

1. Identification of Substance & Company

Product

Product name	Jim™ PR-1L
HSNO approval	HSR002669
Approval description	Surface Coatings and Colourants (Flammable, Toxic [6.7]) Group Standard 2017
UN number	1993
DG class	3
Proper Shipping Name	FLAMMABLE LIQUID, N.O.S. (methyl ethyl ketone, tetrahydrofuran)
Packaging group	II
Hazchem code	3YE
Uses	PVC primer, CPVC primer

Company Details

Company	HYDROFLOW
Address	221 Bush Road, Albany, North Shore City 0632
Telephone	09 415 6151
Fax	09 415 6150
Email	info@hydroflow.co.nz

National Poison Centre NZ (24 hours): 0800 POISON [764 766]

2. Hazard Identification

Approval

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR002669, Surface Coatings and Colourants (Flammable, Toxic [6.7]) Group Standard 2017). The substance has been classified as hazardous according to the criteria in the Hazardous substances (Minimum Degrees of Hazard) Notice 2017.

Classes

Hazard Statements

3.1B	H225 - Highly flammable liquid and vapour.
6.1D (oral)	H302 - Harmful if swallowed.
6.3A	H315 - Causes skin irritation.
6.4A	H320 - Causes eye irritation.
6.7B	H341 - Suspected of causing cancer.
6.9B	H373 - May cause damage to organs through prolonged or repeated exposure.
6.1E (respiratory irritation)	H335 - May cause respiratory irritation.
9.2C	H423 - Harmful to the soil environment.

SYMBOLS

DANGER



Other Classifications

There are no other classifications that are known to apply.

Precautionary Statements

- P101 - If medical advice is needed, have product container or label at hand.
- P102 - Keep out of reach of children.
- P103 - Read label before use.
- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P210 - Keep away from ignition sources. No smoking.
- P233 - Keep container tightly closed.
- P240 - Ground/bond container and receiving equipment.
- P241 - Use explosion-proof electrical equipment.

LEADING WITH KNOWLEDGE

P242 - Use only non-sparking tools.
 P243 - Take precautionary measures against static discharge.
 P260 - Do not breathe vapours/spray.
 P264 - Wash hands thoroughly after handling.
 P270 - Do not eat, drink or smoke when using this product.
 P271 - Use only outdoors or in a well-ventilated area.
 P273 - Avoid release to the environment.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection*.
 P281 - Use personal protective equipment as required.

P301+P312 - IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell.
 P330 - Rinse mouth.
 P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
 P332+P313 - If skin irritation occurs: Get medical advice/ attention.
 P362 - Take off contaminated clothing and wash before re-use.
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+P313 - If eye irritation persists: Get medical advice/attention.
 P308+P313 - IF exposed or concerned: Get medical advice/ attention.
 P304+P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
 P312 - Call a POISON CENTRE or doctor/physician if you feel unwell.
 P403+P235 - Store in a well-ventilated place. Keep cool.
 P405 - Store locked up.
 P501 - Dispose of contents/container in accordance with local/regional/national/international regulation.

3. Composition / Information on Ingredients

Component	CAS/ Identification	Conc (%)
Methyl ethyl ketone	78-93-3	20-85%
Tetrahydrofuran	109-99-9	5-12%
Cyclohexanone	108-94-1	5-15%
Acetone	67-64-1	20-40%

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

4. First Aid

General Information

If medical advice is needed, have product container or label at hand. You should call the National Poisons Centre if you feel that you may have been harmed or irritated by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service).

Recommended first aid facilities Ready access to running water is required. Accessible eyewash is required.

Exposure

Swallowed IF SWALLOWED: Do NOT induce vomiting. Rinse mouth. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs. IF exposed or concerned: Get medical advice/ attention.

Eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Apply continuous irrigation with water for at least 15 minutes holding eyelids apart. If eye irritation persists: Get medical advice.

Skin contact IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: get medical advice/attention. Take off contaminated clothing and wash before re-use.

Inhaled IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Advice to Doctor

Treat symptomatically

5. Firefighting Measures

Fire and explosion hazards: Vapours may form an explosive mixture in air which can be ignited by many sources such as pilot lights, open flames, electrical motors, switches and static electricity.

Suitable extinguishing substances: Carbon dioxide, extinguishing powder, foam.

Unsuitable extinguishing Unknown.

substances:

Products of combustion: Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Water. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures.

Protective equipment: Self-contained breathing apparatus. Safety boots, non-flammable overalls, gloves, hat and eye protection.

Hazchem code: 3YE

6. Accidental Release Measures

Containment	If greater than 1000L is stored, secondary containment and emergency plans to manage any potential spills must be in place. In all cases design storage to prevent discharge to stormwater.
Emergency procedures	In the event of spillage alert the fire brigade to location and give brief description of hazard. Stop the source of the leak, if safe to do so. Shut off all possible sources of ignition. Wear protective equipment to prevent skin, eye and respiratory exposure. Clear area of any unprotected personnel. Contain using sand, earth or vermiculite. Do not use sawdust. Prevent by whatever means possible any spillage from entering drains, sewers, or water courses. (If this occurs contact your regional council immediately).
Clean-up method	Use absorbent (soil, sand or other inert material). Rags are not recommended for the clean-up of spills, as they may create fire or environmental hazard. Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.
Disposal	Mop up and collect recoverable material into labelled containers for recycling or salvage. Recycle containers wherever possible. This material may be suitable for approved landfill. Dispose of only in accord with all regulations.
Precautions	Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation.

7. Storage & Handling

Storage	Avoid storage of harmful substances with food. Store out of reach of children. Containers should be kept closed in order to minimise contamination. Keep from extreme heat and open flames. Avoid contact with incompatible substances as listed in Section 10. Location compliance certificates must be available if storing >100L (containers >5L), 250L (containers ≤5L), 50L (in use). Containers (and outer packaging) must bear the prescribed labelling, including the Hazchem code, UN number, flammability warning and name of contents.
Handling	Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements. Avoid skin and eye contact and inhalation of vapour, mist or aerosols.

8. Exposure Controls / Personal Protective Equipment

Workplace Exposure Standards

A workplace exposure standard (WES) has not been established by WorkSafe NZ for this product. There is a general limit of 3mg/m³ for respirable particulates and 10mg/m³ for inhalable particulates when limits have not otherwise been established.

NZ Workplace Exposure Stds	Ingredient	WES-TWA	WES-STEL
	Methyl ethyl ketone	150ppm, 445mg/m ³	300ppm, 890mg/m ³
	Tetrahydrofuran	100ppm, 295mg/m ³	data unavailable
	Cyclohexanone	25ppm, 100mg/m ³	data unavailable
	Acetone	500ppm, 1185mg/m ³	1000ppm, 2375 mg/m ³

Engineering Controls

In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety at Work Act (2015) and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016. Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify processes or increase ventilation.

Personal Protective Equipment

Eyes



Avoid contact with eyes. Use safety glasses and or chemical splash goggles if splashes are possible.

Skin



Protective gloves are recommended. Laminate film gloves are recommended. PVA gloves give poor protection. Nitrile, PVC, natural rubber and neoprene gloves are NOT recommended as tetrahydrofuran penetrates these materials. Replace gloves very frequently. Gloves should be checked for tears or holes before use.

Respiratory



A respirator when airborne concentrations approach the WES (section 8). Use a respirator with an organic vapour cartridge and a dust/mist filter. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order.

WES Additional Information

Not applicable

9. Physical & Chemical Properties

Appearance	clear purple liquid
Odour	pungent odour
pH	no data
Vapour pressure	140mmHg @ 20°C
Viscosity	no data
Boiling point	66°C
Volatile materials	550g/L
Freezing / melting point	no data
Solubility	soluble in water
Specific gravity / density	<1
Flash point	-17°C (SETA CC)
Danger of explosion	not explosive
Auto-ignition temperature	no data
Upper & lower flammable limits	LEL: 1.8%, UEL 11.8%
Corrosiveness	non corrosive

10. Stability & Reactivity

Stability	Stable
Conditions to be avoided	Flammable substance. Keep away from sources of ignition at all times. Containers should be kept closed in order to avoid contamination.
Incompatible groups	Strong oxidisers, acids, bases.
Substance Specific Incompatibility	none known
Hazardous decomposition products	oxides of carbon, HCl and fragmented hydrocarbons.
Hazardous reactions	none known

11. Toxicological Information

Summary

IF SWALLOWED: small amounts if liquid aspirated into the lungs during ingestion may cause chemical pneumonia or pulmonary edema.

IF IN EYES: severely irritating.

IF ON SKIN: may cause irritation and dermatitis.

IF INHALED: overexposure may cause coughing, shortness of breath, dizziness, central nervous system depression, intoxication and collapse. Vapours may be irritating to the respiratory system and mucous membranes.

CHRONIC: this mixture contains tetrahydrofuran which is suspected of causing cancer (kidney, liver)

Supporting Data

Acute	Oral	Using LD ₅₀ 's for ingredients, the calculated LD ₅₀ (oral, rat) for the mixture is between 300 and 2000 mg/kg. Data considered includes: Methyl ethyl ketone 2737 mg/kg (rat), Tetrahydrofuran 1650mg/kg (rat), Cyclohexanone 1400 mg/kg (mouse), Acetone 3000 mg/kg (mouse).
	Dermal	Using LD ₅₀ 's for ingredients, the calculated LD ₅₀ (dermal, rat) for the mixture is >5000 mg/kg. Data considered includes: Cyclohexanone 948 mg/kg (rabbit)

Inhaled	Using LC ₅₀ 's for ingredients, the calculated LC ₅₀ (inhalation, rat) for the mixture is >20mg/L. Data considered includes: Tetrahydrofuran 21000ppm/3H (rat)
Eye	The mixture is considered to be an eye irritant. Methyl ethyl ketone, tetrahydrofuran and acetone are considered eye irritants.
Skin	The mixture is considered to be a skin irritant. Methyl ethyl ketone, tetrahydrofuran and acetone are considered skin irritants.
Chronic	<p>Sensitisation No ingredient present at concentrations > 0.1% is considered a sensitizer.</p> <p>Mutagenicity No ingredient present at concentrations > 0.1% is considered a mutagen.</p> <p>Carcinogenicity The mixture is considered to be a suspected carcinogen. Tetrahydrofuran is a suspected carcinogen. Animal experiments have shown susceptibility to kidney or liver tumours.</p> <p>Reproductive / Developmental Systemic No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation.</p> <p>Aggravation of existing conditions The mixture is considered to be a suspected target organ toxicant. Methyl ethyl ketone and tetrahydrofuran are classed as suspected systemic toxicants by EPA. None known.</p>

12. Ecological Data

Summary

This mixture is not considered ecotoxic in the aquatic environment. It is considered harmful in the soil environment.

Supporting Data

Aquatic	No evidence of aquatic ecotoxicity.
Bioaccumulation	No data
Degradability	No data
Soil	Cyclohexanone is classed by EPA as 9.2B, using summation method this mixture will be classed 9.2C. Data considered includes: Cyclohexanone 41.2 mg/l (3days, Dicotyledon)
Terrestrial vertebrate	Not considered ecotoxic towards terrestrial vertebrates.
Terrestrial invertebrate	No evidence of ecotoxicity towards terrestrial invertebrates.
Biocidal	no data
Environmental effect levels	No EELs are available for this mixture or ingredients

13. Disposal Considerations

Restrictions	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
Disposal method	Disposal of this product must comply with the Hazardous Substances (Disposal) Notice 2017 and the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. The substance must be treated and therefore rendered non-hazardous before discharge to the environment.
Contaminated packaging	Disposal of contaminated packaging must comply with the Hazardous Substances (Disposal) Notice 2017 clause 12. Ensure that the package is rendered incapable of containing any substance and is disposed in a manner that is consistent with the requirements of the substance it contained and the material of the package. If possible reuse or recycle packaging.

14. Transport Information

Land Transport Rule: Dangerous Goods 2005 - NZS 5433:2007

Transport according to NZS 5433 (Transport of Hazardous Substances on Land). Considered a dangerous good for transport.

UN number:	1993	Proper shipping name:	FLAMMABLE LIQUID, n.o.s. (contains methyl ethyl ketone & tetrahydrofuran)
Class(es)	3	Packing group:	II
Precautions:	Flammable liquid	Hazchem code:	3YE
IMDG			
UN number:	1993	Proper shipping name:	FLAMMABLE LIQUID, n.o.s. (contains methyl ethyl ketone & tetrahydrofuran)
Class(es)	3	Packing group:	II
Precautions:	NA	EmS	F-E, S-D

IATA

UN number:	1133	Proper shipping name:	ADHESIVES
Class(es)	3	Packing group:	II
Precautions:	NA	ERG Guide	127

15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR002669, Surface Coatings and Colourants (Flammable, Toxic [6.7]) Group Standard 2017.

Specific Controls

Key workplace requirements are:

SDS	To be available within 10 minutes in workplaces storing any quantity.
Inventory	An inventory of all hazardous substances must be prepared and maintained.
Packaging	All hazardous substances should be appropriately packaged including substances that have been decanted, transferred or manufactured for own use or have been supplied
Labelling	Must comply with the Hazardous Substances (Labelling) Notice 2017.
Emergency plan	Required if > 1000L is stored.
Certified handler	Not required.
Tracking	Not required.
Bundling & secondary containment	Required if > 1000L is stored.
Signage	Required if > 250L is stored in any one location.
Location compliance certificate	Required if > 100L (>5L), 250L (≤5L), 50L (in use) is stored in any one location.
Flammable zone	Must be established if > 100L (closed), 25L (decanting), 5L (open occasionally), 1L (in use) is stored in any one location.
Fire extinguisher	If > 250L present.

Note: The above workplace requirements apply if only this particular substance is present. The complete set of controls for a location will depend on the classification and total quantities of other substances present in that location.

Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health and Safety at Work Act 2015 and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, local Council Rules and Regional Council Plans.

16. Other Information

Abbreviations

Approval Code	Approval HSR002669, Surface Coatings and Colourants (Flammable, Toxic [6.7]) Group Standard 2017 Controls, EPA. www.epa.govt.nz
CAS Number	Unique Chemical Abstracts Service Registry Number
EC₅₀	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
EPA	Environmental Protection Authority (New Zealand)
HAZCHEM Code	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
HSNO	Hazardous Substances and New Organisms (Act and Regulations)
IARC	International Agency for Research on Cancer
LEL	Lower Explosive Limit
LD₅₀	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
LC₅₀	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
NZIoC	New Zealand Inventory of Chemicals
MSDS (SDS)	Material Safety Data Sheet (or Safety Data Sheet)
STEL	Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded
TWA	Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)
UEL	Upper Explosive Limit
UN Number	United Nations Number
WES	Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed during work hours (usually 8 hours, 5 days a week). The WES relates to exposure that has been measured by personal monitoring using procedures that gather air samples in the worker's breathing zone.

References

Data	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID).
Controls	EPA notices, www.epa.govt.nz , Health and Safety at Work (Hazardous Substances) Regulations 2017, www.legislation.govt.nz
WES	The latest NZ Workplace Exposure Standards, published by WorkSafe NZ and available on their web site – www.worksafe.govt.nz .
Other References:	EU ECHA, ingredients SDS's, ChemIDplus

Review

Date	Reason for review
August 2015	Not applicable – new SDS
July 2020	5 yearly update. Hazard and Precautionary phrase numbers, HSE to HSAW, MBIE to Worksafe, review of toxicological section. Group standard, section 13, 14 and 15.

Disclaimer

This SDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The SDS is given in good faith and constitutes a guideline (not a guarantee of safety). The level of risk each substance poses is relevant to its properties (as summarised in the SDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. The likely HSNO classifications for this SDS have been estimated based on general information from the supplier (e.g., hazard, toxicological). This SDS is copyright Datachem and must not be copied, edited or used for other than intended purpose. To contact the SDS author, email info@datachem.co.nz or phone: +64 9 940 30 80.

