



Australian Specialty Inks Pty Ltd

ABN 71 002 591 620

17 Reaghs Farm Rd, Minto NSW 2566

Telephone: (02) 9603-3399 Fax (02) 9603-7761

Website: www.austspecialtyinks.com.au

ULTRA-V Inks

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MATERIAL SAFETY DATA SHEET

Classified as hazardous according to criteria of Worksafe Australia.

Date of issue: June 2010

COMPANY DETAILS

AUSTRALIAN SPECIALTY INKS PTY LTD

A.B.N. 71 002 591 620

17 REAGHS FARM ROAD MINTO NSW

2566 (02) 9603 3399

A/H (02) 9792 7790 or mobile 0414 616 247

IDENTIFICATION

Trade Name: ULTRA-V INKS

U.N. Number: 3082

Manufacturers Code: FUV Series

Class: 9

Hazchem Code: None allocated

Poisons Schedule: S6

Use: Product is used as an Ultra Violet curing screen printing ink.

Flammability	1
Toxicity	3
Body Contact	3
Reactivity	3
Chronic	3
Scale:	
0 = Minimum to Nil	
1 = Low	
2 = Moderate	
3 = High	
4 = Extreme	

Physical Description/Properties:

Appearance: Variously coloured pastes, mild odour.

Density: Varies with shade.

Boiling Point: 171°C >200°C

Vapour Pressure at 20°C : <0.13 mm Hg

Vapour Density: No data

Percent Volatiles: <8

Flash Point: 69°C (Open-cup method)

Flammability: LEL:1.1 UEL:10.6

Solubility in water: Practically insoluble

Viscosity: > 65 seconds through an ISO Standard Cup with a 6mm jet.



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Ingredients	CAS No.	Proportion
Chemical entity		
Pigments (Various to shade)		0-30%
Acrylic resin		0- 7%
Glycol ether		0- 7%
1-Ethenyl 2-Pyrrolidinone	88-12-0	4-12%
Polyacrylic Oligmer		21-34%
Urethane Acrylate		6-13%
Acrylated Epoxy		5-11%
Acrylate Monomer Blend		.3-.6%
Flow additive		1.5-2.4%
IBOA	005888-33-5	0-31%
Photoinitiators		5-11.5%

HEALTH HAZARD INFORMATION

HEALTH EFFECTS

Swallowed: A large dose may have the following effects:- gastrointestinal irritation. Central nervous system depression. Kidney damage, liver damage. Aspiration during swallowing or vomiting may severely damage the lungs.

Eye: Severe irritant. Can cause pain, redness, discomfort and an aversion to bright lights.

Skin: Harmful in contact with skin. Readily absorbed across the skin in harmful amounts. Can cause redness and appearance of a rash after a short term exposure.

Inhaled: Exposure to vapour may have the following effects:- Irritation of nose, throat and respiratory tract. Headache. Exposure to vapour at high concentrations may have the following effects:- Severe irritation of nose, throat and respiratory tract. Loss of consciousness. Kidney damage. Liver damage.

Chronic: Repeated or prolonged skin exposures may produce pronounced irritation and dermatitis.

FIRST AID

Swallowed: Wash out mouth with water. Do not induce vomiting. Keep warm and at rest. Obtain medical advice urgently.

Eye: Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical advice urgently.

Skin: Immediately flood the skin with large quantities of water for at least 15 minutes, preferably under a shower. Remove contaminated clothing as washing proceeds. Continue washing for at least 10 minutes. Obtain medical attention urgently. Contaminated clothing should be washed or dry-cleaned before re-use. Contaminated leather articles should be disposed of.

Inhaled: Remove from exposure. Keep warm and at rest. If breathing stops or shows signs of failing give artificial respiration. If heartbeat absent, give external cardiac compression. Obtain medical attention.



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Advice to Doctor: Treat symptomatically.

PRECAUTIONS FOR USE

Exposure Limits: For Glycol ether 25 ppm 8 hour time weighted average.
For 1-Ethenyl 2-Pyrrolidinone .1ppm

Engineering Controls: Exposure to this material may be controlled in a number of ways. The measures appropriate for a particular worksite depend on how the material is used and on the potential for exposure. Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions. If engineering controls and work practices are not effective in preventing or controlling exposure, then suitable personal protective equipment, which is known to perform satisfactorily, should be used.

Personal Protection: Wear chemical goggles. Wear chemical resistant gloves. Wear protective clothing as necessary to avoid skin contact. Wear respiratory protection if there is a risk of exposure to high vapor concentrations which meet the requirements of AS/NZS1715.

Flammability: Avoid heat and sources of ignition. Prevent build-up of flammable vapours. Hoses should be electrically continuous and containers bonded to avoid static charge build-up.

SAFE HANDLING INFORMATION

Storage and Transport: Store in cool well ventilated area away from heat and ignition sources. Containers should always be kept closed in storage and properly labelled. Do not store in low or enclosed areas where vapours may become trapped. Store only in original or approved containers. Mild steel, carbon steel and polypropylene are suitable storage materials, as are lined steel and stainless steel where trace iron or slight discolouration are critical. Galvanised iron, aluminium and copper and its alloys are unsuitable. The product is a scheduled Poison (S6) and must therefore be stored, maintained and used in accordance with the relevant State Poisons Act.

Spills and Disposal: Keep public away. Extinguish all ignition sources. For major spills, dam and recover. Prevent entry into drainage systems, rivers etc. Collect with absorbent material such as sand, earth or saw dust. Warn occupants downwind. Advise authorities. Ensure waste disposal conforms with local waste disposal regulations. After recovery and evaporation remaining soil may be disposed of to approved landfill, or if approved, allowed to degrade insitu.

Fire/Explosion Hazard: Combustion products include oxides of carbon. Use water sprays to cool fire exposed surfaces and any adjacent storage vessels. Shut off source of product if safe to do so. Remove sources of re-ignition. Vapour/air mixtures may ignite explosively. Flashback along vapour trail may occur. Avoid contact with strong oxidizing agents and strong caustics. Use foam, CO₂, dry chemical and water fog. Wear full protective clothing and self-contained breathing apparatus.



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Other Information: No data found.

Toxicology

Oral LD50 (rat) 560mg/kg. Oral LD50 (mouse) 1200mg/kg. Oral LD50 (rabbit) 320mg/kg. Inhalation LC50 (rat) 2400mg/litre/4h. Inhalation LC50 (mouse) 3360mg/litre/4h. Material may be harmful by skin absorption. Dermal LD50 (rabbit) 1800mg/kg. SUB-ACUTE/SUB-CHRONIC TOXICITY: Results of repeated inhalation or dermal exposures carried out on a range of laboratory animal species have shown that the solvent does not damage the bone marrow or testes. The major effect of this solvent in experimental animals is damage to circulating red blood cells (to produce haemolysis); kidney damage and increased liver weight have also been reported at higher exposure levels. In rats the lowest atmospheric exposure level at which red blood cell fragility has been reported is 62 ppm. A number of studies have shown that rat red blood cells are particularly susceptible to the haemolytic effects of the solvent and it is therefore unlikely that the effects seen in rats will occur in humans at similar exposure levels. No evidence of increased red blood cell fragility was found in humans exposed to atmospheric concentrations up to 200 ppm; concentrations of 100 and 200 ppm were irritant to the eyes and nose. Studies have shown that the solvent readily penetrates the skin and that skin contact can result in significant absorption and systemic toxicity. Recent studies on the effects of the solvent on pregnant animals have indicated that this solvent is not teratogenic. MUTAGENICITY: The solvent has been subjected to a battery of mutagenicity tests. No significant mutagenic response was observed and the mutagenic and carcinogenic potential of the solvent is therefore considered to be low.

Following data refers to 1-Ethenyl, 2-Pyrrolidinone component.

Oral:	Rat LD50	1500 mg/kg
Dermal:	Rabbit LD50	560 mg/kg
Inhalation:	Rat LC50	3.2 mg/L



Other Acute Toxicity:

Peroral; Rat; Irritant to mucous membrane of upper respiratory tract; narcotic effect.
Pharmacokinetics; Dog; The plasma half life was found to be < 30 minutes following single intravenous dose.

Sub Chronic oral toxicity:

Rat; 13-week gavage; increased liver weight at 40 mg/kg (females) and 60 mg/kg (males); liver damage at 100 mg/kg in both sexes.

Sub Chronic inhalation toxicity:

Subacute inhalation caused liver damage in rats at 15 ppm.

Sub Chronic miscellaneous toxicity:

No data found.

Aquatic Toxicity:

No data found.

Tumorigenicity:

Rat; 2-year inhalation; benign and malignant tumors observed in nasal mucosa of both sexes at 20 ppm and in males at 10 ppm; only benign were seen at 10 ppm in females and 5 ppm in both sexes; liver and laryngeal tumors at 20 ppm and liver damage at 5 ppm in both sexes.

Mutagenicity:

Primary rat hepatocyte unscheduled DNA synthesis assay; 0.284-9.09 microliter/ml; negative.

In vitro transformation of Balb/3T3 cells assay; 0.5 microliter/ml - 0.1 nanoliter/ml; negative.

Mouse lymphoma forward mutation assay; up to 5.0 microliter/ml; negative.

Ames assay: Negative (active & inactive).

In vitro cytogenicity - human lymphocytes; no chromosome-damaging (clastogenic) effects with or without activation.

Reproductive Toxicity:

No data found.

Miscellaneous Toxicity:

No data found.

Biodegradability:

No data found.

1-Ethenyl, 2-Pyrrolidinone is a suspected human carcinogen. Care should be taken when using this product.

PIGMENTS

Pigments used may in some cases be LEAD based compounds. Always consult ink manufacturer for more specific information regarding end use requirements.

This is only applicable to inks manufactured before 28 October 1998. Batches dated on or after 28 October 1998 are LEAD FREE.