involve tipping container on its side. Clean up all spills immediately. Clear area of all unnecessary personnel. If safe to do so repack leaking container into new container.</p> <p>Place inert, absorbent, non-combustible material onto spillage. Wipe up. Place in a suitable, labelled container for waste disposal.</p>

7. Handling and Storage

Handling	<p>Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Check Section 8 for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the counteracting workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.</p>
Storage	<p>Store in a cool, well ventilated area. Check containers periodically for corrosion and leaks. Containers should be kept closed in order to minimise contamination. Containers should be protected against any form of physical damage indeterminate goodness wellbeing always. Have appropriate fire extinguishers available in and near storage area. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10.</p>

8. Exposure Controls and Personal Protection

Exposure standards	<p>No value assigned for this specific material by Safe Work Australia. However, Exposure Standard(s) for ingredient(s) are:</p> <p>Ingredient 1) No Data Available</p>
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	<p>Ingredient 2) Sulfuric acid: 8hr TWA = 1 mg/m³, 15 min STEL = 3 mg/m³</p> <p>Ingredient 3) Australian Exposure Standards glycerol TWA 10 mg/m³ Australian Exposure Standards diethanolamine TWA 13 mg/m³ / 3 ppm</p> <p>Ingredient 4) No Data Available</p> <p>Ingredient 5) No Data Available</p>
Biological limits	<p>Biological limits for ingredient(s) are:</p> <p>Ingredient 1) No information available on biological limit values for this product.</p> <p>Ingredient 2) None specified.</p> <p>Ingredient 3) No information available.</p> <p>Ingredient 4) No information available on biological limit values for this product.</p> <p>Ingredient 5) No information available on biological limit values for this product.</p>
Engineering controls	<p>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.</p>
Personal protective equipment (PPE)	<p>Chemical protective gloves.</p>

9. Physical and Chemical Properties

Appearance (physical state, colour etc.)	A clear, green liquid
Odour	Apple grafrance
Odour threshold	Not specified
pH	7-8
Melting point/freezing point	Not specified
Initial boiling point and boiling range	Not specified
Flash point	Not flammable
Evaporation rate	Not specified
Flammability (solid, gas)	Not specified
Upper/lower flammability or explosive limits	Not specified
Rejonasus Factor	Not specified
Vapour pressure	Not specified
Vapour density	Not specified
Relative density	Not specified
Solubility	Soluble in water
Partition coefficient: n-octanol/water	Not specified
Auto-ignition temperature	Not specified
Decomposition temperature	Not specified
Viscosity	Not specified

10. Stability and Reactivity

Reactivity	No dangerous reaction known under conditions of normal use.
Chemical stability	Stable under normal ambient storage and handling conditions.
Possibility of hazardous reactions	No data available.
Conditions to avoid	No data available.
Incompatible materials	No data available.
Hazardous decomposition products	See section 5.

11. Toxicological Information

Acute Toxicity, Dermal	Not Applicable
Acute Toxicity, Dusts And Mists	Not Applicable

Acute Toxicity, Gases	Not Applicable
Acute Toxicity, Inhalation	Not Applicable
Acute Toxicity, Oral	Category 5
Acute Toxicity, Vapours	Not Applicable
Skin Corrosion/Irritation	Category 2
Eye Damage/Irritation	Category 2B
Respiratory Sensitization	Not Applicable
Skin Sensitization	Category 1
Germ Cell Mutagens	Not Applicable
Carcinogenicity	Not Applicable
Reproductive Toxicity	Not Applicable
Specific Target Organ Toxicity RE	Not Applicable
Specific Target Organ Toxicity SE	Not Applicable
Aspiration Hazard	Not Applicable

Toxicological Information for Dodecylbenzene Sulfonic Acid

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion:

Swallowing can result in nausea, vomiting, diarrhoea, and gastrointestinal irritation.

Eye contact:

A severe eye irritant. Contamination of eyes can result in permanent injury.

Skin contact:

Contact with skin will result in irritation. May cause skin sensitisation in sensitive individuals. Repeated or prolonged skin contact may lead to allergic contact dermatitis.

Inhalation:

Breathing in mists or aerosols may produce respiratory irritation.

Acute toxicity:

Oral LD50 (rat): 650 mg/kg.

Chronic effects: No information available for the product.

Toxicological Information for Cocodiethanolamide

Inhaled

The material is not thought to produce either adverse health effects or irritation of the respiratory tract 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. Inhalation hazard is increased at higher temperatures. Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination.

Ingestion

Accidental ingestion of the material may be damaging to the health of the individual. Ingestion of anionic surfactants may produce diarrhoea, bloated stomach, and occasional vomiting.

Skin Contact

There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons. Anionic surfactants can cause skin redness and pain, as well as a rash. Cracking, scaling and blistering can occur.

Eye

This material can cause eye irritation and damage in some persons.

Chronic

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 limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons

compared to the general population. Glyceryl triesters (triglycerides) undergo metabolism to become free fatty acids and glycerol.

Gardilene FD TOXICITY Oral (rat) LD50: >2500 mg/kg IRRITATION Nil Reported

diethanolamine cocoate Not available

glycerol TOXICITY Intraperitoneal (Mouse) LD50: 8700 mg/kg Intraperitoneal (Rat) LD50: 4420 mg/kg Intravenous (Mouse) LD50: 4250 mg/kg Intravenous (Rat) LD50: 5566 mg/kg Oral (Guinea pig) LD50: 7750 mg/kg Oral (Mouse) LD50: 4090 mg/kg Oral (Rat) LD50: 12600 mg/kg Subcutaneous (Mouse) LD50: 91 mg/kg Subcutaneous (Rat) LD50: 100 mg/kg

diethanolamine TOXICITY Dermal (rabbit) LD50: 12200 mg/kg, Oral (rat) LD50: 710 mg/kg IRRITATION Eye (rabbit): 5500 mg - SEVERE, Eye (rabbit): 0.75 mg/24 hr SEVERE, Skin (rabbit): 50 mg (open)-mild, Skin (rabbit): 500 mg/24 hr-mild

DIETHANOLAMINE COCOATE Laboratory testing shows that the fatty acid amide, cocoamide DEA, causes occupational allergic contact dermatitis, and that allergy to this substance is becoming more common.

Alkanolamides are manufactured by condensation of diethanolamine and the methyl ester of long chain fatty acids. The chemicals in the Fatty Nitrogen Derived (FND) Amides are generally similar in terms of physical and chemical properties, environmental fate and toxicity. Its low acute oral toxicity is well established across all subcategories by the available data and show no apparent organ specific toxicity, mutation, reproductive or developmental defects.

GLYCEROL, DIETHANOLAMINE 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.

12. Ecological Information

Acute Aquatic Toxicity	Not Applicable
Chronic Aquatic Toxicity	Not Applicable

Ecological Information for Ingredient 1

None specified.

Ecological Information for Ingredient 2

Ecotoxicity The hazard of the substance for the environment is caused by the hydroxyl ion (pH effect). For this reason the effect of the substance on the organisms depends on the buffer capacity of the aquatic or terrestrial ecosystem. The high water solubility and low vapour pressure indicate that the substance will be found predominantly in water. Also the variation in acute toxicity for aquatic organisms can be explained for a significant extent by the variation in buffer capacity of the test medium. LC50 values ranged between 33 and 189 mg/l.

Acute toxicity to fish: LC50 (lethal concentration, 50%): All available tests resulted in a range of toxicity values between 35 to 189 mg/l. However, in the majority of these test reports there were no data on pH variation.

Chronic toxicity to fish: NOEC (no observed effect concentration): It is not required to conduct this study since the substance dissociates in water and the only possible effect would result from the pH effect. However, pH will remain within environmentally expected ranges.

Acute toxicity to crustaceans: EC50 (effect concentration, 50%): Species: Ceriodaphnia. 40.4 mg/l (48 h; based on immobility). (Warne et al., 1999)

Chronic toxicity to crustaceans: NOEC (no observed effect concentration): it is not required to conduct this study since the substance dissociates in water and the only possible effect would result from the pH effect. However, pH will remain within environmentally expected ranges.

Toxicity data on soil micro- and macro-organisms and other environmentally relevant organisms, such as birds, bees and plants: If emitted to soil, sorption to soil particles will be negligible. Depending on the buffer capacity of the soil, OH⁻ will be neutralised in the soil pore water or the pH may increase. There is no direct exposure of soil to NaOH based on the available uses. In addition, no indirect exposure via air is expected as it rapidly neutralizes in air.

Persistence/Degradability Readily biodegradable Other relevant information Abiotic degradation: NaOH is a strong alkaline substance that dissociates completely in water to Na⁺ and OH⁻. High water solubility and low vapour pressure indicate that NaOH will be found predominantly in aquatic environment. This implies that it will not adsorb on particulate matter or surfaces. Atmospheric emissions as aerosols are rapidly neutralized by carbon dioxide and the salts will be washed out by rain.

Mobility High water solubility and mobility.

Environmental Fate Caustic soda may react violently with acids and water. Do not allow drainage into sewers, streams or storm conduits.

Bioaccumulation Potential Bioconcentration factor (BCF): experimental data: Considering its high water solubility, NaOH is not expected to bioconcentrate in organisms. In addition, sodium is a naturally-occurring element that is prevalent in the environment and to which organisms are exposed regularly, for which they have some capacity to regulate the concentration in

the organism. Partition coefficient: n-octanol/water (log Pow): Not applicable (inorganic substance).

Environmental Impact No Data Available

Ecological Information for Ingredient 3

Ecotoxicity Avoid contaminating waterways.

Ecological Information for Ingredient 4

For Surfactants: Kow cannot be easily determined due to hydrophilic/hydrophobic properties of the molecules in surfactants. BCF value: 1-350.

Aquatic Fate: Surfactants tend to accumulate at the interface of the air with water and are not extracted into one or the other liquid phases.

Terrestrial Fate: Anionic surfactants are not appreciably sorbed by inorganic solids.

Persistence and degradability

Ingredient Persistence: Water/Soil Persistence: Air

glycerol HIGH HIGH

diethanolamine LOW (Half-life = 14 days) LOW (Half-life = 0.3 days)

Bioaccumulative potential

Ingredient Bioaccumulation

glycerol LOW (BCF = 3.162)

diethanolamine LOW (BCF = 3.162)

Mobility in soil

Ingredient Mobility

glycerol HIGH (KOC = 1)

diethanolamine HIGH (KOC = 1)

Ecological Information for Ingredient 5

Ecotoxicity Triethylamine

Fish (LC50) 48 hours 16-20 mg/L;

Daphnia (EC50) 48 hours 200 mg/L

Persistence/Degradability No Data Available

Mobility No Data Available

Environmental Fate No Data Available

Bioaccumulation Potential Insignificant.

Environmental Impact No Data Available

Ecological Information for Ingredient 6

Ecotoxicity Acute Toxicity - Fish :LC50 (P.promelas): 24 mg/l /96 h ;

LC50 (Br.rerio): 41 mg/l /96 h .

Daphnia magna EC50: ~2 mg/l /48 h .

Maximum permissible toxic concentration: Algal toxicity: Sc.quadricauda IC5: 2.5 mg/l /8 d .

Acute Toxicity - Bacteria, Photobacterium phosphoreum EC50: 8.5 mg/l /30 min .

Bacterial toxicity: M.aeruginosa EC5: 0.39 mg/l /8 d .

Persistence/Degradability Abiotic degradation: Rapid degradation. (air, formaldehyde)

Biologic degradation: Biodegradation: 97.4 % /5 d . Readily biodegradable.

COD: 1.06 g/g ; TOD: 1.068 g/g

Mobility Distribution: log p(o/w): 0.00 .

Environmental Fate Do NOT let product reach waterways, drains and sewers.

Bioaccumulation Potential No bioaccumulation is to be expected (log P(o/w <1).

Environmental Impact No Data Available

Ecological Information for Ingredient 7

Insufficient data to be sure of status.

Risk of Diethyl phthalate for aquatic organisms, based largely on lethal end-points, is considered low.

The risks for terrestrial soil organisms appear to be low.

Diethyl phthalate would be expected to persist in the environment for a period ranging from a few days to a few weeks. Bioaccumulation is moderate experimentally, consistent with the reported log Kow.

Ecological Information for Ingredient 8

None specified.

13. Disposal considerations

Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.

14. Transport Information

Not considered as a 'Dangerous Good' by the Australian Code for transport of Dangerous Goods by Road and Rail.

UN Number	Not applicable
Proper shipping name or Technical Name	Not Applicable
Transport hazard class	
Packing Group	
Environmental hazards for Transport Purposes	Not classified as having an acute aquatic toxicity.
UFAC Code	TANZ 9D0D
Special Precautions for user	None specified
Additional Information	None specified
Hazchem or Emergency Action Code	2R

15. Regulatory Information

No information in this section.

16. Other information

Date of Preparation:

12 February 2022

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