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**NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME
(NICNAS)**

FULL PUBLIC REPORT

Polymer in Solsperse 44000

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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
Chemicals Notification and Assessment**

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FULL PUBLIC REPORT

Polymer in Solsperse 44000

1. APPLICANT AND NOTIFICATION DETAILS

APPLICANT(S)

Orica Australia Pty Ltd (ABN 004 117 828), 1 Nicholson St MELBOURNE VIC 3000.

NOTIFICATION CATEGORY

Limited: Polymer with NAMW ≥ 1000 (greater than 1 tonne per year).

EXEMPT INFORMATION (SECTION 75 OF THE ACT)

Data items and details claimed exempt from publication: chemical identity, molecular weight, spectral data, identity of constituents and impurities.

VARIATION OF DATA REQUIREMENTS (SECTION 24 OF THE ACT)

Variation to the schedule of data requirements is claimed as follows: melting point/boiling point, vapour pressure, partition coefficient, adsorption/desorption and dissociation constant.

PREVIOUS NOTIFICATION IN AUSTRALIA BY APPLICANT(S)

None.

NOTIFICATION IN OTHER COUNTRIES

USA (2002), Canada, Korea.

2. IDENTITY OF CHEMICAL

MARKETING NAME(S)

The notified polymer is manufactured as a 50% (approximately) aqueous solution known as HPA8A or Solsperse 44000.

CAS NUMBER

Not assigned.

MOLECULAR WEIGHT

Number Average Molecular Weight (Mn) < 10000

Weight Average Molecular Weight (Mw) < 10000

% of Low MW Species < 1000 < 10

% of Low MW Species < 500 < 5

SPECTRAL DATA

Infrared (IR) and nuclear magnetic resonance (NMR) spectra were provided.

METHODS OF DETECTION AND DETERMINATION

IR and NMR spectroscopy.

3. COMPOSITION

DEGREE OF PURITY

50.5%

HAZARDOUS IMPURITIES

None.

NON HAZARDOUS IMPURITIES (> 1% by weight)

None.

ADDITIVES/ADJUVANTS

<i>Chemical Name</i>	Water.		
<i>CAS No.</i>	7732-18-5	<i>Weight %</i>	49.4

DEGRADATION PRODUCTS

Minimal degradation over the lifetime of coatings in which the notified polymer is used.

LOSS OF MONOMERS, OTHER REACTANTS, ADDITIVES, IMPURITIES

Not expected to depolymerise.

4. INTRODUCTION AND USE INFORMATION

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

From the U.K. by ship to a warehouse at Laverton, Victoria.

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

<i>Year</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Tonnes</i>	1	1 - 10	1 – 10	1 – 10	1 - 10

USE

Pigment dispersant for use in paints and inks. Ten to 20% of the import volume will be incorporated into inks that will be applied to flexible packaging substrates. The rest will be used in automotive and architectural coatings.

5.1. Distribution, Transport and Storage

PORT OF ENTRY

Melbourne.

IDENTITY OF MANUFACTURER/RECIPIENTS

Five to 10 customers.

TRANSPORTATION AND PACKAGING

The notified polymer will be imported in 25 kg square round blue plastic jerricans.

Industrial paints will be manufactured in 20 and 200 L steel pails and drums and architectural paints in 1 L, 4 L, and 10 L tinplate cans.

5.2. Operation Description

Paint and ink manufacture:

The manufacture of the coating products will involve three steps. In the first step, pigment, resin, solvent and dispersant (notified polymer) are weighed into a mixer and mixed at high speed to produce a mill base. In the second stage, the mill base is pumped into a large mixing vessel and the remaining resin and additives are added under constant low speed stirring. Samples are taken for quality control (QC) at this stage. In the final stage, the finished paint or ink, containing up to 2% (paint) or 3% (ink) by weight of the notified polymer, is gravity fed from the mixing vessel through a filter into 1, 4 and 10 L cans, 20 L steel pails and 200 L drums.

Paint application:

The finished paint is stirred and pumped into trays. The paint is either sprayed, roller coated or

dipped.

Ink application:

The ink is applied by roller coating onto flexible cardboard or plastic substrates after being pumped into machine reservoirs.

5.3. Occupational exposure

Number and Category of Workers

<i>Category of Worker</i>	<i>Number</i>	<i>Exposure Duration</i>	<i>Exposure Frequency</i>
Dock, transport and warehousing personnel	10	incidental	200 days/year
Paint or ink manufacture	130	2-8 hrs/day	30 days/year
Ink application	100	8 hrs/day	200 days/year
Industrial paint application	60	2-8 hrs/day	200 days/year
Architectural paint application	100s	0.5-8 hrs/day	20 days/year

Exposure Details

Coating manufacture:

There is potential for spillage of polymer solution to occur during mixing/blending and batch testing. The notifier estimated that the notified polymer will be used at 5-10 reformulation sites at which up to 100 batches of paint will be manufactured.

Pigment dispersion stage: blending and mixing of the notified polymer with ingredients either metered directly to the mixer (solvent, resin) is performed under local exhaust ventilation or manually added from bags, drums or pails. Workers involved in this process are expected to wear overalls, gloves and chemical goggles.

Makeup stage: the workers use the same handling and control measures as described above when adjusting the batch for viscosity and performing quality control tests.

Filling stage: filling of the finished paint into cans, pails and drums is carried out under local exhaust ventilation and workers wear overalls, gloves and goggles.

Industrial paint application

There is potential for worker exposure because of accidental spillage when stirring the finished paint and pumping it into trays. Spray applications are likely to occur in spray booths. The notifier estimates that up to 100 sites will use the industrial paints. About 90% of the notified polymer will be used in spray applications and about 10% in roller coating applications.

Architectural coatings application

Professional applicators and home handymen will apply the coating by brush, roller and sometimes by spray. Workers may have general ventilation when handling the coating and may use a respirator if spraying.

Ink application

There is potential for spillage of the ink while transferring it manually or by pumping to an ink trough. Although the trough is in an open system access is restricted while the printing machine is in use and workers would not be expected to be exposed. However, workers may be exposed to ink during roller cleaning with solvent.

5.4. Release

RELEASE OF CHEMICAL AT SITE

The notifier expects that coatings or inks will be manufactured by 5 to 10 companies located throughout Australia. It is estimated approximately 200 kg per annum of waste will be generated at manufacturing sites by cleaning up minor spills and cleaning out equipment. Based on previous assessments of similar products a small amount of waste could also be generated from rejected product.

RELEASE OF CHEMICAL FROM USE

AUTOMOTIVE/INDUSTRIAL APPLICATIONS

The notifier expects the paint containing the notified polymer will be used at up to 100 automotive/industrial sites. About 90% of automotive/industrial application will be applied by spray equipment, and 10% by rollercoating. During spray applications, the notifier estimates average wastes from overspray will be about 40% or 3.2 tonnes per annum (at maximum import volume). During roller coating applications, the notifier estimates losses of about 3% or 40 kg from equipment cleanup, spills and residues in containers. It is anticipated that all of the waste paint containing the notified polymer released at industrial sites will be trapped for disposal using standard engineering controls.

ARCHITECTURAL APPLICATIONS

During architectural applications it is estimated that about 100 kg per annum of notified polymer may be consigned to landfills in empty cans containing dry paint residues. The notifier further estimates that waste solvent from cleaning equipment will contain up to 150 kg per annum of the polymer. Professional painters and home handymen may apply the paint with brushes or rollers and occasionally spray equipment. While the fate of the wastes generated by individual users in architectural situations is uncertain the amount waste is small for each individual user. Paint manufacturers recommend that such wastes be stored and then taken to municipal chemical waste collection days for disposal.

PACKAGING INKS

Ten to 20% of the import volume of the notified polymer will be incorporated into inks that will be applied to flexible packaging substrates such as cardboard and plastics. The inks will be applied by a roller coating process at about 20 sites throughout Australia. There is potential for spillage while transferring ink to ink troughs which may be performed manually or by pumping from drums. Good work practices are expected to minimise the probability of spillage and any spillage is usually trapped for disposal using standard engineering controls.

5.5. Disposal

It is expected that the waste generated during coatings manufacture and industrial/automotive applications will be disposed through licensed waste disposal contractors as recommended in the MSDS. Paint and ink mixing vessels would be cleaned with water and the resulting aqueous waste containing polymer solids is often stored for re-use in future batches of product or removed by licensed waste contractors for treatment with flocculants. Flocculants are also added to remove the polymer from the spray booth recirculation water and the solid residue containing the notified polymer buried in secure landfill. The MSDS advises to prevent run off into drains and waterways and to inform local emergency services if contamination of sewers or waterways has occurred.

5.6. Public exposure

Public exposure to the notified polymer during transport should not occur except in the case of accident. During manufacture of paints or inks, disposal of waste or industrial use of coatings or inks public exposure is also unlikely.

Use of architectural coatings by members of the public can result in high exposure to paints but this use is intermittent. Such exposure is most likely to be dermal with some accidental oral or ocular exposure.

Public exposure to dried ink or paint films can be widespread but the notified polymer will not be bioavailable.

6. PHYSICAL AND CHEMICAL PROPERTIES

The notified polymer is manufactured and imported as an aqueous solution (< 60% water). Physico-chemical properties were determined using this solution.

Appearance at 20°C and 101.3 kPa	Yellow-amber viscous liquid.												
Boiling Point	Expected to boil at 100°C at 101.3 kPa.												
Remarks	Expected to boil at the boiling point of water.												
Density	1090 kg/m³ at 20°C												
Vapour Pressure	Not determined												
Remarks	The vapour pressure is expected to be very low due to the high molecular weight of the polymer.												
Water Solubility	Not determined												
Remarks	The polymer is miscible in water. The product is an approximate 50 percent solution in water.												
Hydrolysis as a Function of pH	Unlikely to hydrolyse in the pH range 4–9.												
METHOD	Freeze-dried test substance was dissolved in buffers of pH 4, 7 or 9, incubated at 40 °C for 2 weeks, filtered, freeze-dried and reweighed.												
<table><tr><td><i>pH</i></td><td><i>T (°C)</i></td><td><i>Recovery (%)</i></td></tr><tr><td>4</td><td>40</td><td>98.6</td></tr><tr><td>7</td><td>40</td><td>100</td></tr><tr><td>9</td><td>40</td><td>98.0</td></tr></table>		<i>pH</i>	<i>T (°C)</i>	<i>Recovery (%)</i>	4	40	98.6	7	40	100	9	40	98.0
<i>pH</i>	<i>T (°C)</i>	<i>Recovery (%)</i>											
4	40	98.6											
7	40	100											
9	40	98.0											
Remarks	Method was taken from Korean NIER guidelines. The notified polymer is unlikely to hydrolyse in the environmental pH range of pH 4 to 9.												
TEST FACILITY	Analytical Sciences Group (2002).												
Partition Coefficient (n-octanol/water)	Not determined.												
Remarks	Due to its high water solubility, the notified polymer is expected to partition primarily to the aqueous phase.												
Adsorption/Desorption	Not determined.												
Remarks	Due to its high water solubility, the notified polymer is likely be mobile in soil.												
Dissociation Constant	Not determined.												
Remarks	As a polymeric salt is expected to dissociate in water but free acid will form at low pH.												
Particle Size	Not applicable, polymer is in solution.												
Flash Point	Not determined.												
Flammability Limits	Not determined.												
Autoignition Temperature	Not determined.												

Explosive Properties

Expected to be stable under normal use conditions.

7. TOXICOLOGICAL INVESTIGATIONS

Full reports for the toxicological data were not provided. Summaries of the methods, results and conclusions were provided.

<i>Endpoint and Result</i>	<i>Assessment Conclusion</i>
Rat, acute oral LD50 > 2000 mg/kg bw	low toxicity
Rabbit, skin irritation	non-irritating
Rabbit, eye irritation	slightly irritating
Mouse, skin sensitisation – local lymph node assay	no evidence of sensitisation
Genotoxicity - bacterial reverse mutation	non mutagenic

7.1. Acute toxicity – oral

TEST SUBSTANCE	HPA8A
METHOD	OECD TG 423 Acute Oral Toxicity – Acute Toxic Class Method.
Species/Strain	Rat/Sprague-Dawley.
Vehicle	Administered undiluted.

RESULTS

<i>Group</i>	<i>Number and Sex of Animals</i>	<i>Dose mg/kg bw</i>	<i>Mortality</i>
1	3 males	2000	None
2	3 females	2000	None

LD50	> 2000 mg/kg bw
Signs of Toxicity	None.
Effects in Organs	None.

CONCLUSION	The notified chemical is of low toxicity via the oral route.
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TEST FACILITY	SafePharm (2002a).
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7.2. Irritation – skin

TEST SUBSTANCE	HPA8A
METHOD	OECD TG 404 Acute Dermal Irritation/Corrosion.
	EC Directive 92/69/EEC B.4 Acute Toxicity (Skin Irritation).
Species/Strain	Rabbit/New Zealand White
Number of Animals	3
Vehicle	Administered undiluted.
Observation Period	72 hours.
Type of Dressing	Semi-occlusive.
Remarks - Method	4-hour treatment.

RESULTS

<i>Lesion</i>	<i>Mean Score* Animal No.</i>			<i>Maximum Value</i>	<i>Maximum Duration of Any Effect</i>	<i>Maximum Value at End of Observation Period</i>
	1	2	3			
<i>Erythema/Eschar</i>	0	0	0	0		0
<i>Oedema</i>	0	0	0	0		0

*Calculated on the basis of the scores at 24, 48, and 72 hours for EACH animal.

CONCLUSION The notified chemical is non-irritating to skin.

TEST FACILITY Safepharm (2002b).

7.3. Irritation - eye

TEST SUBSTANCE HPA8A

METHOD OECD TG 405 Acute Eye Irritation/Corrosion.
EC Directive 92/69/EEC B.5 Acute Toxicity (Eye Irritation).
Species/Strain Rabbit/New Zealand White
Number of Animals 3
Observation Period 72 hours.

RESULTS

<i>Lesion</i>	<i>Mean Score* Animal No.</i>			<i>Maximum Value</i>	<i>Maximum Duration of Any Effect</i>	<i>Maximum Value at End of Observation Period</i>
	1	2	3			
<i>Conjunctiva: redness</i>	0	0.33	0	1	24 hours	0
<i>Conjunctiva: chemosis</i>	0	0	0	0		0
<i>Conjunctiva: discharge</i>	0	0.33	0	2	24 hours	0
<i>Corneal opacity</i>	0	0	0	0		0
<i>Iridial inflammation</i>	0	0	0	0		0

*Calculated on the basis of the scores at 24, 48, and 72 hours for EACH animal.

CONCLUSION The notified chemical is slightly irritating to the eye.

TEST FACILITY Safepharm (2002c).

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

TEST SUBSTANCE HPA8A

METHOD
Species/Strain Mouse/CBA.
Vehicle Acetone.

RESULTS

<i>Concentration</i>	<i>Proliferative response (DPM*/lymph node)</i>	<i>Stimulation Index (Test/Control Ratio)</i>
Test Substance		
Control (Acetone)	524.50	
0.5% w/v	695.67	1.3
5.0% w/v	689.34	1.3
50% w/v	1063.87	2.0

* disintegrations per minute

Remarks - Results Positive control data were not presented.

CONCLUSION There was no evidence of induction of a lymphocyte proliferative response indicative of skin sensitisation to the notified chemical.

TEST FACILITY Safepharm (2002d).

7.5. Genotoxicity - bacteria

TEST SUBSTANCE	HPA8A
METHOD	OECD TG 471 Bacterial Reverse Mutation Test. EC Directive 92/69/EEC B.14 Mutagenicity – Reverse Mutation Test using Bacteria.
Species/Strain	<i>S. typhimurium</i> : TA1535, TA1537, TA98, TA100 <i>E. coli</i> : WP2 uvrA
Metabolic Activation System	Rat liver S9 fraction.
Concentration Range in Main Test	a) With metabolic activation: 50 - 5000 µg/plate. b) Without metabolic activation: 50 - 5000 µg/plate.
Vehicle	Sterile distilled water.

RESULTS

<i>Metabolic Activation</i>	<i>Test Substance Concentration (µg/plate) Resulting in:</i>			
	<i>Cytotoxicity in Preliminary Test</i>	<i>Cytotoxicity in Main Test</i>	<i>Precipitation</i>	<i>Genotoxic Effect</i>
<i>Absent</i>				
Test 1		-	-	-
Test 2		-	-	-
<i>Present</i>				
Test 1		-	-	-
Test 2		-	-	-

CONCLUSION	The notified chemical not mutagenic to bacteria under the conditions of the test.
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TEST FACILITY	Safepharm (2002e).
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8. ENVIRONMENT

8.1. Environmental fate

No environmental fate data were submitted.

8.2. Ecotoxicological investigations

No ecotoxicity data other than a summary report of a study on acute toxicity to *Daphnia magna* were submitted.

8.2.1. Acute toxicity to aquatic invertebrates

TEST SUBSTANCE	HPA8A
METHOD	Daphnia sp. Acute Immobilisation Test - 48 hour test
Species	<i>Daphnia magna</i>
Exposure Period	48 hours
Auxiliary Solvent	None
Water Hardness	Not mentioned.
Analytical Monitoring	Not mentioned.
Remarks - Method	The study was stated to have been conducted according to Brixham Environmental Laboratory Standard Operation Procedure BA283 version 02.

RESULTS

<i>Concentration mg/L</i> <i>Nominal</i>	<i>Number of D. magna</i>	<i>% Immobilised</i> <i>48 h</i>
Control (Dilution water)	5	0
0.032	5	0
0.10	5	0
0.32	5	0
1.0	5	0
3.2	5	0
10	5	0
32	5	0
100	5	0

EC50	> 100 mg/L at 48 hours
NOEC	100 mg/L at 48 hours
CONCLUSION	The test substance is practically non-toxic to aquatic invertebrates (Mensink <i>et al</i> 1995).
TEST FACILITY	Brixham Environmental Laboratory (2002)

9. RISK ASSESSMENT

9.1. Environment

9.1.1. Environment – exposure assessment

Release figures are discussed in Section 5.4. No environmental exposure of the notified polymer is expected once the paint is dried and trapped in the hard and durable paint matrix. However, usage patterns suggest that up to 3 tonnes of polymer could be generated as waste during manufacturing and coating application as a result of overspray, incidental spills, equipment cleaning (brushes, rollers, spray equipment), and residues in containers. The majority of the waste is expected to be generated through overspray, where up to 40% of paint can be lost.

In most industrial situations, which accounts for majority of usage, it is expected that spray application will occur in spray booths, in which engineering controls, such as filters systems, are used to trap the overspray. It is estimated about 80% of the oversprayed polymer would be collected by the filter systems in spray booths. The notifier expects that these trapped wastes will be periodically removed and disposed of through a licensed waste contractor.

There is a potential for aquatic exposure during architectural applications, should individual home handymen improperly dispose of unwanted paint waste down the sewer. Given the paint is water based, it is likely equipment will be cleaned with water, and the wastes will enter the sewer system or be poured onto the ground. However, only a minor amount of the total import volume of the notified polymer is expected to enter the aquatic environment via the sewer. Should the polymer enter a sewer system or a spill occur into a stream it is expected to be rapidly diluted to low concentrations.

In the event of spillage onto land, the polymer is expected to bind to the soil and become immobilised as it dries out. Contaminated soil can then be collected and disposed of to landfill. In landfill the notified polymer is expected to undergo eventual degradation by biotic and abiotic processes. The notifier recommends that wastes generated during architectural applications should be taken to a municipal chemical waste collection facility for disposal.

9.1.2. Environment – effects assessment

No ecotoxicity data other than a summary report of a study on acute toxicity to *Daphnia magna* were submitted. With the EC50 at 48 hours greater than 100 mg/L the notified polymer is practically non-toxic to aquatic invertebrates.

9.1.3. Environment – risk characterisation

No aquatic exposure is anticipated during manufacture and normal use of the notified polymer. Any small amount of the polymer released into the aquatic environment during architectural applications, will be rapidly diluted. It is unlikely that the polymer would exist at levels, which could accumulate and pose a threat to aquatic organisms. Further, the high molecular weight and the water solubility of the notified polymer suggest a low potential to bioaccumulate.

However, up to 3 tonnes of polymer wastes could be generated during manufacturing and coating application. It is expected that most of this waste will be disposed of in landfill as inert solid waste. In landfill, the polymer is expected to be immobile, and eventually degrade through biotic and abiotic processes, and consequently, should not pose a significant hazard to the environment.

9.2. Human health

9.2.1. Occupational health and safety – exposure assessment

Workers likely to be exposed to the notified polymer are those involved in transport and warehousing, coating manufacture and application.

The most likely routes of exposure are dermal and inhalation (during spray applications). Ocular

exposure may occur as a result of accidental spillage. The following activities were identified as potential exposure scenarios:

- weighing and mixing the notified polymer with other ingredients
- transferring the coatings from one tank to another
- batch adjustment and QC testing
- filling paint or ink cans
- pumping the finished paint or ink containing up to 3% notified polymer into trays
- applying the finished paint or ink in industrial and architectural situations

Workers involved in manufacturing of the coating or ink are assessed as having a greater risk of exposure than workers handling the finished paint (containing up to 3% notified polymer) during application, as these workers will handle concentrated amounts of notified polymer.

Workers in the manufacturing plant are expected to use local exhaust ventilation and personal protective equipment. During application, in industrial situations, the main use is by spraying and it is likely that workers will use spray booths fitted with exhaust ventilation in accordance with the NOHSC *National Guidance Material for Spray Painting* (NOHSC, 1999b). However, during architectural application there is potential for workers to be exposed to the coatings. The conditions in this situation are uncontrolled. During spraying, workers may wear a respirator.

Workers involved in ink application may be exposed to spills during addition of ink to ink troughs and during cleaning of rollers but would typically be wearing protective clothing and gloves. In any case the maximum concentration of polymer to which workers could be exposed is 3%.

Exposure during transport and warehousing is only likely in the case of accidental spills.

9.2.2. Public health – exposure assessment

Public exposure to surface coatings containing the notified polymer is expected to be widespread but intermittent, i.e. limited to periods of home decoration. The likely route of exposure would be dermal, with the possibility of accidental oral and ocular exposure. Inhalation exposure may occur if the paint is applied by spray. Due to the wide range of applications in the domestic and industrial environment, public exposure via dermal contact with dried surface coating films containing the notified polymer is also likely.

Public exposure to inks containing the notified polymer may be common when packaging containing it is handled and dermal contact with the dried ink film occurs.

It is expected that during transport, storage, manufacture, industrial and professional use, exposure of the general public will be low, except in the event of an accidental spill.

9.2.3. Human health - effects assessment

From the toxicity data submitted the notified polymer was of low acute oral toxicity in rats, was not a skin irritant but was a slight eye irritant in rabbits, was not a skin sensitiser in the mouse local lymph node assay and was not mutagenic in bacteria.

The toxicity data are consistent with a predicted low hazard for the notified polymer based on its high molecular weight, low levels of residual monomers, low levels of low molecular weight species and likely high stability under normal conditions of use.

9.2.4. Occupational health and safety – risk characterisation

The notified polymer is unlikely to be hazardous to health. Exposure during transport, storage or manufacture of paints or inks is likely to be restricted to intermittent spills which will be easily contained because of the viscous nature of the polymer solution to be imported. During industrial use of the paints there is potential for dermal exposure and inhalation exposure if the paint is sprayed. However, the low hazard of the polymer coupled with its low concentration in the paints makes it unlikely there will be any risk of adverse health effects to workers.

During ink application there is some chance of dermal exposure when adding the ink to the application machine but again, the low hazard of the polymer coupled with its low concentration in the inks makes it unlikely there will be any risk of adverse health effects to workers.

Once the paints or inks have been applied to substrates and have dried, the notified polymer will not be bioavailable and the risk of adverse health effects to workers is negligible.

9.2.5. Public health – risk characterisation

The public can be exposed to the notified polymer at low concentration in architectural paints and this exposure is most likely to be dermal. However, the risk of adverse health effects should be minimal given the likely low hazard of the polymer coupled with its low concentration in paints and intermittent exposure.

After the paint or ink film has dried the notified polymer will not be bioavailable and the risk of adverse health effects to the public is negligible.

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

10.1. Hazard classification

Based on the available data the notified chemical is not classified as hazardous under the NOHSC *Approved Criteria for Classifying Hazardous Substances* (NOHSC, 1999a).

10.2. Environmental risk assessment

Due to the limited exposure, the notified polymer 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 Low Concern to occupational health and safety under the conditions of the occupational settings described.

10.3.2. Public health

There is Negligible Concern to public health when used in architectural paints or packaging inks.

11. MATERIAL SAFETY DATA SHEET

11.1. Material Safety Data Sheet

The MSDS of the aqueous solution of the notified polymer to be imported and an automotive repair basecoat containing the notified polymer provided by the notifier were in accordance with the NOHSC *National Code of Practice for the Preparation of Material Safety Data Sheets* (NOHSC, 1994a). They are 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 aqueous solution of the notified polymer to be imported provided by the notifier was in accordance with the NOHSC *National Code of Practice for the Labelling of Workplace Substances* (NOHSC, 1994b). The accuracy of the information on the label remains the responsibility of the applicant.

12. RECOMMENDATIONS

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 paints that will be sprayed:
 - Use of the paint containing the notified polymer by spray application should be in accordance with the NOHSC *National Guidance Material for Spray Painting* (NOHSC, 1999b)
- A copy of the MSDS should be easily accessible to employees.

If products and mixtures containing the notified polymer 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.

Environment

Disposal

- Wastes generated during industrial application should be disposed of through a licensed waste contractor. Wastes generated during domestic use should be disposed of according to the following instructions: "Do not pour leftover paint down the drain. Unwanted paint should be brushed out on newspaper, allowed to dry and then disposed of via domestic waste collections. Empty paint containers should be left open in a well-ventilated area to dry out. When dry, recycle steel containers via steel can recycling programs. Disposal of empty paint containers via domestic recycling programs may differ between local authorities. Check with your local council first."

Emergency procedures

- Spills/release of the notified chemical should be adsorbed with inert material and collected in sealable drums for disposal through a licensed waste contractor.

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:

Under subsection 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.

No additional secondary notification conditions are stipulated.

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