

Material Safety Data Sheet

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Issue date: December 2015

PROPAC RECTIFIER

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: PROPAC RECTIFIER

Manufacturer's Product Code: PR10

Use: Used to extend the life of the ink during the printing process and also aids in the drying process.

DYEPAC LIQUID INKS PTY. LTD.

A.C.N. 009 995 215

A.B.N.94 009 995 215

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2. HAZARDS IDENTIFICATION

HAZARDOUS ACCORDING TO ASCC/NOHSC/EU CRITERIA

Hazard Category: Irritant (Xi), Highly Flammable (F)

Hazard Classification: HAZARDOUS SUBSTANCE, DANGEROUS GOODS

RISK PHRASES

R11 Highly flammable

R41 Risk of serious damage to eyes.

R66 Repeated exposure may cause skin dryness and cracking.

R67 Vapours may cause drowsiness and dizziness.

SAFETY PHRASES

S7 Keep container tightly closed.

S16 Keep away from sources of ignition - No smoking.

S23 Do not breathe vapour.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S29 Do not empty into drains.

S33 Take precautionary measures against static discharge.

Road Transport (ADR/RID):

UN Number: 1993

Proper Shipping Name: FLAMMABLE LIQUID, N.O.S. (Contains n-PROPANOL and n-PROPYL ACETATE)

Dangerous Goods Class: 3

Packing Group: III

Poison Schedule: S5 [Aust]

This material is a Scheduled S5 Poison and must be stored, handled and used according to the appropriate regulations.

Warning Statement:

Eye contact may cause severe injury. Highly flammable liquid, avoid all sources of ignition, heat and naked flames.

3. COMPOSITION / INFORMATION ON INGREDIENTS

| SUBSTANCE NAME | Proportion | CAS Number |
|------------------|--------------|------------|
| n-PROPANOL | 30 to < 60 % | 71-23-8 |
| n-PROPYL ACETATE | 20 to < 30 % | 109-60-4 |

All other ingredients not hazardous according to ASCC/NOHSC/EU Criteria.

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4. FIRST AID MEASURES

Swallowed:

If swallowed, **DO NOT** induce vomiting. Give 1 to 2 glasses of water to drink.

Eye:

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

Skin:

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

Inhaled:

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

First Aid Facilities:

Eye wash fountain, safety shower and normal wash room facilities.

Advice to Doctor:

Treat symptomatically.

For advice, contact a Poisons Information Centre (**AT ONCE**)

In Australia call Tel: 13 1126

In New Zealand Tel: 0800 764 766

5. FIRE-FIGHTING MEASURES

Fire/Explosion Hazard

SUITABLE EXTINGUISHING MEDIA: Foam, dry chemical or carbon dioxide.

HAZARDS FROM COMBUSTION PRODUCTS: Decomposes on heating emitting oxides of carbon and noxious smoke.

PRECAUTIONS FOR FIRE FIGHTERS AND SPECIAL PROTECTIVE EQUIPMENT: Self-contained breathing apparatus (SCBA) required for fire-fighting personnel. If possible to do so safely, shut off fuel to fire. Avoid spreading burning liquid with water used for cooling fire exposed containers when using water spray, boil-over may occur when the product temperature reaches the boiling point of water, thereby resulting in re-ignition.

HAZCHEM CODE: 3[Y]E [Aust]

FLAMMABILITY

This material is a **HIGHLY FLAMMABLE** liquid. Avoid all sources of ignition, heat and naked flames.

Flash Point: 16°C

Flammability Limits: LEL: 3.2 UEL: 17.0 %

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures:

Highly flammable liquid. Avoid all sources of ignition. Keep unnecessary people away; Isolate hazard area and deny entry. Ventilate area. Wear suitable protective equipment as outlined under personal protection in this MSDS.

Methods and Materials for Containment and Clean Up Procedures:

Throw diatomaceous earth onto spill. **DO NOT** use sawdust. **ALLOW TO ABSORB.** Use non-sparking tools or HEPA vacuum system to pick up. Place into labelled drum(s) for later disposal. If risk of fire, blanket the spill with

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6. ACCIDENTAL RELEASE MEASURES (continued)

foam or use water fog to disperse vapour clouds. Consult an expert regarding disposal of this product.

Emergency information(Transport):

Dangerous Goods - Initial Emergency Response Guide (SAA/SNZ HB76:2004)

For **LIQUIDS** - Highly Flammable, Guide No: 14

7. HANDLING AND STORAGE

Precautions for Safe Handling:

Highly flammable liquid. Avoid ignition sources. Do not get in eyes. Avoid direct or prolonged contact with skin. Provide adequate ventilation.

Conditions for Safe Storage:

Keep containers tightly closed, when not using the product. Store in original packages as approved by manufacturer. Store in an area that is dry and well-ventilation away from ignition sources. The floor of the depot should be impermeable. Store away from oxidizing agents. For further information please refer to the Engineering Controls of this MSDS.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards

No exposure standards are available for this product, however, the following exposure standards have been assigned by [NOHSC] to the following components of the product:

***n*-PROPANOL**

[NOHSC]

[TWA] 200 ppm 492 mg/m³

[STEL] 250 ppm 614 mg/m³

Notices: Sk

References: H

Sk Notation:

For most substances in the occupational setting, the main route of entry into the body is via inhalation. However, some substances can readily penetrate the intact skin and thus become absorbed into the body, with resultant toxic effects.

***n*-PROPYL ACETATE**

[NOHSC]

[TWA] 200 ppm 835 mg/m³

[STEL] 250 ppm 1,040 mg/m³

References: H

Engineering Controls

Highly flammable liquid. Maintain adequate ventilation at all times. Prevent accumulation of vapours in hollows or sumps. Eliminate any sources of ignition.

Personal Protection Equipment

GLOVES: Neoprene or nitrile.

EYES: Chemical goggles or spectacles with side shields to protect eyes.

RESPIRATORY PROTECTION: Avoid breathing of vapours. Filter capacity and respirator type depends on exposure levels and type of contaminant. Select and use respirators in accordance with AS/NZS 1715. When vapours

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION (continued)

exceed the exposure standards then the use of a half-face respirator fitted with an organic vapour cartridge is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-----------------------------|----------------------------------|
| Appearance: | Clear liquid with alcohol odour. |
| Boiling Point: | 78 - 101°C |
| Melting Point: | -117.3°C |
| Vapour Pressure: | 44 mmHg @ 20°C |
| Specific Gravity: | 0.7904 |
| Flash Point: | 16°C |
| Flammability Limits: | LEL: 3.2 UEL: 17.0 % |
| Solubility in Water: | Completely miscible. |

Other Properties

pH: Not available.

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY:

Stable under normal conditions of use.

CONDITIONS TO AVOID:

Ignition sources and mixing with incompatibles.

INCOMPATIBLE MATERIALS:

Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS:

Decomposes on heating emitting oxides of carbon and noxious smoke.

HAZARDOUS REACTIONS:

Will not occur.

11. TOXICOLOGICAL INFORMATION

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

ACUTE HEALTH EFFECTS:

Swallowed:

May cause irritation to mouth, throat and stomach with effects including pains in the stomach, which may lead to nausea, vomiting and diarrhoea.

Eye:

Will cause severe irritation to the eyes with effects including: tearing, pain, corneal opacity and blurred vision. If prompt action is not taken permanent eye damage may occur.

Skin:

May cause irritation to the skin, with effects including; Redness and itchiness.

Inhaled:

Mists or vapours may cause irritation to the nose, throat and respiratory system with effects including: Dizziness, headache, coughing, loss of co-ordination and chest pains.

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11. TOXICOLOGICAL INFORMATION (continued)

Chronic:

Prolonged or repeated skin contact may lead to dermatitis.

Prolonged contact may cause severe eye irritation and some form of permanent eye damage may occur.

Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness,

n-Propanol:

Inhalation LCLo(Rat): 4,000 ppm/4H

Oral LD50(rat): 1,870 mg/kg

EYE - STANDARD DRAIZE TEST

From the published literature a dose of 20 mg/24Hr produces a moderate reaction in the eyes of rabbits.

n-Propyl acetate:

Inhalation LCLo(Rat): 8,000 ppm/4H

Oral LD50(Rat): 9,370 mg/kg

Human and animal data collected for n-propyl acetate indicate irritation to eyes by vapour and by liquid contact.

12. ECOLOGICAL INFORMATION

There is no ecological information available for this product, however for the ingredients:

The following ecological information is available for n-Propanol:

TERRESTRIAL FATE: When spilled on soil, n-propanol will both volatilize and leach into the ground. It will leach into groundwater.

AQUATIC FATE: When released into water, n-propanol will volatilize (estimated half- life approx. 6.5 days) and may biodegrade.

ATMOSPHERIC FATE: When released into the atmosphere, n-propanol will photodegrade by reaction with hydroxyl radicals (estimated half-life is 6.7 days).

13. DISPOSAL CONSIDERATIONS

Refer to appropriate authority in your State. Dispose of material through a licensed waste contractor. Advise highly flammable nature. If large amounts of the product enter waterways, sewers or streams, immediately contact the Environmental Protection Agency or your Local Waste Management Authority.

14. TRANSPORT INFORMATION

Road Transport (ADR/RID):

UN Number: 1993

Proper Shipping Name: FLAMMABLE LIQUID, N.O.S. (Contains n-PROPANOL and n-PROPYL ACETATE)

Dangerous Goods Class: 3

Packing Group: III

Air Transport (IATA):

UN Number: 1993

Proper Shipping Name: FLAMMABLE LIQUID, N.O.S.(Contains n-PROPANOL and n-PROPYL ACETATE)

Dangerous Goods Class: 3

Packing Group: III

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14. TRANSPORT INFORMATION (continued)

Sea Transport (IMDG):

UN Number: 1993

Proper Shipping Name: FLAMMABLE LIQUID, N.O.S. (Contains n-PROPANOL and n-PROPYL ACETATE)

Dangerous Goods Class: 3

Packing Group: III

15. REGULATORY INFORMATION

Poison Schedule: S5 [Aust]

This material is a Scheduled S5 Poison and must be stored, handled and used according to the appropriate regulations.

Inventory Status:

Australia (AICS) Y

United States (TSCA) Y

Europe (EINECS/ELINCS) Y

Y = all ingredients are on the inventory.

EU Label: Irritant (Xi), Highly Flammable (F)

16. OTHER INFORMATION

Date of Preparation:

Issue date: December 07, 2015

Supersedes: August 08, 2011

Reasons for Update:

1. Review of fields and data, promoting uniformity of MSDS.
2. Changes to Sections 2, 4, 6, 8, 11, 15 & 16, based upon SUSDP first aid information.

Key Legend Information:

NOHSC - National Occupational Health & Safety Commission {Formerly Worksafe}[Aust]

ASCC - Australian Safety and Compensation Council [Aust]

SUSDP - Standard for the Uniform Scheduling of Drugs and Poisons [Aust]

TWA - Time Weighted Average [Int]

STEL - Short Term Exposure Limit [Int]

AICS - Australian Inventory of Chemical Substances

Dangerous Goods - Initial Emergency Response Guide (SAA/SNZ HB76:2004) [Aust]

EPA - Environmental Protection Agency [Int]

NIOSH - National Institute for Occupational Safety and Health [US]

TSCA - Toxic Substances Control Act [US]

OSHA - Occupational Safety and Health Administration [US]

AS/NZS 1715 - Selection, use and maintenance of respiratory protective devices. [Aust/NZ]

AS/NZS 1716 - Respiratory protective devices. [Aust/NZ]

Hazchem Code - Fire fighters designation [Aust]

IATA - International Aviation Transport Authority [Int]

ICAO - International Civil Aviation Organization [Int]

IMO - International Maritime Organisation. [Int]

IMDG - International Maritime Dangerous Goods [Int]

United Nations Recommendations for the Transport of Dangerous Goods and Globally Harmonized System for the classification and labelling of Chemicals. [Int]

EINECS - European Inventory of Existing Commercial Chemical Substances. [Int]

ELINCS - European List of Notified Chemical Substances. [Int]

EU - European Union [Int]

ADR/RID - European Road & Rail Transport Union - [Int]

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16. OTHER INFORMATION (continued)

EU Directives: The classification criteria used, are adopted from the European Community's (EC) legislation for classifying dangerous substances. The criteria are taken from:

EC Council Directive 67/548/EEC

EC Council Directive 1999/45/EC

[Aust/NZ] = Australian New Zealand

[Int] = International

[US] = United States of America

Principal References:

Information supplied by manufacturer, reference sources including the public domain.

Disclaimer

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END OF MSDS