


1. Identification

Product identifier	Disinfectant, Pine	
Recommended use of the chemical and restrictions on use	Triple action: disinfects, cleans, and reodourises! A biodegradable product, suitable for use on all surfaces requiring cleaning, disinfecting and deodorising. This product is suitable for use on drains, toilets, sinks, rubbish bins, toilet brushes, buckets, floors and benches. It eliminates most germs and bacteria while leaving a fresh clean fragrance.	
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.

Classification of the hazardous chemical	Acute Aquatic Toxicity 2 Chronic Aquatic Toxicity 2 Eye Damage/Irritation 1 Skin Corrosion/Irritation 2
Hazard symbols	
Signal word(s)	Danger
Hazard statement(s)	H315 - Causes skin irritation H318 - Causes serious eye damage H411 - Toxic to aquatic life with long-lasting effects

Precautionary statement(s)	Prevention	P264 - Wash thoroughly after handling. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P273 - Avoid release to the environment.
	Response	P391 - Collect spillage. P302+352 - IF ON SKIN: Wash with plenty of water. P321 - Specific treatment (see ... on this label). P332+313 - If skin irritation occurs: Get medical advice/attention. P362 - Take off contaminated clothing. P305+351+338 - 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.
	Storage	
	Disposal	P501 - Dispose of contents/container to in accordance with local regulation.

3. Composition and Information on Ingredients

Name	Proportion
Nonyl Phenol Ethoxylated	<10%
C12-C14 Alkyldimethylbenzyl ammonium chloride	<10%
Terpene Alcohol	<10%

Disclosure of ingredient names is not required by the WHS Regulations for those ingredients that meet only physicochemical and/or environmental hazard classifications, or for nonhazardous ingredients.

There is no requirement to disclose the identity of ingredients for the following GHS health hazard categories because they fall outside the scope of the WHS Regulations:

- Acute toxicity – Category 5 (oral, dermal and inhalation)
- Skin; corrosion / irritation – Category 3
- Serious eye damage / eye irritation – Category 2B
- Aspiration hazard – Category 2
- Aquatic toxicity (all categories)
- Flammable gas – Category 2
- Ozone depletion.

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>Nonyl Phenol Ethoxylated: On combustion, may emit toxic fumes of carbon monoxide (CO). C12-C14 Alkyldimethylbenzyl ammonium chloride : In case of fires, hazardous combustion gases are formed: Carbon monoxide (CO), Nitrogen oxides (NOx), Hydrogen chloride</p> <p>Terpene Alcohol: On combustion, may emit toxic fumes of carbon monoxide (CO). May emit acrid smoke. Combustion products include: carbon dioxide (CO₂), other pyrolysis products typical of burning organic material.</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): 2X</p>

6. Accidental Release Measures

<p>Personal precautions, protective equipment and emergency procedures</p>	<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>
<p>Environmental precautions</p>	<p>Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.</p>
<p>Methods and materials for containment and cleaning up</p>	<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

<p>Handling</p>	<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 counteractingly workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.</p>
<p>Storage</p>	<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

<p>Exposure standards</p>	<p>No value assigned for this specific material by Safe Work Australia. However, Exposure Standard(s) for ingredient(s) are:</p> <p>Nonyl Phenol Ethoxylated: None specified.</p>
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	<p>C12-C14 Alkyldimethylbenzyl ammonium chloride :</p> <p>C12-C14 Alkyldimethylbenzyl ammonium chloride CAS-No.: 85409-22-9</p> <p>Workers Inhalation Long-term systemic effects 3,96 mg/m³</p> <p>Workers Dermal Long-term systemic effects 5,7 mg/kg bw/day</p> <p>General population Inhalation Long-term systemic effects 1,64 mg/m³</p> <p>General population Dermal Long-term systemic effects 3,4 mg/kg bw/day</p> <p>General population Oral Long-term systemic effects 3,4 mg/kg bw/day</p> <p>Terpene Alcohol:</p> <p>No Data Available</p>
Biological limits	<p>Biological limits for ingredient(s) are:</p> <p>Nonyl Phenol Ethoxylated:</p> <p>None specified.</p> <p>C12-C14 Alkyldimethylbenzyl ammonium chloride :</p> <p>None specified.</p> <p>Terpene Alcohol:</p> <p>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>Safety glasses with side shields.</p> <p>Chemical protective gloves.</p>

9. Physical and Chemical Properties

Appearance (physical state, colour etc.)	A clear, green liquid
Odour	Not specified
Odour threshold	Not specified
pH	7-7.5
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	Not Applicable
Acute Toxicity, Vapours	Not Applicable
Skin Corrosion/Irritation	Category 2
Eye Damage/Irritation	Category 1
Respiratory Sensitization	Not Applicable
Skin Sensitization	Not Applicable

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 Nonyl Phenol Ethoxylated

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 abdominal pain.

Eye contact: An eye irritant.

Skin contact: Contact with skin will result in irritation. Will have a degreasing action on the skin. Repeated or prolonged skin contact may lead to irritant contact dermatitis.

Inhalation: Breathing in mists or aerosols may produce respiratory irritation.

Acute toxicity: Oral LD50 (rat): <2000 mg/kg.

Skin corrosion/irritation: Irritant.

Serious eye damage/irritation: Irritant.

Chronic effects: No information available for the product.

Toxicological Information for C12-C14 Alkyldimethylbenzyl ammonium chloride

Acute oral toxicity : LD50 (Rat): 500 - 2.000 mg/kg Method: OECD Test Guideline 401

Acute inhalation toxicity: Remarks: not tested.

Acute dermal toxicity: Remarks: not tested.

Skin corrosion/irritation Product: Species: Rabbit Method: OECD Test Guideline 404 Result: Corrosive

Serious eye damage/eye irritation Product: Species: rabbit eye Method: OECD Test Guideline 405 Result: Corrosive

Respiratory or skin sensitisation Product: Remarks: not tested.

Germ cell mutagenicity Product: Germ cell mutagenicity- Assessment: No information available.

Carcinogenicity Product: Carcinogenicity -Assessment: No information available.

Reproductive toxicity Product: Reproductive toxicity -Assessment: No information available.

STOT - single exposure Product: Remarks: not tested.

STOT - repeated exposure Product: Remarks: not tested.

Repeated dose toxicity Product: Remarks: not tested.

Aspiration toxicity Product: no data available

Toxicological Information for Terpene Alcohol

General Information

CHRONIC HEALTH EFFECTS

Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Substance accumulation, in the human body, may occur and may

cause some concern following repeated or longterm occupational exposure. In the presence of air, a number of common flavour and fragrance chemicals can form peroxides surprisingly fast. Antioxidants can in most cases minimise the oxidation. Fragrance terpenes are generally easily oxidised in air. Nonoxidised limonene, linalool and caryophyllene turned out to be very weak sensitizers, however after oxidation limonene hydroperoxide and linalool hydroperoxide are strong sensitizers. Of the patients tested 2.6% showed positive reaction to oxidised limonene, 1.3% to oxidised linalool, 1.1% to linalool hydroperoxide, 0.5% to oxidised caryophyllene, while testing with caryophyllene oxide and oxidised myrcene resulted in few positive patch tests. 2/3 of the patients reacting positive to oxidised terpenes had fragrance related contact allergy and/or positive history for adverse reactions to fragrances. As well as the hydroperoxides produced by linalol, limonene and delta-3-carene other oxidation and resinification effects progressively causes other fairly major changes in essential oil quality over time. Autoxidation of fragrance terpenes contributes greatly to fragrance allergy, which emphasizes the need of testing with compounds that patients are actually exposed to and not only with the ingredients originally applied in commercial formulations. Sensitisation may result in allergic dermatitis responses including rash, itching, hives or swelling of extremities.

ALPHA-PINENE: DIPENTENE:

Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.

ALPHA-TERPINEOL: Irritant

Oral (rat) LD50: 5170 mg/kg Nil Reported

Oral (mouse) LD50: 12.8 mg/kg

Intramuscular (mouse) LD50: 2000 mg/kg

Oral (Mouse) LD50: 2830 mg/kg

Oral (Rat) TDLo: 2900 mg/kg

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 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. For terpenoid tertiary alcohols and their related esters: These substances are metabolised in the liver and excreted primarily in the urine and faeces. A portion is also excreted unchanged. They have low short term

toxicity when ingested or applied on the skin. However, repeated and long term use may cause dose dependent harm to both the foetus and mother.

DIPENTENE: Irritant

Oral (Rat) LD50: 5300 mg/Kg Skin (rabbit): 500 mg/24 h - Moderate

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. d-Limonene is readily absorbed by inhalation and ingestion. Dermal absorption is reported to be lower than by the inhalation route. d-Limonene is rapidly distributed to different tissues in the body, readily metabolised and eliminated primarily through the urine. Limonene exhibits low acute toxicity by all three routes in animals. Limonene is a skin irritant in both experimental animals and humans. Limited data are available on the potential to cause eye and respiratory irritation. Autooxidised products of d-limonene have the potential to be skin sensitisers. Limited data are available in humans on the potential to cause respiratory sensitisation. Autooxidation of limonene occurs readily in the presence of light and air forming a variety of oxygenated monocyclic terpenes. Risk of skin sensitisation is high in situations where contact with oxidation products of limonene occurs. Renal tumours induced by limonene in male rats is thought to be sex and species specific and are not considered relevant to humans. Repeated exposure affects the amount and activity of liver enzymes, liver weight, blood cholesterol levels and bile flow in animals. Increase in liver weight is considered a physiological adaptation as no toxic effects on the liver have been reported. From available data it is not possible to identify an NOAEL for these effects. Limonene is neither genotoxic or teratogenic nor toxic to the reproductive system.

ALPHA-PINENE: Irritant

Oral (rat) LD50: 3700 mg/Kg Skin (man): 100% - SEVERE

Skin (rabbit): 500 mg/24 h - Moderate

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. Bicyclic terpenes are very low in acute toxicity. However, repeated dosing may have deleterious effects on the liver and kidney. Members of this category show no significant reproductive or developmental toxicity and may have a little, if any, potential to alter genetic material.

Eye Irritant

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

Ingestion

Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result.

Inhalation

The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhalation may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of coordination and vertigo. Inhalation of aerosols generated by the material during the

course of normal handling, may be damaging to health. Material can cause respiratory irritation in some persons. the body's response to such irritation can cause further lung damage. Acute effects from inhalation of high vapour concentration may be chest and nasal irritation with coughing, sneezing, headache and nausea.

Skin Irritant

This material can cause inflammation of the skin on contact in some persons. The material may accentuate any preexisting dermatitis condition. Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. 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.

Carcinogen Category

No Data Available

12. Ecological Information

Acute Aquatic Toxicity	Category 2
Chronic Aquatic Toxicity	Category 2

Ecological Information for Water

None specified.

Ecological Information for Nonyl Phenol Ethoxylated

Ecotoxicity Avoid contaminating waterways.

Aquatic toxicity: Toxic to aquatic organisms. May cause long term adverse effects in the aquatic environment.

48hr EC50 (Daphnia magna): 19 mg/L.

96hr LC50 (fish): 5.6 mg/L (Brachydanio rerio)

Ecological Information for C12-C14 Alkyldimethylbenzyl ammonium chloride

Toxicity to fish: LC50 (Danio rerio (zebra fish)): 1 - 10 mg/l Exposure time: 96 h Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 0,0058 mg/l Exposure time: 48 h Method: US-EPA FIFRA 72-2

Remarks: The values mentioned are those of the active ingredient.

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 0,049 mg/l Exposure time: 72 h Method: OECD Test Guideline 201

Remarks: The values mentioned are those of the active ingredient.

Toxicity to daphnia and other aquatic invertebrates : NOEC: 0,025 mg/l Exposure time: 21 d

Ecological Information for Terpene Alcohol

Ecotoxicity DIPENTENE:

ALPHA-PINENE:

ALPHA-TERPINEOL:

Substances containing unsaturated carbons are ubiquitous in indoor environments. They result from many sources (see below). Most are reactive with environmental ozone and many produce stable products which are thought to adversely affect human health. The potential for surfaces in an enclosed space to facilitate reactions should be considered.

Terpenes such as limonene and isoprene contribute to aerosol and photochemical smog formation. Emissions of biogenic hydrocarbons, such as the terpenes, to the atmosphere may either decrease ozone concentrations when oxides of nitrogen are low or, if emissions take place in polluted air (i.e. containing high concentrations of nitrogen oxides), leads to an increase in ozone concentrations. Lower terpenoids can react with unstable reactive gases and may act as precursors of photochemical smog therefore indirectly influencing community and ecosystem properties. Complex chlorinated terpenes such as toxaphene (a persistent, mobile and toxic insecticide) and its degradation products, were produced by photoinitiated reactions in an aqueous system, initially containing limonene and other monoterpenes, simulating pulp bleach conditions. The reactions of ozone with larger unsaturated compounds, such as the terpenes can give rise to oxygenated species with low vapour pressures that subsequently condense to form secondary organic aerosol.

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.

Very toxic to aquatic organisms.

Persistence/Degradability

ALPHA-PINENE: bi

Fish LC50 (96 h) 0.28 mg/l

Aquatic invertebrates EC50 (48 h) 1.44 mg/l

Aquatic plants LC50 (48 h) 0.973 mg/l

ALPHA-TERPINEOL:

Degradation Biological: by soil microflora 2days.

ALPHA-PINENE:

Biodegradation: 37% 31 d (OECD 302 C); 38%, 28 d (OECD 301 F); 100%, 8 d (forest soil sample)

Mobility No information available on mobility for this product.

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

Bioaccumulation Potential ALPHA-TERPINEOL:

Koc: 67

Half-life (hr) air: 4

Half-life (hr) H2O surface water: 466

BCF: 8.5-53

Environmental Impact No Data Available

Ecological Information for Color Green Apple

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	Classified as having an acute aquatic toxicity.
UFAC Code	TANZ 9CCA
Special Precautions for user	None specified
Additional Information	None specified
Hazchem or Emergency Action Code	2X

15. Regulatory Information

No information in this section.

16. Other information

Date of Preparation:

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