

## SAFETY DATA SHEET

### 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

#### 1.1 Product identifier

**Product name** SOLUTION 45  
**Synonyms** 45 SOLUTION

#### 1.2 Uses and uses advised against

**Uses** GRAFFITI REMOVER • PAINT REMOVER

#### 1.3 Details of the supplier of the product

**Supplier name** CHALLENGE CHEMICALS AUST.  
**Address** 6 Butcher St, Kwinana Beach, WA, 6167, AUSTRALIA  
**Telephone** (08) 9419 5577  
**Email** [sales@challengechemicals.com.au](mailto:sales@challengechemicals.com.au)  
**Website** <http://www.challengechemicals.com.au>

#### 1.4 Emergency telephone numbers

**Emergency** 0414 586 164

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

##### Physical Hazards

Flammable Liquids: Category 4

##### Health Hazards

Aspiration Hazard: Category 1  
Toxic to Reproduction: Category 1B

##### Environmental Hazards

Not classified as an Environmental Hazard

#### 2.2 GHS Label elements

**Signal word** DANGER

##### Pictograms



##### Hazard statements

H227 Combustible liquid.  
H304 May be fatal if swallowed and enters airways.  
H360 May damage fertility or the unborn child.

##### Prevention statements

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.

**PRODUCT NAME SOLUTION 45****Response statements**

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P331 Do NOT induce vomiting.  
P370 + P378 In case of fire: Use appropriate media for extinction.

**Storage statements**

P403 + P235 Store in a well-ventilated place. Keep cool.  
P405 Store locked up.

**Disposal statements**

P501 Dispose of contents/container in accordance with relevant regulations.

**2.3 Other hazards**

No information provided.

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**3. COMPOSITION/ INFORMATION ON INGREDIENTS**

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**3.1 Substances / Mixtures**

Ingredient	CAS Number	EC Number	Content
(2-METHOXYMETHYLETHOXY)PROPANOL	34590-94-8	252-104-2	30 to 60%
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT	64742-47-8	265-149-8	30 to 60%
1-METHYL-2-PYRROLIDONE	872-50-4	212-828-1	<10%
NON HAZARDOUS INGREDIENTS	Not Available	Not Available	<10%

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**4. FIRST AID MEASURES**

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**4.1 Description of first aid measures**

**Eye** If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.

**Inhalation** If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.

**Skin** If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.

**Ingestion** For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.

**First aid facilities** Eye wash facilities and safety shower are recommended.

**4.2 Most important symptoms and effects, both acute and delayed**

1-Methyl-2-pyrrolidone is classified as damaging the unborn child.

**4.3 Immediate medical attention and special treatment needed**

Treat symptomatically.

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**5. FIRE FIGHTING MEASURES**

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**5.1 Extinguishing media**

Dry agent, carbon dioxide, foam or water fog. Prevent contamination of drains or waterways.

**5.2 Special hazards arising from the substance or mixture**

Combustible. May evolve toxic gases (carbon/ nitrogen oxides, hydrocarbons) when heated to decomposition.

**5.3 Advice for firefighters**

Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

**5.4 Hazchem code**

None allocated.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS.

### 6.2 Environmental precautions

Prevent product from entering drains and waterways.

### 6.3 Methods of cleaning up

If spilled, collect and reuse where possible. Contain spillage, then cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal.

### 6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well ventilated area, removed from incompatible substances, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use.

### 7.3 Specific end uses

No information provided.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

#### Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
1-Methyl-2-pyrrolidone	SWA [AUS]	25	103	75	309
1-methyl-2-pyrrolidone	SWA [Proposed]	20	80	--	--
2-(Methoxymethylethoxy) propanol	SWA [AUS]	50	308	--	--
Mineral Oil Mist	SWA [AUS]	--	5	--	--

#### Biological limits

Ingredient	Determinant	Sampling Time	BEI
1-METHYL-2-PYRROLIDONE	5-hydroxy-N-methyl-2-pyrrolidone in urine	End of shift	100 mg/L

Reference: ACGIH Biological Exposure Indices

### 8.2 Exposure controls

#### Engineering controls

Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain vapour levels below the recommended exposure standard.

#### PPE

- Eye / Face** Wear splash-proof goggles.
- Hands** Wear PVC or rubber gloves.
- Body** When using large quantities or where heavy contamination is likely, wear coveralls.
- Respiratory** Where an inhalation risk exists, wear a Type A (Organic vapour) respirator.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	CLEAR LIQUID
Odour	SLIGHT SOLVENT ODOUR
Flammability	CLASS C1 COMBUSTIBLE
Flash point	76°C (cc)
Boiling point	NOT AVAILABLE
Melting point	NOT AVAILABLE
Evaporation rate	NOT AVAILABLE
pH	NOT AVAILABLE
Vapour density	NOT AVAILABLE
Relative density	0.91
Solubility (water)	INSOLUBLE
Vapour pressure	NOT AVAILABLE
Upper explosion limit	7.0 %
Lower explosion limit	0.6 %
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Carefully review all information provided in sections 10.2 to 10.6.

### 10.2 Chemical stability

Stable under recommended conditions of storage.

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation is not expected to occur.

### 10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources.

### 10.5 Incompatible materials

Incompatible with oxidising agents (e.g. hypochlorites), acids (e.g. nitric acid), alkalis (e.g. sodium hydroxide), heat and ignition sources. Incompatible with reducing agents (e.g. sulphites).

### 10.6 Hazardous decomposition products

May evolve toxic gases (carbon/ nitrogen oxides, hydrocarbons) when heated to decomposition.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

**Acute toxicity** Animal evidence indicates that 1-methyl-pyrrolidone exhibits low acute oral, dermal or inhalation toxicity.

#### Information available for the ingredients:

Ingredient	Oral LD50	Dermal LD50	Inhalation LC50
(2-METHOXYMETHYLETHOXY)PROPANOL	5.4 mL/kg (rat)	10 mL/kg (mouse)	--
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT	> 2000 mg/kg (rat)	> 2000 mg/kg (rabbit)	--
1-METHYL-2-PYRROLIDONE	4,150 mg/kg (rat)	> 5,000 mg/kg (rat)	> 5.1 mg/l/4hrs (rat)

**Skin** Contact may result in irritation, redness, rash and dermatitis.

**Eye** Contact may result in irritation, lacrimation, pain and redness.

**Sensitisation** There is no evidence of sensitisation from the limited animal and human data available.

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<b>Mutagenicity</b>	Based on the available in vitro and in vivo genotoxicity studies the chemical is not considered to be genotoxic.
<b>Carcinogenicity</b>	No evidence of carcinogenic effects.
<b>Reproductive</b>	1-Methyl-2-pyrrolidone is classified as damaging the unborn child. Developmental effects, including post implantation loss, foetal malformations and pup mortality, have been observed in rats, rabbits and mice following oral and/or dermal exposure (AICIS).
<b>STOT - single exposure</b>	Over exposure may result in irritation of the nose and throat, with coughing. High level exposure may result in breathing difficulties.
<b>STOT - repeated exposure</b>	Not classified as causing organ damage from repeated exposure.
<b>Aspiration</b>	Aspiration into the lungs may result in chemical pneumonitis and pulmonary oedema.

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**12. ECOLOGICAL INFORMATION**

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**12.1 Toxicity**

No information provided.

**12.2 Persistence and degradability**

No information provided.

**12.3 Bioaccumulative potential**

No information provided.

**12.4 Mobility in soil**

No information provided.

**12.5 Other adverse effects**

No information provided.

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**13. DISPOSAL CONSIDERATIONS**

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**13.1 Waste treatment methods**

**Waste disposal** For small amounts, absorb with sand, vermiculite or similar and dispose of to an approved landfill site. Contact the manufacturer/supplier for additional information if disposing of large quantities (if required). Prevent contamination of drains and waterways as aquatic life may be threatened and environmental damage may result.

**Legislation** Dispose of in accordance with relevant local legislation.

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**14. TRANSPORT INFORMATION**

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**NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA**

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
<b>14.1 UN Number</b>	None allocated.	None allocated.	None allocated.
<b>14.2 Proper Shipping Name</b>	None allocated.	None allocated.	None allocated.
<b>14.3 Transport hazard class</b>	None allocated.	None allocated.	None allocated.
<b>14.4 Packing Group</b>	None allocated.	None allocated.	None allocated.

**14.5 Environmental hazards**

No information provided.

**14.6 Special precautions for user**

**Hazchem code** None allocated.

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**15. REGULATORY INFORMATION**

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

<b>Poison schedule</b>	Classified as a Schedule 5 (S5) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).
<b>Classifications</b>	Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.
<b>Inventory listings</b>	<b>AUSTRALIA: AIIC (Australian Inventory of Industrial Chemicals)</b> All components are listed on AIIC, or are exempt.

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**16. OTHER INFORMATION**

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**Additional information** WORK PRACTICES - SOLVENTS: Organic solvents may present both a health and flammability hazard. It is recommended that engineering controls should be adopted to reduce exposure where practicable (for example, if using indoors, ensure explosion proof extraction ventilation is available). Flammable or combustible liquids with explosive limits have the potential for ignition from static discharge. Refer to AS 1020 (The control of undesirable static electricity) and AS 1940 (The storage and handling of flammable and combustible liquids) for control procedures.

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

**PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:**

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as form of product, method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

**HEALTH EFFECTS FROM EXPOSURE:**

It should be noted that the effects from exposure to this product will depend on several factors including: form of product; frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

<b>Abbreviations</b>	ACGIH	American Conference of Governmental Industrial Hygienists
	CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
	CNS	Central Nervous System
	EC No.	EC No - European Community Number
	EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
	GHS	Globally Harmonized System
	GTEPG	Group Text Emergency Procedure Guide
	IARC	International Agency for Research on Cancer
	LC50	Lethal Concentration, 50% / Median Lethal Concentration
	LD50	Lethal Dose, 50% / Median Lethal Dose
	mg/m <sup>3</sup>	Milligrams per Cubic Metre
	OEL	Occupational Exposure Limit
	pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
	ppm	Parts Per Million
	STEL	Short-Term Exposure Limit
	STOT-RE	Specific target organ toxicity (repeated exposure)
	STOT-SE	Specific target organ toxicity (single exposure)
	SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
	SWA	Safe Work Australia
	TLV	Threshold Limit Value
	TWA	Time Weighted Average

**Report status**

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

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