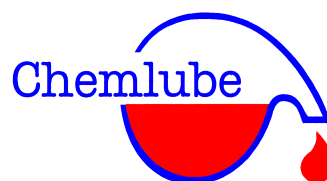


MATERIAL SAFETY DATA SHEET



Chem Pack Pty Ltd
ABN 62 060 283 089
120 Fulton Drive Derrimut Vic 3030
incorporating
Citro-Clean Products & Chemlube
(Registered Business Names of Chem Pack Pty Ltd)



Citro-Clean Products
Ph: 61 3 8369 9988

enquiries@chempack.com.au

Chemlube
Ph: 3 8369 9900

“Banish” Fabric Kleen Fluid

This product is classed as a Dangerous Goods according to criteria of NOHSC.
This product is classified as a Toxic Goods for transport by road and rail.

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Supplier: Chem Pack Pty Ltd
ABN: 62 060 283 089
Street Address: 120 Fulton Drive Derrimut Vic 3030
Telephone: + 61 3 8369 9999
Facsimile: + 61 3 8369 9901
Emergency telephone number: 0412 582 924

Substance: “Banish” Fabric Kleen
Product name: Fabric Kleen
Product Use: Fabric Cleaner
Creation Date: 01 April 2009

2. COMPOSITION/INFORMATION ON INGREDIENTS

Recommended Use: General-purpose fabric cleaner and stain remover.
Appearance: Clear liquid

Chemical Entity	CAS NO.	Proportion (% weight/weight)
Tetrachloroethylene	127-18-4	75-95%
Alcohol	67-56-1	5-15%
Aliphatic Hydrocarbon	64742-82-1	5-15%

3. HAZARDS IDENTIFICATION

A. EMERGENCY OVERVIEW:

Physical Appearance and Odor: Clear liquid.

Warning statements:

Based on available information, classified as hazardous according to health criteria of NOHSC Australia.

B. POTENTIAL HEALTH EFFECTS:

MATERIAL SAFETY DATA SHEET

Eye: Fumes cause slight irritation. Liquid causes intense irritation, lacrimation, reddening of the eyes. Risk of temporary eye lesions.

Skin: Causes slight irritation, reddening of the skin. In the case of repeated contact will cause dry and cracked skin, risk of dermatitis. Skin burns, blistering and erythema can occur from severe direct contact with material. Some skin absorption can occur but does not appear to be of major significance.

Inhalation: Causes slight nasal irritation. At high concentrations light headedness, agitation, dizziness, nausea, retching, drowsiness and deep stupor. Risk of palpitations. Risk of chemically induce bronchial pneumonia and of pulmonary oedema. In cases of repeated and prolonged exposure: headache, lethargy and the risk of irregularities of the nervous system. Expected delayed effects include chemically induced pneumonia, pulmonary oedema with coughing and toxic symptoms. Perchloroethylene is absorbed mainly through inhalation, causing both irritation and neurobehavioural effects.

Ingestion: Causes breath with the odour of chloroform, mouth and throat irritation, nausea, retching, abdominal cramps and diarrhea, feeling of intoxication, agitation, vertigo and drowsiness, risk of palpitations, risk of alteration in liver and kidney functions.

Chronic Effects: Target organs: Liver, kidneys, eyes, primary respiratory tract and the central nervous system. In man repeated and/or prolonged exposure may result in asthenia, nausea, liver dysfunction (by inhalation beginning at 75 ppm) and kidney dysfunction (by inhalation beginning at 230 ppm and oral beginning at 400 mg/kg of body weight). However in man a toxic effect of the central nervous system has been recorded, beginning at 100 ppm, behavioral differences from 400 ppm and cardiac sensitivity beginning from 5000 ppm.

A study examined 27 dry cleaners for neurobehavioural effects. Exposure of these workers was quite low; the 8 hr TWA being 18 ppm in the exposed group. The occurrence of psychological problems and signs of functional disturbances in the peripheral nervous system were investigated. The researchers found no difference between the exposed and the control groups. In several recent studies, excesses of lymphosarcomas, leukemia's and cancers of the skin, colon, lung and urogenital tract were reported in laundry or dry-cleaning workers. However, the number of cases involved were small; and many of these studied workers were also exposed to other organic solvents, such as trichloroethylene and petroleum distillates. Moreover, in some of these studies, the dry-cleaning solvents used were not identified. Taken together, with all these discrepancies, these studies have not provided a satisfactory basis for drawing definitive conclusions. Perchloroethylene can cause narcotic and anaesthetic effects. Prolonged exposure at 100ppm resulted in a slight decrement in performance on coordination tests but no observable health effect.

There is limited evidence for carcinogenicity of perchloroethylene in experimental animals. Perchloroethylene has induced malignant tumors of the liver in mice. Exposure of rats through inhalation produced an increased incidence of leukemia. Some other studies have not produced positive results. There is inadequate evidence for carcinogenicity of perchloroethylene in humans.

Classified as Toxic Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail.

4. FIRST AID MEASURES

- Ingestion:** Call a doctor in all cases. Arrange urgent transport to hospital. If patient is conscious rinse mouth with fresh water. DO NOT induce vomiting. If patient is unconscious loosen collar and other clothing and lay patient on left side in recovery position. If necessary, carry out heart-lung resuscitation or administer oxygen. Ensure patient does not become cold (keep patient covered).
- Eye contact:** Wash eyes with running water for at least 15 minutes, keeping eyelids held open. In all cases consult at eye specialist.
- Skin contact:** Remove contaminated clothing, and shoes immediately. Wash with soap or mild detergent and large amounts of water for at least 15 minutes. Seek medical attention in cases where pain is persistent or where there is reddening of the skin.

MATERIAL SAFETY DATA SHEET

Inhalation: Move the subject away from contaminated area as quickly as possible, avoid becoming a casualty. Move the patient into a quiet, cool and well-ventilated area maintaining a supine position (on back) with raised torso. If necessary begin artificial heart and/or lung resuscitation or administer oxygen. Ensure patient does not become cold (keep covered). In the case of symptoms affecting the respiratory system or nervous system, consult a doctor.

Notes to physician: DO NOT administer medicines which intimate the effects of adrenalin. Treat symptomatically based on judgment of doctor and individual reactions of patient.

5. FIRE-FIGHTING MEASURES

Flash Point: <100°C

Flammability Limits: (% Vol): >200°C

Suitable extinguishing media: Use media appropriate to surrounding conditions.

Hazards from combustion products: Vapour exposed to high temperatures or electric arcs may decompose to acidic and toxic gases, including phosgene. Unstable to ultra-violet light. Strong solvent. Reacts violently with barium, beryllium or lithium powders. Reacts with fresh zinc surfaces. The stabilized product is normally stable in air and light. Unstabilised perchloroethylene in the presence of air and light undergoes slow oxidization with the formation of toxic substances (phosgene, trichloroacetylchloride, peroxides). Hazardous decomposition products include hydrogen chloride, carbon monoxide, carbon dioxide and phosgene.

Precautions for Firefighters and Special Protective Equipment

In case of fire, use Self Contained Breathing Apparatus and full protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Cleanup and Disposal of Spill: Dispose of in accordance with all local, state and federal regulations at an approved waste disposal facility. Clothing, rags or mops should not be used again until completely dry and free of odour. Perchloroethylene wastes in the dry cleaning industry present a variable consistence between viscous and sandy, and contain inert substances in addition to perchloroethylene in a range between 15-50% (dust and hair extracted from washed garments) as well as soluble part constituted by fats and eventual additives used in the washing process. Burn in an incinerator plant equipped to receive chlorinated toxic and hazardous liquid waste, or convey to a sewer system leading to a purification plant appropriate for the removal of this compound, using stripping methods, activated carbon or anaerobic bio-oxidation with appropriate bacteria.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Avoid throwing drums on their sides, use trolleys for handling.

Precautions for Safe Storage: Keep away from ignition sources at all times. Store in cool, dry environment below 38°C. Avoid storage with oxidizers, metals, bases and combustible materials. Ensure storage area is well ventilated with a hard, dry surface. Avoid direct sunlight and heat.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National occupational exposure limits

Tetrachloroethylene: TWA = 50 ppm (335 mg/m³)
STEL = 150 ppm (1020 mg/m³)

Carcinogen Category 3 – substances suspected of having carcinogenic potential are those substances which have possible carcinogenic effects on humans but in respect of which the available information is not adequate for making a satisfactory assessment. There is some evidence from appropriate animal or epidemiological studies, but this is insufficient to place the substance in Category 2.

Engineering measures: Ensure adequate ventilation (either general or local) to maintain airborne concentrations below the applicable limits.

MATERIAL SAFETY DATA SHEET

Personal protection equipment: Use self contained breathing apparatus, safety goggles, nitrile gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form / Colour / Odour: Clear liquid.

Specific Gravity (15°C):	0.82	Melting Point (°C):	N App
Rel. Vapour Density (air=1):	N Av	Boiling Point (°C):	235 - 280°C
Vapour Pressure (20°C):	N Av	Decomp. Point (°C):	N Av
Sublimation Point:	N App	pH (1% aqueous soln):	N Av
Autoignition Temp (°C):	N Av	Viscosity (20°C):	N Av
% Volatile by volume:	100%	Evaporation Rate:	<0.01
Solubility in water:	<0.1%		

(Typical values only - consult specification sheet)
N Av = Not available N App = Not applicable

10. STABILITY AND REACTIVITY

Stability: Stable under anticipated conditions of storage and handling.

Conditions to Avoid: Avoid heating the product above 120°C.

Incompatible materials: Finely powdered metals, strong oxidising agents, bases and combustible materials.

11. TOXICOLOGICAL INFORMATION

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

Acute Effects

Ingestion:	(rat) LD50: 3005 mg/kg.
Eye contact:	Slightly irritant to eyes.
Skin contact:	Highly irritant to skin. No sensitization action reported.
Inhalation:	(rat) LC50: 4100 ppm/6hr.
Chronic toxicity:	No Information.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Aquatic toxicity and other data relating to ecotoxicity:

ACUTE :	Fish : LC50 = 5 mg/L (96h)	Species: Salmo gairdneri
	Crustaceans : EC50 = 8.5 mg/L (48h)	Species: Daphnia magna
	Algae : EC50 = 500 mg/L (96h salt water)	Species: Skeletonema costatum
CHRONIC:	Fish : LC50 = 18 mg/L (7 days)	Species: Poecilia reticulata
	LOEC = 1.6 mg/L (60 days)	Species: Poecilia sphenops
	NOEC = 2 mg/L (10-18 days)	Species: Jordanella floridae

Perchloroethylene is not readily biodegradable in aerobic conditions. In anaerobic conditions with acclimated sludges it is reasonably biodegradable. The substance is toxic to aquatic organisms. It poses limited danger to the environment due to low persistence (t_{1/2} global = 5 months), low potential for bioaccumulation, high volatility and it's biodegradability (in favorable anaerobic conditions).

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with all local, state and federal regulations at an approved waste disposal facility. Clothing, rags or mops should not be used again until completely dry and free of odour. Perchloroethylene wastes in the dry cleaning industry present a variable consistence between viscous and sandy, and contain inert substances in addition to perchloroethylene in a range between 15-50% (dust and hair extracted from washed garments) as well as soluble part constituted by fats and eventual additives used in the washing process. Burn in an incinerator plant equipped to receive chlorinated toxic and hazardous liquid waste, or convey to a sewer system leading to a purification

MATERIAL SAFETY DATA SHEET

plant appropriate for the removal of this compound, using stripping methods, activated carbon or anaerobic bio-oxidation with appropriate bacteria.

14. TRANSPORT INFORMATION

UN Number	2810
Class	6.1
Packing Group	III

Road and Rail Transport

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail.

Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

15. REGULATORY INFORMATION

Based on available information, classified as dangerous goods according to health criteria of NOHSC Australia.

Poisons Schedule (Aust)/Toxic Substance (NZ): 6

16. OTHER INFORMATION

Any advice, recommendation, information, assistance or service provided by Chem Pack Pty Ltd in relation to the goods supplied by it or their use or application is given in good faith and believed to be appropriate and reliable. However, it is provided with a disclaimer for any liability or responsibility on the part of Chem Pack Pty Ltd. The customer accepts all risk and responsibility for use of the goods alone, or in combination with other products. All warranties, guarantees and conditions, other than those expressly stated, and when implied by statute, common law, custom of the trade or otherwise, are to the extent that the law permits, expressly excluded.