



Section 1: Identification of the Material and Supplier

Product Name: Smart Metal Safe Graffiti Remover

Other Names: Solvent mixture containing mixed surfactants.

Proper shipping name (ADG Code): Flammable liquid, n.o.s.
(ethanol, d-limonene)

Recommended use: For removing graffiti from raw concrete, painted surfaces and other difficult porous surfaces.

Supplier: Smart Distribution Services Australia,
ACN: 079 072 227 ABN: 57 079 072 227
Factory 2, 69 Crissane Road, HEIDELBERG WEST VIC 3081
Tel: +61 3 9459 8990 (business hours)
Fax: +61 3 9459 8951

Emergency Phone Numbers:
General Information: 0409 140 662 (Mobile)
Transport/Fire Emergency: 000 (Emergency services)
Medical Emergency: 131126 (Poisons Information Centre)

Section 2: Hazards Identification

Hazardous according to criteria of Worksafe Australia.

Dangerous Goods.

Risk Phrases:

R: 11	Highly flammable.
R: 36/38	Irritating to skin and eyes.
R: 43	May cause sensitisation by skin contact.
R: 51/53	Toxic to aquatic organisms. May cause long term adverse effects in the aquatic environment.

Safety Phrases:

S: 2	Keep out of the reach of children.
S: 7	Keep container tightly closed.
S: 16	Keep away from sources of ignition - No smoking.
S: 24	Avoid contact with skin.
S: 37	Wear suitable gloves.
S: 41	In case of fire and/or explosion, do not breathe fumes.
S: 60	This material and its container must be disposed of as hazardous waste.
S: 61	Avoid release to the environment. Refer to special instructions / Material Safety Data Sheet.

Section 3: Composition/Information on Ingredients

Ingredients:

N-Methyl-2-pyrrolidone	[872-50-4]	10 - 30 %
Benzyl alcohol	[100-51-6]	10 - 30 %
Ethanol	[64-17-5]	10 - 30 %
d-Limonene	[5989-27-5]	10 - 30 %
Other ingredients deemed not to be hazardous		to 100 %

Section 4: First Aid Measures

For advice, contact a Poisons Information Centre (Phone 131126) or a doctor.

Swallowed: If swallowed, do not induce vomiting.

Skin: If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.

Eyes: If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Center or a doctor, or for at least 15 minutes.

Inhaled: Remove from exposure, rest and keep warm. Seek medical advice.

First Aid facilities:

Recommended: Eye wash. Hand wash basin.

Advice to Doctor:

Product is a mixture of organic solvents containing a mixture of surfactants. Irritating to skin and eyes. Contains a moderate proportion of d-limonene: may cause sensitisation by skin contact. Contact Poisons Information Centre.

Aggravated medical conditions:

Pre-existing skin disorders. Liver or kidney dysfunction.
Prior sensitisation to d-limonene.

Section 5: Fire fighting Measures

HAZCHEM Code: 3[Y]E

Evacuate: Yes.

Extinguishant: Foam or dry agent.

Risk of violent reaction or explosion: Yes.
Vapour/air mixtures may be flammable or explosive.
Vapours will be heavier than air - risk of remote ignition.

Products of combustion: Oxides of nitrogen, oxides of carbon, oxides of sulphur.

Protective Equipment: Breathing apparatus and protective gloves for fire only.

Section 6: Accidental Release Measures

Emergency Procedures:

Shut off all sources of ignition.
Increase ventilation.
Contain.
Prevent spillages from entering drains or natural waters.

For large spills:

Contain spillage using sand or earth. Transfer liquid and solids to suitable closed container. Treat residues as for small spillage.

For small spills:

If local regulations permit, mop up with plenty of water and run to waste, diluting greatly with running water. Otherwise, absorb on inert absorbent, transfer to suitable closed container and arrange removal by disposals company. Wash site of spillage thoroughly with water and detergent. Ventilate area to dispel any residual vapours.

Section 7: Handling and Storage

Precautions for safe handling:

Avoid contact with skin and eyes.
Do not breathe vapours.
Keep away from oxidising agents, sources of ignition.

Conditions for safe storage:

Store in a cool, well ventilated place, out of reach of children. Large quantities should be stored in a bunded flammables store. Store in original container. Keep container tightly closed and out of direct sunlight. Keep away from oxidising agents. Protect from physical damage. Clean up all spills and splashes promptly; avoid secondary accidents.

Incompatibles:

Oxidising agents.

Section 8: Exposure Controls/Personal Protection

National Exposure Standards:

ES-TWA: N-Methyl-2-pyrrolidone 25 ppm, 103 mg/m³
 Ethanol 1,000 ppm, 1,880 mg/m³
 Propan-1,2-diol 150 ppm, 474 mg/m³

Not assigned by NOHSC, but see also:

Benzyl alcohol 5 mg/m³ [Russia]
 d-Limonene 110 mg/m³ [Germany]

ES-STEL: N-Methyl-2-pyrrolidone 75 ppm, 309 mg/m³

Not assigned by NOHSC, but see also:

Ethanol 1,250 ppm, 2,400 mg/m³ [Finland]

ES-PEAK: None assigned.

Notations: N-Methyl-2-pyrrolidone Skin

Not assigned by NOHSC, but see also:

Benzyl alcohol Skin [Russia]
 d-Limonene Skin, Sens [Germany]

[Skin] indicates that this material may be absorbed via unbroken skin, and any such contact may invalidate the TLV.

[Sens] indicates that this material is a known sensitiser and may cause a specific immune response in some individuals

Biological Limit Values: No data found.

Engineering Controls:

Use **only** flame proof equipment.
 Ensure adequate ventilation (same as outdoors) when using.
 If handling industrial quantities or if aerosol risk exists, consider local mechanical exhaust/extraction to keep airborne contamination as low as possible, and at least below the TLV.

Personal Protective Equipment:

Avoid contact with skin and eyes. Do not breathe vapours.
 Personal protection to be selected from those recommended below, as appropriate to mode of use, quantity handled and degree of hazard:-

Normal Use:

Eye/face protection
 Gloves, rubber or plastic
 Impervious overalls.

Industrial Quantities:

Positive pressure air hood
 Face shield or safety glasses
 Gloves, rubber or plastic
 Plastic apron, sleeves and boots
 Impervious overalls.

Section 9: Physical and Chemical Properties

Appearance: Clear, yellowish liquid.
Odour: Mostly citrus.
pH: No data.
Vapour Pressure: No data.
Vapour Density: Vapours will be heavier than air.
Boiling Point: No data.
Melting Point: No data.
Volatiles: About 30 %
Volatile Organic Compounds (VOC): About 30 %
Evaporation Rate: No data.
Solubilities: Partially miscible with water.
Specific Gravity/Density: 0.95 g/mL @ 20 °C
Flash Point: 22.0 °C (Closed cup)
Flammable Limits: 3.3 - 19.0 % [ethanol]
0.7 - 6.1 % [d-limonene]
Dust Explosion: Not applicable.
Auto-ignition Temperature: No data.

Other Information:

Mixture of organic solvents containing mixed surfactants.
Flammable liquid. Sensitive to light. Harmful to the environment.
Slippery when spilled.

Section 10: Stability and Reactivity

Chemical Stability: Stable under normal conditions.
Conditions to Avoid: Incompatible materials, sources of ignition, heat, direct sunlight.
Incompatible Materials: Oxidising agents.
Hazardous Decomposition Products: Oxides of nitrogen, oxides of sulphur.
Hazardous Reactions: Contact with strong oxidising agents may cause fire.

Section 11: Toxicological Information

Health Effects:

No data available for the mixture. Information presented relates to individual ingredients.

Acute: **Swallowed:** Harmful if swallowed. May cause gastrointestinal irritation, with nausea, vomiting and diarrhoea. Larger doses may affect the central nervous system.
Harmful effects of this product may be enhanced by the presence of ethanol.

Skin: Irritating to skin. Will be absorbed directly through the skin. Repeated skin contact with moderate quantities may result in painful, severe haemorrhage and formation of dry scabs.

Eyes: Irritating to eyes. May cause redness, pain and blurred vision, with possible temporary clouding of the cornea.

Inhaled: May cause irritation of the respiratory system, coughing, headache, nausea and possible breathing difficulties. Other symptoms may include dizziness, drowsiness, inflammation of the gums and mouth, abdominal pain, incoordination and confusion.
Aspiration of froth into the lungs during swallowing or vomiting may cause chemical pneumonitis (irritation of lung tissues). Onset of symptoms may be delayed.

Chronic: Repeated skin contact may lead to irritation and dermatitis. Repeated exposure may affect the blood, spleen, kidneys, liver, bone marrow and lymphatic system.

d-Limonene is reported as a sensitiser by skin contact.

N-Methyl-2-pyrrolidone is reported as carcinogenic by RTECS criteria; rats continuously fed (nearly 80 % of their own body weight) over a period of 78 weeks developed liver tumours. (1)

It is not classified as carcinogenic by IARC or NOHSC.

LD₅₀ :	N-Methyl-2-pyrrolidone	3,914 mg/kg oral, rat. 8,000 mg/kg skin, rabbit.
	Benzyl alcohol	1,660 mg/kg oral, rat. 2,000 mg/kg skin, rabbit.
	Ethanol	7,060 mg/kg oral, rat.
	d-Limonene	4,400 mg/kg oral, rat.
LDLo:	Ethanol	1,400 mg/kg oral, human.
TDLo:	N-Methyl-2-pyrrolidone	50,000 ppm/15 minutes, skin, human.
TCLo:	Benzyl alcohol	100,000 ppm/45 days, human (intermittent) - general depressed activity, headache, nausea or vomiting.

Section 12: Ecological Information

Ecotoxicity:	Toxic to aquatic organisms, due to the presence of d-limonene.
Persistence and degradability:	N-Methyl-2-pyrrolidone is readily biodegraded. Only one of the surfactants is not considered to be readily biodegradable.
Mobility:	Readily transported by water. Volatile components will evaporate to atmosphere.
Environmental Fate:	No data.
Bioaccumulative potential:	No data.
Other adverse environmental effects:	Contains mixed surfactants. Local concentrations may be harmful to aquatic organisms, including fish.

Section 13: Disposal Considerations

The generator of any wastes from this product is responsible for its proper classification, transport and disposal.

Consult appropriate local and State regulations.

Disposal methods and containers:

Avoid disposal to natural waters or the environment.

Special precautions for landfill or incineration:

High temperature incineration, with exhaust gases scrubbed for oxides of nitrogen and sulphur.
Not suitable for landfill.

Section 14: Transport Information

UN Number:	UN 1993
UN Proper shipping name:	Flammable liquid, n.o.s. (ethanol, d-limonene)
Class and subsidiary risk:	3 Flammable liquid.
Packaging group:	II
Special precautions for user:	Do not store or transport with dangerous goods of classes 1, 2.1 (in bulk), 2.3, 4.2, 5.1, 5.2, 7.

HAZCHEM Code: 3[Y]E

Material for export: Regulated.
Refer to **IMO/IMDG** and **IATA/ICAO**.

Section 15: Regulatory Information

Poisons (SUSDP): Schedule 5
N-Methyl-2-pyrrolidone > 25 %

Dangerous Goods: Yes. UN 1993 3/II 3[Y]E

Carcinogen: **Australia** **IARC** **NTP** **RTECS**
No. No. No. Yes. (1)

Agricultural and Veterinary Chemicals Act: Not applicable.

Australian Inventory of Chemical Substances (AICS): Listed.

Other National/International Regulations: No data.

Section 16: Other Information

Date of MSDS preparation: November 2008

Abbreviations:

NOHSC - National Occupational Health and Safety Commission.
ACGIH - American Conference of Governmental Industrial Hygienists.
MAK - Maximum workplace concentration - Germany,
(*maximale Arbeitsplatzkonzentration*)
IARC - International Agency for Research on Cancer.
NPT - National Toxicology Program (USA).
RTECS - Registry of Toxic Effects of Chemical Substances.
HSE - Health and Safety Executive (United Kingdom).

Literature references:

(1) *National Technical Information Service.*
(Springfield, VA 22161) OTS0559204-1.

Available Sources of Data:

National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [2011(2003)] - NOHSC.
Australian Dangerous Goods Code.
Standard for the Uniform Scheduling of Drugs and Poisons - AHMAC.
Exposure Standards for Atmospheric Contaminants in the Occupational Environment [1003]- NOHSC.
List of Designated Hazardous Substances [10005] - NOHSC.
Merck Index - Merck Inc.
Sax's Dangerous Properties of Industrial Materials - Lewis.
Handbook of Toxic and Hazardous Chemicals and Carcinogens - Sittig.
Handbook of Reactive Chemical Hazards - Bretherick.
Hawley's Condensed Chemical Dictionary - Wiley Interscience.
AUSREG's Chemical Data Package for PCs - AUSREG Consultancy.