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NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

FULL PUBLIC REPORT

FSM-005W

This Assessment has been compiled in accordance with the provisions of the *Industrial Chemicals (Notification and Assessment) Act 1989* (Cwlth) (the Act) and Regulations. This legislation is an Act of the Commonwealth of Australia. The National Industrial Chemicals Notification and Assessment Scheme (NICNAS) is administered by the Department of Health and Ageing, and conducts the risk assessment for public health and occupational health and safety. The assessment of environmental risk is conducted by the Department of the Environment and Water Resources.

For the purposes of subsection 78(1) of the Act, this Full Public Report may be inspected at our NICNAS office by appointment only at 334-336 Illawarra Road, Marrickville NSW 2204.

This Full Public Report is also available for viewing and downloading from the NICNAS website or available on request, free of charge, by contacting NICNAS. For requests and enquiries please contact the NICNAS Administration Coordinator at:

Street Address:	334 - 336 Illawarra Road MARRICKVILLE NSW 2204, AUSTRALIA.
Postal Address:	GPO Box 58, SYDNEY NSW 2001, AUSTRALIA.
TEL:	+ 61 2 8577 8800
FAX	+ 61 2 8577 8888
Website:	www.nicnas.gov.au

Director
NICNAS

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1. APPLICANT AND NOTIFICATION DETAILS

APPLICANT(S)
Epson Australia Pty Ltd (ABN 91 002 625 783) of 3 Talavera Road, North Ryde, NSW, 2113.

NOTIFICATION CATEGORY
Limited-small volume: Chemical other than polymer, (1 tonne or less per year).

EXEMPT INFORMATION (SECTION 75 OF THE ACT)
Data items and details claimed exempt from publication:

Chemical Identity
Spectral data
Purity and Identity of impurities
Import Volume

VARIATION OF DATA REQUIREMENTS (SECTION 24 OF THE ACT)
No variation to the schedule of data requirements is claimed.

PREVIOUS NOTIFICATION IN AUSTRALIA BY APPLICANT(S)
None

NOTIFICATION IN OTHER COUNTRIES
None

2. IDENTITY OF CHEMICAL

OTHER NAME(S)
Ink additive J-19

MARKETING NAME(S)
FSM-005W (contain 30% notified chemical)

3. COMPOSITION

DEGREE OF PURITY
> 80% (contains two chemicals, as impurities, not listed on the Inventory at <10%)

4. INTRODUCTION AND USE INFORMATION

MODE OF INTRODUCTION OF NOTIFIED CHEMICAL (100%) OVER NEXT 5 YEARS
The notified chemical will be imported as a component of ink (<1%) incorporated into cartridges.

MAXIMUM INTRODUCTION VOLUME OF NOTIFIED CHEMICAL (100%) OVER NEXT 5 YEARS

Year	*1*	*2*	*3*	*4*	*5*
Tonnes	< 1	< 1	< 1	< 1	< 1

USE
Component of printer ink (< 1%) contained within cartridges.

5. PROCESS AND RELEASE INFORMATION

5.1. Distribution, transport and storage

PORT OF ENTRY
Sydney

IDENTITY OF MANUFACTURER/RECIPIENTS
The inkjet printing cartridges will be potentially supplied to offices and retail outlets nationwide.

TRANSPORTATION AND PACKAGING
The notified chemical will be imported as a component of a ready to use sealed ink-jet cartridge (5-100ml) and transported by road.

5.2. Operation description

No reformulation or repackaging of the product will occur in Australia. The product will be delivered to the end-user as it is imported into Australia. The sealed inkjet cartridges will be handled by service technicians or office workers replacing the spent cartridges in the printer.

5.3. Occupational exposure

Number and Category of Workers

Category of Worker	*Number*	*Exposure Duration*	*Exposure Frequency*
Transport and Storage Workers	5-10	2-3 h	10-20 days/yr
Service Technicians	10-20	0.5 h	100 days/yr
Office workers	>1000	0.1 h	20 days/yr

Exposure Details

Transport and Storage

Importation/dockside, storage and transport workers will only handle new, unopened cartridges containing the notified chemical. Therefore, exposure is highly unlikely unless the packaging and cartridges are accidentally breached. The volume of the notified chemical in any single cartridge would typically be approximately 0.1 ml.

End-Use

Office workers and customer service engineers may have dermal contact with very small quantities of the notified chemical (concentration < 1%) if they touch the print heads while replacing the cartridges, have contact with ink-stained parts of the printer or by handling printed media before the ink is adequately dried. Dermal and possible ocular exposure could occur when handling faulty or ruptured cartridges.

5.4. Release

RELEASE OF CHEMICAL AT SITE
The notified chemical will be imported in sealed cartridges. There will be no release to the environment due to reformulation or repackaging.

RELEASE OF CHEMICAL FROM USE
The ink cartridges are designed to prevent leakage and will not be opened during transport, use, installation or replacement. Therefore, release of ink containing the notified chemical to the environment is not expected under normal conditions. However, if leakage or spillage does occur, the ink will be contained with absorbent material, which will presumably be disposed of in landfill in the normal office garbage along with the empty cartridges and print heads.

The sealed cartridges are contained within the printer until they are removed for disposal. Residual ink (< 5%) left in empty cartridges will most likely be disposed of to landfill.

Most of the notified chemical will be bound to printer paper, which will be disposed of to landfill, recycled or incinerated. Recycling of treated paper may result in the release of a proportion of the notified chemical to the aquatic compartment. Waste paper is repulped using a variety of chemical treatments, which result in fibre separation and ink detachment from the fibres. The wastes are expected to go to trade waste sewers. Due to the low percentage of notified chemical in the ink and the widespread use, release to the aquatic compartment will be highly diluted. The notified chemical adsorbed to sludge during the recycling process will be disposed of to landfill.

5.5. Disposal

Empty cartridges which contained the ink preparation will be disposed of to landfill.

5.6. Public exposure

Public exposure to the notified chemical will occur through the use of inkjet printers. Routes of exposure will be similar to office workers but less frequent exposure is expected. Public contact with the notified chemical may occur when handling printed paper. However, no significant exposure is expected after the paper is dried as the ink is bound in the structure of the paper.

6. PHYSICAL AND CHEMICAL PROPERTIES

Appearance at 20°C and 101.3 kPa White Solid

Melting Point/Freezing Point 208°C at 101.05 to 101.62 kPa

METHOD EC Directive 92/69/EEC A.1 Melting/Freezing Temperature.
Remarks Determined by differential scanning calorimetry. The test material has been determined to melt with evidence of gradual decomposition
TEST FACILITY Safepharm (2005a)

Boiling Point 543°C (estimated)

METHOD EC Directive 92/69/EEC A.2 Boiling Temperature
Remarks The notified chemical gradually decomposed at the melting point. The boiling point was calculated using adoptation of US EPA MPBP program 2000.
TEST FACILITY Safepharm (2005a)

Density 954 kg/m^3 at 20°C

METHOD EC Directive 92/69/EEC A.3 Relative Density.
TEST FACILITY Safepharm (2005a)

Vapour Pressure 5.7×10^{-10} kPa at 25°C

METHOD EC Directive 92/69/EEC A.4 Vapour Pressure.
TEST FACILITY Safepharm (2005b)

Water Solubility 39.9 – 42.3% w/w at 20°C

METHOD EC Directive 92/69/EEC A.6 Water Solubility.
Remarks Due to the high solubility of the test material in water a procedure was adopted based on Method A6 and the flask method. The water solubility was determined by visual assessment to determine the presence of excess test material in water.
TEST FACILITY Safepharm (2005a)

Hydrolysis as a Function of pH

METHOD EC Directive 92/69/EEC C.7 Degradation: Abiotic Degradation: Hydrolysis as a Function of pH.

pH	*T (°C)*	*$t_{½}$ (days)*
4	25	>365
7	25	>365
9	25	>365

Remarks — It was noted that the chromatography generated in this test was of poorer quality than would have been desirable, due to the buffer salts present and the general unsuitability of the test material to reverse phase HPLC. However, the method was of adequate accuracy to assess any concentration change over the course of the test.

At all pH values, less than 10% hydrolysis was observed after 5 days at 50°C. This is equivalent to a half life greater than 1 year at 25 °C.

TEST FACILITY — SafePharm Laboratories Ltd (2005a)

Partition Coefficient (n-octanol/water) — Estimated log Pow = -1.65

METHOD — EC Directive 92/69/EEC A.8 Partition Coefficient.

Remarks — No determination was possible. The test material exhibited the properties of a surfactant in the octanol-water system, thus preventing the determination by the shake-flask method. Estimation by the HPLC method was not possible in the absence of suitable calibration standards and since ionic compounds interact with HPLC columns by forces other than partitioning, such as ionic interaction with free silanols present on the stationary phase.

The estimation was performed by KOWWIN, version 1.67, Syracuse Research Corporation, William Meylan, 1993-2000.

TEST FACILITY — SafePharm Laboratories Ltd (2005a)

Adsorption/Desorption – screening test — Estimated $\log_{10}K_{oc}$ = 3.45

METHOD — EC Directive 2001/59/EC C.19 Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography.

Remarks — No determination was possible. An estimation was performed by PCKOCWIN, version 1.66.

TEST FACILITY — SafePharm Laboratories Ltd (2005a)

Dissociation Constant — Estimated pKa = 1.80 ± 0.32

Remarks — Using ACD/I – Lab Web Service (ACD/pKa 8.03), the dissociation constant of the acid group was predicted to be 1.80 ± 0.32.

TEST FACILITY — SafePharm Laboratories Ltd (2005a)

Particle Size

METHOD — OECD TG 110 Particle Size Distribution/Fibre Length and Diameter Distributions.

Range (µm)	*Mass (%)*
Less than 100 µm	0.359

Remarks — Sieve method

TEST FACILITY — Safepharm (2005a)

Flash Point — Not determined

Remarks — The notifed chemical is a solid with low vapour pressure.

Flammability Limits — Not highly flammable

METHOD EC Directive 92/69/EEC A.10 Flammability (Solids).
Remarks The test material did not propagate combustion over the 200 mm of the preliminary screening test in under 4 minutes.
TEST FACILITY Safepharm (2005b)

Autoignition Temperature None below its melting temperature

METHOD 92/69/EEC A.16 Relative Self-Ignition Temperature for Solids.
TEST FACILITY Safepharm (2005b)

Explosive Properties Negative

METHOD EC Directive 92/69/EEC A.14 Explosive Properties.
Remarks Based on the chemical structure and oxygen balance of the test material (-280) the result for the explosive properties has been predicted negative.
TEST FACILITY Safepharm (2005b)

Reactivity Not determined

Remarks Based on the chemical structure, it is predicted that the notified chemical is stable under normal conditions.

Oxidizing Properties Predicted negative

METHOD EC Directive 92/69/EEC A.17 Oxidizing Properties (Solids).
Remarks Based on assessment of chemical groups that would imply oxidizing properties.
TEST FACILITY SafePharm Laboratories Ltd (2005b)

7. TOXICOLOGICAL INVESTIGATIONS

Endpoint and Result	*Assessment Conclusion*
Rat, acute oral LD50 >2000 mg/kg bw	low toxicity
Guinea pig, skin irritation	corrosive
Mouse local lymph node assay (LLNA)	evidence of skin sensitisation

7.1. Acute toxicity – oral

TEST SUBSTANCE — Notified chemical

METHOD — Not stated. Only a summary report was provided. It was indicated that this is a limited study.

Species/Strain	Rat/Slc:Wistar (male)
Vehicle	Corn oil or purified water
Remarks - Method	The test substance was administered by gavage using a metal stomach tube at two single doses, 300 and 2000 mg/kg. After dosing, animals were clinically observed from immediately to 6 hours after dosing, and once daily for 14 days from the second day, during which period they were weighted. The author stated that the test substance was administered as an undiluted liquid. However, the notified chemical is a solid with a high melting point. There are no details on how the test substance was prepared.

RESULTS

Group	*Number and Sex of Animals*	*Dose mg/kg bw*	*Mortality*
1	5 males	300	0/5
2	5 males	2000	0/5

LD50	>2000 mg/kg bw
Signs of Toxicity	The author stated that no significant changes were noted in clinical observations. The animals showed favourable body weight gains, showing normal increase during the 14-day period.
Effects in Organs	No particular changes were detected at necropsy.
Remarks - Results	No details on clinical observations and changes in necropsy were included in the summary report.

CONCLUSION — The notified chemical is of low toxicity via the oral route.

TEST FACILITY — Saitama Laboratories (2003a)

7.2. Irritation – skin

TEST SUBSTANCE — Notified chemical

METHOD — Not stated. Only a summary report was provided.

Species/Strain	Guinea pigs/Hartley White (female)
Number of Animals	6
Vehicle	Distilled water
Observation Period	48 hours
Type of Dressing	Occlusive
Remarks - Method	The test substance was applied dropwise onto a patch which was attached

to the flanks of the animal for 24 hours. The test sites were observed and scored for erythema/eschar formation and oedema formation 3, 24 and 48 hours following the removal of the patches.

An evaluation criteria of skin reaction was described in the summary report. The scores at the 3 and 48 hour readings for both erythema/eschar and oedema were totalled and then divided by the number of animals (ie. mean score). The total of the mean score was further divided by 2 to give the primary irritation index (PII).

The author stated that the test substance was administered as an undiluted liquid. However, the notified chemical is a solid with a high melting point. There are no details on how the test substance was prepared.

RESULTS

Lesion	*Mean Score**	*Maximum Value*	*Maximum Duration of Any Effect*	*Maximum Value at End of Observation Period*
Erythema/Eschar	4	4	4	4
Oedema	4	4	4	4

*Calculated on the basis of the scores at 3 and 48 hours for ALL animals.

Remarks - Results: No abnormalities were noted in clinical observations.

Necrosis was noted in all animals and eschar was gradually formed. The PII was 8 and the test material was classified as corrosive according to the evaluation criteria of this study.

CONCLUSION: The notified chemical is corrosive to the skin.

TEST FACILITY: Saitama Laboratories (2003b)

7.3. Skin sensitisation – mouse local lymph node assay (LLNA)

TEST SUBSTANCE: A mixture (aqueous solution) containing 8% of the notified chemical and 22% of a closely related chemical.

METHOD: OECD TG 429: Skin Sensitisation – Local Lymph Node Assay.
EC Directive 2004/73/EC B.42 Skin Sensitisation - Local Lymph Node Assay.

Species/Strain: Mouse/CBA/CaOlaHsd
Vehicle: Ethanol/water (7/3 v/v)
Remarks - Method: No significant protocol deviation

A non-GLP pre-test in two mice was conducted at 4 concentrations (10%, 25%, 50% and 100%), on one ear each. One day after a single topical application, no irritation effects were observed at these concentrations, so 100% was chosen as the highest concentration. Also the vehicle of ethanol/water (7/3 v/v) was selected from this test.

RESULTS

Concentration (% w/w)	*Proliferative response (DPM/lymph node)*	*Stimulation Index (Test/Control Ratio)*
Test Substance		
0 (vehicle control)	251	-
5	602	2.4
10	1555	6.2
25	3685	14.7

50	4764	19.0
100 (undiluted)	6534	26.0
Positive Control		
0	282	-
5	664	2.4
10	1007	3.6
25	3169	11.2

Remarks - Results

All treated animals survived the scheduled study period.

No clinical signs were observed in any animals of the vehicle control group and 5% group. From the second application day, a dose-related slight to severe ear erythema was observed at both sites in all mice of other groups which persisted for the rest of the period of the study.

The body weight of all animals was within the range of commonly recorded for animals of the strain and age.

The size of the draining lymph nodes of the 50% group and 100% group was doubly large compared to those of the control group.

The EC3 value was calculated as 5.8%.

CONCLUSION

There was evidence of induction of a lymphocyte proliferative response indicative of skin sensitisation to the test material.

Given the closely related nature of the two components of the aqueous mixture, it is considered likely that both chemicals may be contributing to the sensitising property.

TEST FACILITY

RCC (2005)

8. ENVIRONMENT

8.1. Environmental fate

No environmental fate data were submitted.

8.2. Ecotoxicological investigations

No ecotoxicity data were submitted.

9. RISK ASSESSMENT

9.1. Environment

9.1.1. Environment – exposure assessment

The notified chemical will be manufactured overseas and imported into Australia as a component of ready to use sealed ink jet cartridges. No reformulation or repackaging of the cartridges will occur in Australia. Each cartridge will contain between 5-100 ml of ink, of which the notified chemical typically comprises 0.1 mL. Upon arrival in Australia, cartridges will be temporarily stored in a warehouse before distribution nation wide.

The ink will be used for printing to paper. Printed paper will be disposed of to landfill, recycled or incinerated.

Recycling of treated paper may result in the release of a proportion of the notified chemical to the aquatic compartment. Waste paper is repulped using a variety of chemical treatments, which result in fibre separation and ink detachment from the fibres. The wastes are expected to go to trade waste sewers. Due to the low percentage of notified chemical in the ink and the widespread use, release to the aquatic compartment will be highly diluted. As a worst case, assuming 95% of paper is recycled in Australia, and that all notified chemical is removed during the recycling process, the following Predicted Environmental Concentration (PEC) has been calculated.

Predicted Environmental Concentration for the Aquatic Compartment		
Total Annual Import/Manufactured Volume	1,000	kg/year
Proportion expected to be released to sewer	95	%
Annual quantity of chemical released to sewer	950	kg/year
Days per year where release occurs	365	days/year
Daily chemical release	2.60	kg/day
Water use	200.0	L/person/day
Population of Australia (Millions)	20.496	million
Removal within STP	0	%
Daily effluent production	4,099	ML
Dilution Factor - River	1.0	
Dilution Factor - Ocean	10.0	
PEC - River	0.63	µg/L
PEC - Ocean	0.06	µg/L

While the notified compound is highly water soluble, indicating it may move to the aquatic compartment due to its surface active nature, it is more likely that the notified chemical will be adsorbed to sludge during the recycling process. The estimated adsorption co-efficient also indicates very high adsorption to soil and sediment, and very low mobility in the soil. As such, the estimated PEC is considered to be an overestimate. The sludge produced during the recycling process will be disposed of to landfill.

It is expected that the majority of paper that is not recycled will be disposed of to landfill.

Over time, it is expected that the paper will degrade. In the soil environment, the notified chemical is expected to adhere to the soil rather than move into the aquatic compartment due to its surface active properties. Cartridges containing residual amounts of ink may also be disposed of in landfill.

Incineration of the notified chemical will result in the formation of water vapour and oxides of carbon and nitrogen.

9.1.2. Environment – effects assessment

No environmental fate or ecotoxicity data were submitted, hence it is not possible to make an assessment of the environmental effects of the notified chemical. However, based on the physical and chemical properties of the notified chemical, some assumptions can be made in relation to possible environmental effects.

Surfactants with MW's <1000, such as the notified chemical, are considered to be primarily surface active agents that damage respiratory membranes of aquatic organisms during acute exposures, and may be systemically toxic as a result of absorption through respiratory membranes (Naboltz *et al* 1993).

The notified chemical also is an amphoteric surfactant, and is likely to be in its most toxic in its cationic form (in acid pH conditions). Algae are assumed to be the most sensitive species during acute exposure, and fish and aquatic invertebrates most sensitive during chronic exposure. Dissolved organic carbon (DOC) in the water column is known to mitigate the toxicity of cationic surfactants. Binding of the dissolved DOC to the chemical neutralises the positive charge, making the cationic chemical less toxic and reducing its bioavailability (Naboltz *et al* 1993).

9.1.3. Environment – risk characterisation

While the environmental effects of the notified chemical are unknown, the PEC of the nominated chemical indicates it will be present at low levels. Potential entry of the notified chemical into the aquatic environment and its toxicity are mitigated by its tendency to bind to organic matter.

Based on the proposed use volume and patterns, the notified chemical is not expected to pose an unacceptable risk to the aquatic environment.

9.2. Human health

9.2.1. Occupational health and safety – exposure assessment

There will be no reformulation or repackaging of the imported ink cartridges before the end use.

Dermal exposure is not expected to be significant as it is limited to possible contact with very small amounts of the notified chemical from handling the ink cartridges amd printed paper or servicing.

Inhalation and ocular exposure is unlikely, as the notified chemical is of low volatility in a liquid preparation and the ink is only released in minute amounts within the confines of the printer. Once the ink dries, the notified chemical would be trapped on the printed media, and therefore exposure from contact with the dried ink is not expected.

9.2.2. Public health – exposure assessment

Public exposure to the notified chemical via use of inkjet printers will be similar to the office workers but is expected to be generally less frequent. The notifier provided an estimated public exposure based on worst-case conditions assuming each piece of A4 paper can incorporate 1 mg of the notified chemical and a 50% transfer on contact when handling printed paper:

Area of contact with finger ends (four fingers on one hand) = 8 cm^2
A4 sized paper substrate = approximately 600 m^2
% Removal = (8/600) x 5 x 100 = <1%
Therefore, total removal to finger ends at point of contact would be <1% of 1 mg notified chemical per event = < 0.01 mg.

For extensive contact (ie. >10 events per day), the daily body burden, assuming no washing between events, 60 kg person and 100% absorption, would be <0.01 x 10/60 = approximately 0.017 mg/kg/day.

9.2.3. Human health – effects assessment

Acute toxicity
A study with limited reporting details indicated that the notified chemical has an oral LD50 >2000 mg/kg in rats. No data is available for acute dermal and inhalation toxicity. However, as the notified chemical is corrosive, it is expected to disrupt the skin.

Irritation and Sensitisation
A study with limited reporting details showed that the notified chemical is corrosive in guinea pigs. Although no eye irritation study is available, this effect is expected from a corrosive substance. A LLNA study conducted according to the OECD Test Guideline showed evidence of skin sensitisation property of the notified chemical.

Based on the available data, the notified chemical is classified as a hazardous substance in accordance with the NOHSC *Approved Criteria for Classifying Hazardous Substances* (NOHSC 2004). The classification details are:

C, R34 Cause burns
Xi, R43 May cause sensitisation by skin contact

Impurity
The notified chemical contains a hazardous impurity (at <1.5%) that is toxic for reproductive fertility and development (Category 2). However, its concentration in the imported ink cartridges is < 0.015% (<1% x <1.5%) which is below the concentration cut-off level for classification for these toxic effects.

9.2.4. Occupational health and safety – risk characterisation

The notified chemical is classified as a hazardous chemical and can cause burns and skin sensitisation.

The risk of corrosive effect and skin sensitisation during the end use by office workers and customer service engineers is expected to be low due to the concentration of the notified chemical in the printing ink (<1%) and the design of the cartridge. However, as exposure to the notified chemical could occur during change of ink cartridges, handling printed paper before the ink is dried, and accidental faulty or rupture of cartridges, an irritant response or sensitisation in certain individuals cannot be ruled out. The risk would be minimised by proper use and safety instructions on product labels and the wearing of gloves where dermal contact with the notified chemical is unavoidable.

9.2.5. Public health – risk characterisation

Based on the similar use and exposure pattern to the workers, plus less frequent exposure to the public than workers, the risk of the sensitisation/corrosive effects to the public is not expected to be significant due to the concentration of the notified chemical in the printing ink (<1%) and the design of the cartridge. Further, the public exposure estimation indicates a low level of exposure. However, as exposure to the notified chemical could occur during change of ink cartridges, handling printed paper before the ink is dried, and accidental faulty or rupture of cartridges, an irritant response or sensitisation in certain individuals cannot be ruled out. The risk would be minimised by proper use and following safety instructions on product labels.

10. CONCLUSIONS – ASSESSMENT LEVEL OF CONCERN FOR THE ENVIRONMENT AND HUMANS

10.1. Hazard classification

Based on the available data the notified chemical is classified as hazardous under the NOHSC *Approved Criteria for Classifying Hazardous Substances*. The classification details are:

C, R34 Cause burns
Xi, R43 May cause sensitisation by skin contact

and

As a comparison only, the classification of notified chemical using the Globally Harmonised System for the Classification and Labelling of Chemicals (GHS) (United Nations 2003) is presented below. This system is not mandated in Australia and carries no legal status but is presented for information purposes.

	Hazard category	***Hazard statement***
Corrosive and Irritation	1C	Causes severe skin burns and eye damage
Sensitisation	1	May cause an allergic skin reaction

10.2. Environmental risk assessment

The chemical is not considered to pose a risk to the environment based on its reported use pattern.

10.3. Human health risk assessment

10.3.1. Occupational health and safety

There is No Significant Concern to occupational health and safety under the conditions of the occupational settings described, provided products are adequately labelled and safety instructions are followed.

10.3.2. Public health

There is No Significant Concern to public health when used in printing ink contained in sealed cartridges, provided products are adequately labelled and safety instructions are followed.

11. MATERIAL SAFETY DATA SHEET

11.1. Material Safety Data Sheet

The MSDS of the imported product containing the notified chemical provided by the notifier was in accordance with the NOHSC *National Code of Practice for the Preparation of Material Safety Data Sheets* (NOHSC 2003). It is published here as a matter of public record. The accuracy of the information on the MSDS remains the responsibility of the applicant.

11.2. Label

The label for the product containing the notified chemical provided by the notifier was in accordance with the NOHSC *National Code of Practice for the Labelling of Workplace Substances* (NOHSC 1994). The accuracy of the information on the label remains the responsibility of the applicant.

12. RECOMMENDATIONS

REGULATORY CONTROLS
Hazard Classification and Labelling

- The Office of the ASCC, Department of Employment and Workplace Relations (DEWR), should consider the following health hazard classification for the notified chemical:

Risk phrases:

- C, R34 Cause burns

- Xi, R43 May cause sensitisation by skin contact

Safety phrases:
- S24 Avoid contact with skin
- S25 Avoid contact with eyes
- S37 Wear suitable gloves
- S39 Wear eye/face protection

- Use the following risk phrases for products/mixtures containing the notified chemical:
  - ≥ 10%: R34, R41, R43
  - 5% ≤ Conc < 10%: R36/38, R43
  - 1% ≤ Conc < 5%: R43

- The National Drugs and Poisons Scheduling Committee (NDPSC) should consider the notified chemical for listing on the SUSDP.

- Products containing the notified chemical and available to the public must carry safety directions and consistent with the following warning statements on the label:
  - May cause allergy
  - Avoid contact with skin
  - Wash hands after use

CONTROL MEASURES

Occupational Health and Safety

- Employers should implement the following safe work practices to minimise occupational exposure during handling of the notified chemical in ink cartridges, especially during handling faulty or ruptured cartridges:
  - Avoid skin and eye contact
  - Wear suitable gloves

- A copy of the MSDS should be easily accessible to employees.

- If products and mixtures containing the notified chemical are classified as hazardous to health in accordance with the NOHSC *Approved Criteria for Classifying Hazardous Substances*, workplace practices and control procedures consistent with provisions of State and Territory hazardous substances legislation must be in operation.

Public Health

The following measures should be taken by the cartridge manufacturers to minimise public exposure to the notified chemical:

- The design of the ink cartridges should minimise the potential for leaks or ruptures.
- The product label should include appropriate use and safety directions.

Environment

Disposal

- The notified chemical should be disposed of by incineration of or in landfill.

Emergency procedures

- Spills or accidental release of the notified chemical should be contained using suitable absorbent material and removed for disposal.

12.1. Secondary notification

The Director of Chemicals Notification and Assessment must be notified in writing within 28 days by the notifier, other importer or manufacturer:

(1) Under Section 64(1) of the Act; if
- the importation volume exceeds one tonne per annum notified chemical; or
- the concentration of the notified chemical exceeds or equals 1%.

or

(2) Under Section 64(2) of the Act:
- if any of the circumstances listed in the subsection arise.

The Director will then decide whether secondary notification is required.

13. BIBLIOGRAPHY

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