Altex Graffiti Cleaner

ALTEX COATINGS LTD

Chemwatch:	9-35446	Print Date:	27/11/2013
Version No:	2.2	Issue Date:	03/10/2013
Safety Data Sheet according to HSNO Regulations		S.GHS.NZL.EN	

SECTION 1 Identification of the substance / mixture and of the company / undertaking

Product Identifier

Product name:	Altex Graffiti Cleaner
Chemical Name:	Not Applicable
Proper shipping name:	Not Applicable
Chemical formula:	Not Applicable
Other means of identification:	Not Available
CAS number:	Not Applicable

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

Relevant identified uses:	Use according to manufacturer's directions. Graffiti Cleaner

Details of the supplier of the safety data sheet

Registered company name:	ALTEX COATINGS LTD		
Address:	91-111 Oropi Road 3112 Bay of Plenty New Zealand		
Telephone:	+64 7 5411974		
Fax:	+64 7 5411310		
Website:	Not Available		
Email:	neil.debenham@carboline.co.nz		

Emergency telephone number

Association / Organisation:	NZ Poisons Centre (0800-1630hr Mon-Fri)		
Emergency telephone numbers:	0800 764766		
Other emergency telephone numbers:	0800 764766		

CHEMWATCH EMERGENCY RESPONSE

Primary Number	Alternative Number 1	Alternative Number 2
+800 2436 2255	**+612 9186 1132**	**Not Available**

Once connected and if the message is not in your prefered language then please dial 01

SECTION 2 Hazards identification

Classification of the substance or mixture

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation. Not regulated for transport of Dangerous Goods.

GHS Classification[1]:

Acute Toxicity (Inhalation) Category 4, Reproductive Toxicity Category 1, Aspiration Hazard Category 1, Chronic Aquatic Hazard Category 3, Flammable Liquid Category 4, Acute Toxicity (Dermal) Category 4, Skin Corrosion/Irritation Category 2, Skin Sensitizer Category 1, Eye Irritation Category 2A, Acute Toxicity (Oral) Category 4

Legend:*1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI*

Determined by Chemwatch using GHS/HSNO criteria :

3.1D, 6.1D (dermal), 6.1D (inhalation), 6.1D (oral), 6.1E (aspiration), 6.3A, 6.4A, 6.5B (contact), 6.8A, 9.1C

Label elements

GHS label elements

Signal word:	**DANGER**

Hazard statement(s):

H227	Combustible liquid
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin

H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H360	May damage fertility or the unborn child
H412	Harmful to aquatic life with long lasting effects

Supplementary statement(s):

Not Applicable

Precautionary statement(s): Prevention	
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash all exposed external body areas thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary statement(s): Response	
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of water and soap
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
P321	Specific treatment (see advice on this label).
P330	Rinse mouth.
P331	Do NOT induce vomiting.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use… to extinguish.
Precautionary statement(s): Storage	
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
Precautionary statement(s): Disposal	
P501	Dispose of contents/container to authorised chemical landfill or if organic to high temperature incineration

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
872-50-4	30-40	N-methyl-2-pyrrolidone
1119-40-0	30-40	dimethyl glutarate
14035-94-0	20-30	Rhodiasolve IRIS (dimethyl-2-methyl glutarate)
9002-93-1	1-10	p-tert-octylphenol ethoxylate
5989-27-5	<=1	d-limonene

SECTION 4 First aid measures

NZ Poisons Centre 0800 POISON (0800 764 766) | NZ Emergency Services: 111

Description of first aid measures

Eye Contact:

If this product comes in contact with the eyes:

- Wash out immediately with fresh 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.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact:

If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

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.

Ingestion:
- 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.
- Seek medical advice.
- Avoid giving milk or oils.
- Avoid giving alcohol.
- If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

Indication of any immediate medical attention and special treatment needed

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.
Treat symptomatically.
for simple esters:

BASIC TREATMENT

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 l/min.
- Monitor and treat, where necessary, for pulmonary oedema .
- Monitor and treat, where necessary, for shock.
- **DO NOT** use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.
- Give activated charcoal.

ADVANCED TREATMENT

- Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- Positive-pressure ventilation using a bag-valve mask might be of use.
- Monitor and treat, where necessary, for arrhythmias.
- Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- Drug therapy should be considered for pulmonary oedema.
- Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- Treat seizures with diazepam.
- Proparacaine hydrochloride should be used to assist eye irrigation.

EMERGENCY DEPARTMENT

- Laboratory analysis of complete blood count, serum electrolytes, BUN, creatinine, glucose, urinalysis, baseline for serum aminotransferases (ALT and AST), calcium, phosphorus and magnesium, may assist in establishing a treatment regime. Other useful analyses include anion and osmolar gaps, arterial blood gases (ABGs), chest radiographs and electrocardiograph.
- Positive end-expiratory pressure (PEEP)-assisted ventilation may be required for acute parenchymal injury or adult respiratory distress syndrome.
- Consult a toxicologist as necessary.

BRONSTEIN, A.C. and CURRANCE, P.L. EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

For acute and short term repeated exposures to methanol:
- Toxicity results from accumulation of formaldehyde/formic acid.
- Clinical signs are usually limited to CNS, eyes and GI tract Severe metabolic acidosis may produce dyspnea and profound systemic effects which may become intractable. All symptomatic patients should have arterial pH measured. Evaluate airway, breathing and circulation.
- Stabilise obtunded patients by giving naloxone, glucose and thiamine.
- Decontaminate with Ipecac or lavage for patients presenting 2 hours post-ingestion. Charcoal does not absorb well; the usefulness of cathartic is not established.
- Forced diuresis is not effective; haemodialysis is recommended where peak methanol levels exceed 50 mg/dL (this correlates with serum bicarbonate levels below 18 mEq/L).
- Ethanol, maintained at levels between 100 and 150 mg/dL, inhibits formation of toxic metabolites and may be indicated when peak methanol levels exceed 20 mg/dL. An intravenous solution of ethanol in D5W is optimal.
- Folate, as leucovorin, may increase the oxidative removal of formic acid. 4-methylpyrazole may be an effective adjunct in the treatment. 8.Phenytoin may be preferable to diazepam for controlling seizure.

[Ellenhorn Barceloux: Medical Toxicology]
BIOLOGICAL EXPOSURE INDEX - BEI

Determinant	Index	Sampling Time	Comment
1. Methanol in urine	15 mg/l	End of shift	B, NS
2. Formic acid in urine	80 mg/gm creatinine	Before the shift at end of workweek	B, NS

B: Background levels occur in specimens collected from subjects **NOT** exposed.
NS: Non-specific determinant - observed following exposure to other materials.

SECTION 5 Firefighting measures

Extinguishing media

- Alcohol stable foam.
- Dry chemical powder.

- BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog - Large fires only.

Special hazards arising from the substrate or mixture

Fire Incompatibility:

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

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 water delivered as a fine spray to control fire and cool adjacent area.
- Avoid spraying water onto liquid pools.
- **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.

Fire/Explosion Hazard:

- Combustible.
- Slight fire hazard when exposed to heat or flame.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO).
- May emit acrid smoke.
- Mists containing combustible materials may be explosive.

&Combustion products include:, carbon dioxide (CO2)

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Minor Spills:

Environmental hazard - contain spillage.
Slippery when spilt.

- Remove all ignition sources.
- 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:

Environmental hazard - contain spillage.
Slippery when spilt.
Moderate hazard.

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- No smoking, naked lights or ignition sources.
- Increase ventilation.
- Stop leak if safe to do so.

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

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling

- **DO NOT** allow clothing wet with material to stay in contact with skin

The substance accumulates peroxides which may become hazardous only if it evaporates or is distilled or otherwise treated to concentrate the peroxides. The substance may concentrate around the container opening for example.
Purchases of peroxidisable chemicals should be restricted to ensure that the chemical is used completely before it can become peroxidised.

- A responsible person should maintain an inventory of peroxidisable chemicals or annotate the general chemical inventory to indicate which chemicals are subject to peroxidation. An expiration date should be determined. The chemical should either be treated to remove peroxides or disposed of before this date.
- The person or laboratory receiving the chemical should record a receipt date on the bottle. The individual opening the container should add an opening date.

Other information

- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- 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 MSDS.

Conditions for safe storage, including any incompatibilities

Suitable container:

- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

Altex Graffiti Cleaner

Storage incompatibility:

Dibasic esters:

- react with strong oxidisers with risk of fire and/ or explosion
- are incompatible with strong acids, nitrates
- Esters react with acids to liberate heat along with alcohols and acids.
- Strong oxidising acids may cause a vigorous reaction with esters that is sufficiently exothermic to ignite the reaction products.
- Heat is also generated by the interaction of esters with caustic solutions.
- Flammable hydrogen is generated by mixing esters with alkali metals and hydrides.
- Esters may be incompatible with aliphatic amines and nitrates.
- Avoid strong acids, bases.

Package Material Incompatibilities:

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
New Zealand Workplace Exposure Standards (WES)	N-methyl-2-pyrrolidone	1-Methyl-2-pyrrolidone	103 (mgm3) / 25 (ppm)	309 (mgm3) / 75 (ppm)	Not Available	Skin absorption

Emergency Limits

Ingredient	TEEL-0	TEEL-1	TEEL-2	TEEL-3
N-methyl-2-pyrrolidone	10(ppm)	10(ppm)	25(ppm)	25(ppm)
p-tert-octylphenol ethoxylate	15(ppm)	40(ppm)	300(ppm)	500(ppm)
d-limonene	30(ppm)	90(ppm)	150(ppm)	350(ppm)

Ingredient	Original IDLH	Revised IDLH
Altex Graffiti Cleaner	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 "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.
Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator.

Personal protection

Eye and face protection:

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens 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. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

Skin protection:

See Hand protection below

Hand protection:

- Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear or safety gumboots, e.g. Rubber

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.

For esters:

- Do NOT use natural rubber, butyl rubber, EPDM or polystyrene-containing materials.

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.

Body protection:

See Other protection below

Other protection:

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.
- Eye wash unit.

Thermal hazards:

Recommended material(s):

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:
"Forsberg Clothing Performance Index".
The effect(s) of the following substance(s) are taken into account in the ***computer-generated*** selection:
Altex Graffiti Cleaner

Not Available

Material	CPI

* CPI - Chemwatch Performance Index
A: Best Selection
B: Satisfactory; may degrade after 4 hours continuous immersion
C: Poor to Dangerous Choice for other than short term immersion
NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -
* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

Respiratory protection:

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 5 x ES	AK-AUS / Class 1 P2	-	AK-PAPR-AUS / Class 1 P2
up to 25 x ES	Air-line*	AK-2 P2	AK-PAPR-2 P2
up to 50 x ES	-	AK-3 P2	-
50+ x ES	-	Air-line**	-

^ - 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)

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance

clear viscous liquid

Physical state	Liquid	**Relative density (Water = 1)**	1.05
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	245
pH (as supplied)	Not Available	**Decomposition temperature**	Not Available
Melting point / freezing point (°C)	Not Available	**Viscosity (cSt)**	40
Initial boiling point and boiling range (°C)	201	**Molecular weight (g/mol)**	Not Available
Flash point (°C)	Not Available	**Taste**	Not Available
Evaporation rate	0.1	**Explosive properties**	Not Available
Flammability	Not Available	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	9.4	**Surface Tension (dyn/cm or mN/m)**	Not Available
Lower Explosive Limit (%)	1.5	**Volatile Component (%vol)**	96
Vapour pressure (kPa)	0.04	**Gas group**	Not Available
Solubility in water (g/L)	Partly miscible	**pH as a solution(1%)**	Not Available
Vapour density (Air = 1)	3.44		

SECTION 10 Stability and reactivity

Reactivity:

See section 7

Chemical stability:

- 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:

Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful.
Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.
Inhalation of high vapour concentrations of N-methyl-2-pyrrolidone (NMP) may produce mucous membrane irritation, headache, giddiness, mental confusion and nausea. Fatalities were not recorded following inhalation of 180-200 mg/m3 for 2 hours by mice and following a 6 hour exposure to saturated vapours by rats.
Laboratory animals exposed to concentrations of 50 ppm for 8 hours daily for 20 days or 370 ppm for 6 hours daily for 10 days showed no gross or histopathological abnormalities
The main effects of simple aliphatic esters are narcosis and irritation and anaesthesia at higher concentrations. These effects become greater as the molecular weights and boiling points increase.
Central nervous system depression , headache, drowsiness, dizziness, coma and neurobehavioral changes may also be symptomatic of overexposure. Respiratory tract involvement may produce mucous membrane irritation, dyspnea, and tachypnea, pharyngitis, bronchitis, pneumonitis and, in massive exposures, pulmonary oedema (which may be delayed).

Ingestion:

Altex Graffiti Cleaner

Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.
Swallowing of the liquid may cause aspiration of vomit into the lungs with the risk of haemorrhaging, pulmonary oedema, progressing to chemical pneumonitis; serious consequences may result.
Signs and symptoms of chemical (aspiration) pneumonitis may include coughing, gasping, choking, burning of the mouth, difficult breathing, and bluish coloured skin (cyanosis).
Considered an unlikely route of entry in commercial/industrial environments The liquid may produce considerable gastrointestinal discomfort and may be harmful or toxic if swallowed. Ingestion may result in nausea, pain and vomiting. Vomit entering the lungs by aspiration may cause potentially lethal chemical pneumonitis

Skin Contact:

Skin contact with the material may be harmful; systemic effects may result following absorption.
The material produces moderate skin irritation; evidence exists, or practical experience predicts, that the material either

- produces moderate inflammation of the skin in a substantial number of individuals following direct contact, and/or
- produces significant, but moderate, inflammation when applied to the healthy intact skin of animals (for up to four hours), such inflammation being present twenty-four hours or more after the end of the exposure period.

Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis.
Prolonged contact with N-methyl-2-pyrrolidone (NMP) reportedly causes severe dermatitis with redness, cracking, swelling, blisters and oedema.
An instance of severe skin irritation after a few days work with NMP shows latex rubber gloves as giving insufficient protection. A review article casts doubts on reliability of animal single patch tests, i.e Draize tests.

Eye:

Direct contact with the liquid N-methyl-2-pyrrolidone (NMP) may produce painful burning or stinging of the eyes and lids, watering and inflammation of the conjunctiva and temporary corneal clouding.
Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Repeated or prolonged eye contact may cause inflammation characterised by a temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.

Chronic:

Practical experience shows that skin contact with the material is capable either of inducing a sensitisation reaction in a substantial number of individuals, and/or of producing a positive response in experimental animals.
There is sufficient evidence to provide a strong presumption that human exposure to the material may result in developmental toxicity, generally on the basis of:
- clear results in appropriate animal studies where effects have been observed in the absence of marked maternal toxicity, or at around the same dose levels as other toxic effects but which are not secondary non-specific consequences of the other toxic effects.
Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.
The teratogenic potential, subchronic and long term inhalation toxicity of N-methyl-2-pyrrolidone (NMP has been studied in rats. No evidence of nephrotoxicity was seen.
No carcinogenic effects were observed. Very high doses are embryotoxic to rats and mice. Reproductive effects have been reported in animals.
Chronic solvent inhalation exposures may result in nervous system impairment and liver and blood changes. [PATTYS]
Long-term exposure to methanol vapour, at concentrations exceeding 3000 ppm, may produce cumulative effects characterised by gastrointestinal disturbances (nausea, vomiting), headache, ringing in the ears, insomnia, trembling, unsteady gait, vertigo, conjunctivitis and clouded or double vision.

TOXICITY	IRRITATION
Altex Graffiti Cleaner	
Not Available	Not Available
N-methyl-2-pyrrolidone	
Dermal (rabbit) LD50: 8000 mg/kg	*[Manufacturer]
Oral (rat) LD50: 3914 mg/kg	Eye (rabbit): 100 mg - moderate
Oral (rat) LD50: 4200 mg/kg*	
Not Available	Not Available
dimethyl glutarate	
Oral (mouse) LD50: 2227 mg/kg	[Manuf. DU]
Oral (rat) LD50: 5000 mg/mg	Eye (rabbit): Irritant
	Skin (human): Irritant
Not Available	Not Available
Rhodiasolve IRIS (dimethyl-2-methyl glutarate)	
Not Available	Not Available
p-tert-octylphenol ethoxylate	
Oral (rat) LD50: 1800 mg/kg	Eye (rabbit): 1 mg - moderate
	Skin (human): 2 mg/3d -I - mild
Not Available	Not Available
d-limonene	
Dermal (Rabbit) LD50: >5000 mg/kg	Nil reported
Inhalation (rat) LC50: 90860 mg/m3	Skin (rabbit): 500mg/24h moderate
Oral (rat) LD50: 4400 mg/kg	
Oral (Rat) LD50: 5300 mg/kg	
Not Available	Not Available

Altex Graffiti Cleaner

The following information refers to contact allergens as a group and may not be specific to this product.
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.
for N-methyl-2-pyrrolidone (NMP):
Acute toxicity: In rats, NMP is absorbed rapidly after inhalation, oral, and dermal administration, distributed throughout the organism, and eliminated mainly by hydroxylation to polar compounds, which are excreted via urine.

N-METHYL-2-PYRROLIDONE

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.
for N-methyl-2-pyrrolidone (NMP):
Acute toxicity: In rats, NMP is absorbed rapidly after inhalation, oral, and dermal administration, distributed throughout the organism, and eliminated mainly by hydroxylation to polar compounds, which are excreted via urine.

DIMETHYL GLUTARATE

The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.
The family of dibasic (methyl) esters (DBEs) comprise dimethyl succinate (DMS, CAS No. 106-65-0), dimethyl glutarate (DMG, CAS No. 1119-40-0), and dimethyl adipate (DMA, CAS No. 627-93-0), and their mixture DBE (CAS No. 95481-62-2). A crude dibasic ester mixture is distilled to produce DMS, DMG, and DMA and three other fractions that are mixtures of these esters generally composed of 10-25, 55-65, and 15-25% DMA, DMG, and DMS, respectively. The three discrete compounds are all short four-to six-carbon straight-chain dicarboxylic acid dimethyl esters differing incrementally by one carbon atom. The four members of the category produce similar levels of acute and repeated-dose toxicity in experimental animals
DBEs have very low acute oral toxicities with LD50 s in rats generally > 5,000 mg/kg (with two exceptions reported as >500 and <5,000 mg/kg b.wt. for DBE (the mixture) and DMS
By skin absorption, DBEs have a low order of acute toxicity to rabbits with dermal LD50s of 3,000 mg/kg . Based upon the most recent GLP studies DBEs are not considered to produce primary dermal irritation as defined in EPA Guidelines .

RHODIASOLVE IRIS (DIMETHYL-2-METHYL GLUTARATE)

For Group B aliphatic esters of mono-alcohols and diacids (diesters)
According to a classification scheme described by the American Chemistry Council' Aliphatic Esters Panel, Group B substances are comprised of aliphatic esters derived from linear diacids and monofunctional alcohols. The diacids include maleic (C4), adipic (C6), azelaic (C9) and sebacic (C10) acid. The monofunctional alcohols most common in the diesters are in the C8 to C13 carbon range, although methyl, isopropyl and butyl occur in some diesters.
Due to the physicochemical properties of the diesters (e.g., viscosity, pour point), they have widespread applications as lubricants, solvents, and plasticisers. The linear diacid portion of the diester contributes to the good viscosity index while branching in the alcohol portion provides good pour point characteristics. Because diesters have good polarity characteristics, they are useful as solvents.
Acute toxicity: Most of the diesters in Group B are higher alkyl (>C8) adipates, azelates and sebacates and these diesters generally have a low order of toxicity. Oral rat LD50 values ranged from >2 g/kg to >64 g/kg.
Toxicological Information and Interpretation- MUTAGENICITY,mouse.Mouse micronucleus (invivo):Positive.- MUTAGENICITY,**.AmesTest:Negative. * Rhodia Novecare MSDS

P-TERT-OCTYLPHENOL ETHOXYLATE

Octoxynols:
Octoxynols of various chain lengths as well as octoxynol salts and organic acids function in cosmetics either as surfactants-emulsifying agents, surfactants-cleansing agents, surfactant-solubilizing agents, or surfactants-hydrotropes in a wide variety of cosmetic products at concentrations ranging from 0.0008% to 25%, with most less than 5.0%. The octoxynols are chemically similar to nonoxynols.. Long-chain nonoxynols (9 and above) were considered safe as used, whereas short-chain nonoxynols (8 and below) were considered safe as used in rinse-off products and safe at concentrations less than 5% in leave-on formulations. Acute exposure of hamsters to Octoxynol-9 by bronchopulmonary lavage produced pneumonia, pulmonary edema, and intra-alveolar hemorrhage. Octoxynol-9 at doses over 1 g/kg was toxic in rats and in mice in acute oral toxicity studies. No significant effects were noted in short-term oral studies of Octoxynol-9 in rats, in subchronic oral studies of Octoxynol-40 in rats and dogs, or in chronic oral studies of Octoxynol-40 in rats. The intraperitoneal LD50 of Octoxynol-9 in rats and mice was around 100 mg/kg. In skin irritation studies, octoxynols ranged from nonirritating to moderately irritating. Octoxynols were not ocular irritants in one rabbit study, but in others there was ocular irritation.

D-LIMONENE

The following information refers to contact allergens as a group and may not be specific to this product.
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.
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.
Tumorigenic by RTECS criteria

Acute Toxicity:	Acute Toxicity (Inhalation) Category 4 Acute Toxicity (Dermal) Category 4 Acute Toxicity (Oral) Category 4	**Carcinogenicity:**	Not Applicable
Skin Irritation/Corrosion:	Skin Corrosion/Irritation Category 2	**Reproductivity:**	Reproductive Toxicity Category 1
Serious Eye Damage/Irritation:	Eye Irritation Category 2A	**STOT - Single Exposure:**	Not Applicable
Respiratory or Skin sensitisation:	Skin Sensitizer Category 1	**STOT - Repeated Exposure:**	Not Applicable
Mutagenicity:	Not Applicable	**Aspiration Hazard:**	Aspiration Hazard Category 1

CMR STATUS

SKIN

N-methyl-2-pyrrolidone	New Zealand Workplace Exposure Standards (WES) - Skin	Skin absorption

SECTION 12 Ecological information

Toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
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.
Toxic to fauna.
When spilled this product may act as a typical oil, causing a film, sheen, emulsion or sludge at or beneath the surface of the body of water. Oils of any kind can cause:

- drowning of water-fowl due to lack of buoyancy, loss of insulating capacity of feathers, starvation and vulnerability to predators due to lack of mobility
- lethal effects on fish by coating gill surfaces, preventing respiration
- asphyxiation of benthic life forms when floating masses become engaged with surface debris and settle on the bottom and

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
Not Available	Not Available	Not Available

Bioaccumulative potential

Ingredient	Bioaccumulation
Not Available	Not Available

Mobility in soil

Ingredient	Mobility
Not Available	Not Available

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 MSDS 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

Insure that the disposal of material is carried out in accordance with Hazardous Substances (Disposal) Regulations 2001.

SECTION 14 Transport information

Labels Required:

Marine Pollutant: NO

HAZCHEM:

Land transport (UN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

SECTION 15 Regulatory information

Safety, health and environmental regulations / legislation specific for the substance or mixture

This substance is to be managed using the conditions specified in an applicable Group Standard

HSR Number	Group Standard
HSR002657	Surface Coatings and Colourants

N-methyl-2-pyrrolidone(872-50-4) is found on the following regulatory lists

"New Zealand Workplace Exposure Standards (WES)","New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods","New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals","New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data","New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)","GESAMP/EHS Composite List - GESAMP Hazard Profiles","International Chemical Secretariat (ChemSec) SIN List (*Substitute It Now!)","IMO IBC Code Chapter 17: Summary of minimum requirements","FisherTransport Information","Sigma-AldrichTransport Information","IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk","OECD List of High Production Volume (HPV) Chemicals","International Council of Chemical Associations (ICCA) - High Production Volume List","New Zealand Inventory of Chemicals (NZIoC)","OSPAR National List of Candidates for Substitution – Norway"

dimethyl glutarate(1119-40-0) is found on the following regulatory lists

"New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals","New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data","New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)","GESAMP/EHS Composite List - GESAMP Hazard Profiles","IMO IBC Code Chapter 17: Summary of minimum requirements","Sigma-AldrichTransport Information","IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk","Acros Transport Information","OECD List of High Production Volume (HPV) Chemicals","International Council of Chemical Associations (ICCA) - High Production Volume List","New Zealand Inventory of Chemicals (NZIoC)","International Fragrance Association (IFRA) Survey: Transparency List"

Rhodiasolve IRIS (dimethyl-2-methyl glutarate)(14035-94-0) is found on the following regulatory lists

"New Zealand Inventory of Chemicals (NZIoC)"

p-tert-octylphenol ethoxylate(9002-93-1) is found on the following regulatory lists

"New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals","New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data","International Chemical Secretariat (ChemSec) SIN List (*Substitute It Now!)","FisherTransport Information","Sigma-AldrichTransport Information","New Zealand Inventory of Chemicals (NZIoC)","International Fragrance Association (IFRA) Survey: Transparency List","Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (English)","New Zealand Land Transport Rule: Dangerous Goods 2005 - Schedule 1 Quantity limits","International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index","International Air Transport Association (IATA) Dangerous Goods Regulations","International Maritime Dangerous Goods Requirements (IMDG Code)","New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)"

d-limonene(5989-27-5) is found on the following regulatory lists

"New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals","New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data","New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)","International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs","OSPAR National List of Candidates for Substitution – Norway","OSPAR List of Substances of Possible Concern","FisherTransport Information","Sigma-AldrichTransport Information","OECD List of High Production Volume (HPV) Chemicals","New Zealand Inventory of Chemicals (NZIoC)","IOFI Global Reference List of Chemically Defined Substances","International Fragrance Association (IFRA) Survey: Transparency List","New Zealand Cosmetic Products Group Standard - Schedule 5 - Table 1: Components Cosmetic Products Must Not Contain Except Subject to the Restrictions and Conditions Laid Down","Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (English)","International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index","International Air Transport Association (IATA) Dangerous Goods Regulations","International Maritime Dangerous Goods Requirements (IMDG Code)","New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods","International Fragrance Association (IFRA) Standards Specification","OSPAR National List of Candidates for Substitution – United Kingdom","GESAMP/EHS Composite List - GESAMP Hazard Profiles","IMO IBC Code Chapter 17: Summary of minimum requirements","IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk"

SECTION 16 Other information

Altex Graffiti Cleaner

Other information

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/references

The (M)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.