

1. Statement of Hazardous Nature, Chemical Product and Company Identification

Classified as hazardous according to criteria of NOHSC

Product name: **Citra-Force Concentrate**
 Other names: Dipentene
 Manufacturer's Code: CF
 Product Use: Industrial/Commercial cleaner & degreaser
 Company: Lanotec Australia Pty Ltd
 ABN: 87 096 795 621
 Address: 1317 Ipswich Road, Rocklea Qld 4106
 Telephone: 07 3373 3700 (office hours)
 Facsimile: 07 3373 3777

2. Composition/Information on Ingredients

Chemical	CAS Number	Proportion
<i>α</i> -limonene	5989-27-5	> 80% v/v
C12-C15 alcohols, ethoxylated with 4 moles of ethylene oxide	68131-39-5	< 20% v/v
Other ingredients determined not to be hazardous		to 100%

3. Hazards Identification

Poisons Schedule: Not a scheduled poison
 Dangerous Goods Class: Not classified as a Dangerous Good under the Australian Dangerous Goods Act
 UN Number: 2052
 Hazchem Code: 3[Y]
 Hazard Category: Xi Irritant
 Risk Phrases: R38 - Irritating to skin
 R41 - Risk of serious damage to eyes.
 R43 - May cause sensitisation by skin contact.
Emergency Overview: Yellow liquid - flammable.
 Fairly low toxicity.
 Aquatic contaminant.

Potential Health Effects:

Acute: Inhalation: Readily absorbed through inhalation. Strong odour may cause discomfort to some people.
 Skin: Skin irritant. May have a degreasing action on skin, which can lead to contact dermatitis after repeated or prolonged skin contact.
 Eye: Ethoxylated alcohol is a severe eye irritant, which can cause cornea burn. Ethoxylated alcohol is present at less than 5% in Citra-Force Concentrate.
 Ingestion: Ingestion of 20 g of *α*-limonene caused diarrhoea, painful constrictions and proteinuria in volunteers. Vomit entering the lungs by aspiration may cause lung damage.
 Chronic: Skin: Evidence of sensitisation from contact with oxidised limonene.

4. First Aid Measures

Inhalation: Remove to fresh air. Keep at rest until fully recovered. Seek medical advice if effects persist.
 Skin contact: Remove contaminated clothing. Wash with plenty of soap and water.
 Eye contact: Immediately flush with plenty of water for several minutes. If irritation occurs and persists, seek medical advice.
 Ingestion: Do not induce vomiting, as aspiration may occur and cause lung damage. Give a glass of water. If swallowed, contact a doctor or Poisons Information Centre on 131126.
 First Aid Facilities: Safety shower and eye wash basin desirable.
 Note to Medical Personnel: Treat symptomatically.

5. Fire Fighting Measures

Flashpoint : > 54°C Pensky-Martens
 Auto-ignition Point: 237°C
 Flammability Limits (%): LEL = 0.7%; UEL = 6.1%
 Specific Hazards Not classed as a flammable liquid according to the Australian Dangerous Goods Act. Vapour is heavier than air and may spread along ground and collect in drains or low areas. Vapour may form explosive mixtures with air.
 Degree of fire/explosion hazard: Moderate explosion hazard when exposed to heat or flame.
 Extinguishing media: Dry chemical powder, foam, polymer foam, water spray or fog*.
 * Water may be ineffective on fire. Water spray can be used to absorb heat, keep containers cool and protect exposed material.
 Hazardous decomposition products: Carbon monoxide and carbon dioxide may be released in a fire.
 Special fire-fighting procedures: Wear self-contained breathing apparatus (SCBA) and complete protective clothing.

6. Accidental Release Measures

Slippery when spilt. Clean up immediately. Use protective gloves to avoid skin contact. Ventilate area thoroughly and wear a ventilator if necessary to minimise inhalation. Eliminate all sources of ignition and do not smoke. Move leaking containers to well-ventilated area. Small spills can be wiped up. Rags or other combustible material wet or soaked with Citra-Force may autoxidise, generating heat and igniting spontaneously. Large spills should be absorbed by dirt, sand or other suitable absorbents for disposal.

7. Handling and Storage

Storage Advice: Not classed as a flammable liquid according to the Australian Dangerous Goods Act. Store in a cool, dry and well ventilated location, out of direct sunlight. Avoid excess heat.

8. Exposure Controls / Personal Protection

Exposure Guidelines: No occupational exposure standards have been assigned by NOHSC in Australia for any of the ingredients in this product. Other exposure standards for *α*-limonene are tabulated below:

Country or Body	8 h TWA	STEL
Norway (OEL)	25 ppm	
Sweden	25 ppm	50 ppm
AIHA	30 ppm	

OEL = Occupational exposure limit
 AIHA = American Industrial Hygiene Assoc

TWA = Time weighted average

STEL = Short-term (15 min) exposure limit

Engineering controls: Use only with adequate ventilation. Keep containers closed when not in use.
 Personal Protective equipment (PPE): Use suitable protective equipment to avoid skin and eye contact. Use manufacturer's recommendations when selecting gloves, as some glove materials are unsuitable for use with limonene. If necessary, use respirator to avoid breathing vapours in confined spaces and in places with limited ventilation.

9. Physical and Chemical Properties

Appearance: Lemon yellow liquid
 Odour: Mild to strong citrus odour
 Boiling point: 176°C
 Freezing point: -75°C
 Specific Gravity: 0.85 @ 24°C (relative to water = 1)
 Vapour pressure: 0.19 kPa @ 20°C
 Solubility: Emulsifies
 Flammability Limits: 0.7 - 6.1%
 Flash Point: > 54°C
 Vapour Density: 4.7 (relative to air = 1)

10. Stability and Reactivity

Reactivity: Autoxidation of α -limonene in presence of light and air
Conditions to avoid: Hazardous polymerisation has not been reported. However, conditions to avoid for polymerisation are catalysts such as aluminium chloride and acidic clays.
Incompatible materials: Incompatible with strong oxidising agents and acidic agents, including acidic clays, peroxides, halogens, vinyl chloride and iodine pentafluoride.

11. Toxicological Information

No specific data is available for Citra-Force Concentrate. No toxicity tests have been conducted on this product. Information presented is for the primary ingredient, α -limonene.

Acute oral LD₅₀: Rat : 4,400 / 5,100 mg/kg (m/f)
 Rabbit : > 5,000 mg/kg
 Mouse : 5,600 / 6,600 mg/kg (m/f)
Acute dermal LD₅₀: Rabbit : > 5,000 mg/kg

12. Ecological Information

No specific data is available for Citra-Force Concentrate. Information presented is for the primary ingredient, α -limonene.

Aquatic organisms: 96 h LC₅₀ : 0.7 mg/L (fish)
 48 h EC₅₀ : 0.4 mg/L (Daphnia)
 96 h NOEC : 4 mg/L (algae)
 Toxic to aquatic organisms.
Fate: Strongly adsorbed to soil (Log P_{ow} = 4.21)
Persistence/Degradability: As a result of dilution, rapid biodegradation and evaporation, general releases to the aquatic compartment are not expected to result in adverse effects on aquatic organisms.

13. Disposal

Do not hose concentrated spills down drains, sewers or waterways, as α -limonene may be toxic to aquatic organisms. Contact local waste disposal authority for advice, or pass to a licensed waste disposal company for disposal.

14. Transport Information

DG Class: Not classified as a Dangerous Good under the Australian Dangerous Goods Act
UN No.: 2052
Hazchem Code: Not Applicable
Packaging Group: Not Applicable
Proper Shipping Name: Not Applicable
Segregation: Not Applicable

15. Regulatory Information

NRA: Not required
TGA: Not required
AICS: All ingredients are listed on the Australian Inventory of Chemical Substances
Poisons schedule: Not allocated
Hazardous substance: Category: Xi Irritant
 Risk phrases: R38 - Irritating to skin
 R41 - Risk of serious damage to eyes.
 R43 - May cause sensitisation by skin contact.
 Safety phrases: S2 - Keep out of reach of children.
 S24 - Avoid contact with skin.
 S37 - Wear suitable gloves.

16. Other Information

References:

Limonene - Priority Existing Chemical Assessment Report No. 22. May 2002, by NICNAS
Material Safety Data Sheet 6/03
Material Safety Data Sheet - Ingredients
List of Designated Hazardous Substances [NOHSC:10005 (1995)]
Australian Dangerous Goods Code, 6th Ed.
Standard for the Uniform Scheduling of Drugs & Poisons. No 17.

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.