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

FULL PUBLIC REPORT

Solplus D520

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**Director
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TABLE OF CONTENTS

FULL PUBLIC REPORT	4
1. APPLICANT AND NOTIFICATION DETAILS	4
2. IDENTITY OF CHEMICAL	4
3. COMPOSITION.....	4
4. INTRODUCTION AND USE INFORMATION	4
5. PROCESS AND RELEASE INFORMATION.....	5
5.1. Distribution, transport and storage.....	5
5.2. Operation description.....	5
5.3. Occupational exposure.....	5
5.4. Release.....	6
5.5. Disposal	6
5.6. Public exposure	6
6. PHYSICAL AND CHEMICAL PROPERTIES	6
7. TOXICOLOGICAL INVESTIGATIONS	9
7.1. Genotoxicity – bacteria	9
8. ENVIRONMENT.....	10
8.1. Environmental fate	10
8.2. Ecotoxicological investigations.....	10
9. RISK ASSESSMENT	10
9.1. Environment.....	10
9.1.1. Environment – exposure assessment.....	10
9.1.2. Environment – effects assessment.....	10
9.1.3. Environment – risk characterisation.....	11
9.2. Human health	11
9.2.1. Occupational health and safety – exposure assessment.....	11
9.2.2. Public health – exposure assessment.....	11
9.2.3. Human health – effects assessment	11
9.2.4. Occupational health and safety – risk characterisation.....	11
9.2.5. Public health – risk characterisation.....	11
10. CONCLUSIONS – ASSESSMENT LEVEL OF CONCERN FOR THE ENVIRONMENT AND HUMANS	12
10.1. Hazard classification.....	12
10.2. Environmental risk assessment.....	12
10.3. Human health risk assessment.....	12
10.3.1. Occupational health and safety.....	12
10.3.2. Public health.....	12
11. MATERIAL SAFETY DATA SHEET	12
11.1. Material Safety Data Sheet.....	12
11.2. Label	12
12. RECOMMENDATIONS.....	12
12.1. Secondary notification	13
13. BIBLIOGRAPHY	14

FULL PUBLIC REPORT**Solplus D520****1. APPLICANT AND NOTIFICATION DETAILS**

APPLICANT(S)

Orica Australia Pty Ltd (ABN 99 004 117 828) of 1 Nicholson Street Melbourne VIC 3001.

NOTIFICATION CATEGORY

Limited-small volume: Polymer with NAMW < 1000 (1 tonne or less per year).

EXEMPT INFORMATION (SECTION 75 OF THE ACT)

Data items and details claimed exempt from publication:

Chemical Name, Other Names, CAS Number, Molecular and Structural Formulae, Molecular Weight, Spectral Data, Polymer Constituents, Purity, Hazardous and Non-hazardous Impurities/Residual Monomers, Additives/Adjuvants.

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

USA (year not specified).

2. IDENTITY OF CHEMICAL

MARKETING NAME(S)

Solplus D520 (>75% notified polymer)

3. COMPOSITION

DEGREE OF PURITY

High

4. INTRODUCTION AND USE INFORMATION

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

Import

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	1	1	1

USE

As a $\leq 1\%$ dispersant for fillers, aluminium trihydrate (flame retardant), calcium carbonate, glass fibre, etc. used in resin formulations for temperature cured composites such as baths, shower trays, kitchen worktops, boats, automotive panels and bodyshells.

5. PROCESS AND RELEASE INFORMATION

5.1. Distribution, transport and storage

PORT OF ENTRY
Melbourne

IDENTITY OF MANUFACTURER/RECIPIENTS
Orica Australia Pty Ltd

TRANSPORTATION AND PACKAGING

Solplus 520 will be stored and transported by road in 20 kg and 180 kg steel pails and drums from dockside to United Transport warehouse at Laverton VIC prior to distribution to a number of customer resin formulation plants (5-10 in total) throughout Australia. The resin formulations which are expected to contain flammable liquids such as styrene will be stored and transported by road or rail in 20 L and 200 L steel pails and drums. Storage will be in a covered bunded area and in accordance with state legislation.

5.2. Operation description

Solplus D520 is a viscous liquid containing >75% notified polymer in phosphoric acid. It will be imported for use in resin systems of the unsaturated polyester or acrylic type, which are cured with peroxide additives and elevated temperatures to produce a wide range of industrial and consumer articles.

At the customer resin formulation plant, Solplus D520 will be pumped or decanted using a drum cradle into a mixing tank (1000-2000 L capacity), where other ingredients are added under agitation to form the final resin formulation. The mixing process is enclosed with exhaust ventilation fitted to capture volatiles at source. The quality control personnel will collect a sample of up to 500 mL to perform spraying tests and adjustment to the formulation if necessary. The final resin formulation containing ≤1% notified polymer will be pumped through a filter into the required containers, lidded and then warehoused for distribution to composite manufacturers.

The methods employed in composite manufacture may involve a variety of techniques including hand lay-up/open moulding and various closed moulding operations. In open moulding, which gives the highest level of exposure to resins, application may be by air or airless spray equipment, pressure fed rollers, flow coaters and impregnators or brushes. In a spray booth, whilst an operator sprays the resin into the mould, another operator monitors the film thickness and catalyst levels of the sprayed resin formulation. After application, the resin formulation is allowed to solidify and cure hard before applying the fibreglass laminate to build the final article.

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>
Transport and warehouse workers	10	--	--
Resin formulators	20	4 hours/day	100 days/year
Quality control personnel	1	short	
Composite moulding operators			
Hand lay-up (spray, roll, brush)	20	6 hours/day	250 days/year
Equipment cleaning	20	2 hours/day	250 days/year

Exposure Details

During transport and storage, workers are unlikely to be exposed to the notified polymer except when packaging is accidentally breached. Should a spill occur, it is expected to be contained and collected using absorbent materials, and placed into properly labelled containers for disposal in accord with the MSDS and official regulations.

Quality control personnel may be potentially exposed to the notified polymer when sampling and testing formulations containing it. However, they will handle only small quantities and will wear appropriate personal protective equipment. The testing of resin formulations will be carried out in a

well-ventilated spray booth with a fume extraction system.

Inhalation, dermal and ocular exposure due to splashes and spillages can occur during weighing and mixing procedures, equipment cleaning processes, and to a greater or lesser extent in end use of the resin whilst carrying out moulding operations, dependant on the application technology used. Spraying techniques will give rise to the highest airborne concentrations of resins during hand lay-up whilst vacuum infusion in closed moulding techniques eliminates workers to airborne materials. Grinding and sanding operations on the cured composite will contribute to dust levels in the workplace. The notifier indicates that adequate ventilation will be in place to prevent workers from breathing dust and particulates. Local exhaust ventilation will be employed at all work areas when required. A regular maintenance programme including measurement of air flows at determined intervals will be also in place. In addition, because of the toxic nature of the solvent content (such as styrene), operators of the resin reformulation and application plants will wear appropriate respirators, dust masks and safety glasses with side-shields/chemical goggles. Protective clothing and gloves will be worn at all times. Such PPE is generally adequate to minimise worker exposure to the notified polymer. Copies of the MSDS will be readily accessible in all work areas.

5.4. Release

RELEASE OF CHEMICAL AT SITE

The notified polymer will be reformulated at a variety of companies (5-10 in total). The notifier estimates that approximately 70 kg per annum of the notified polymer will be present in wastes from the manufacture of resin formulations. This total will be contributed to by spills (~20 kg per annum), cleaning wastes (~20 kg per annum) and residuals in drums (~30 kg per annum). It is anticipated that this waste will be collected by licensed waste disposal contractors for disposal by incineration.

RELEASE OF CHEMICAL FROM USE

The formulated resins will be applied to mould by a variety of techniques as noted above. The notifier estimates that waste generated by applications of the resins would total around 80 kg per annum. Overspray from hand lay-up by spray application is expected to be the largest source of waste and account for around 50 kg per annum. This waste will be trapped in spray booth filters and consigned to landfill. The cleaning of application equipment will account for around 20 kg per annum, which will be incinerated along with the cleaning solvents. Waste in the resin drums is expected to account for a further 10 kg per annum. Drum residues will be incinerated during the recycling of the drums.

5.5. Disposal

Waste notified polymer generated during the manufacture of articles from the formulated resins as a result of spills and equipment cleaning will be collected by a licensed waste disposal contractor and destroyed via incineration. Empty drums will either be disposed of to landfill or recycled.

The majority of the notified polymer will be disposed of to landfill or incinerated at the end of the products' useful lifetimes, bound within a cured polymer matrix.

5.6. Public exposure

Solplus D520 will not be available to the public except in the form of finished articles. There is potential for widespread public exposure through dermal contact with plastic articles containing $\leq 1\%$ notified polymer in an encapsulated form.

6. PHYSICAL AND CHEMICAL PROPERTIES

Appearance at 20°C and 101.3 kPa Brown slightly turbid viscous liquid

Melting Point Not technically feasible

METHOD In-house method.

Remarks A test sample of the notified polymer was cooled to -60°C and then heated up to 30°C at a heating rate of 10°C/min under a nitrogen purge and examined by differential scanning calorimetry (DSC). The two DSC runs showed a glass transition at 3.7°C and 1.5°C respectively. It was not possible to measure the

TEST FACILITY	melting point from this data. Avecia (2001)
Boiling Point	Decompose without boiling
METHOD	EC Directive 92/69/EEC A.2 Boiling Temperature.
Remarks	DSC was used. The notified polymer was determined to decompose without boiling as no sharp endothermic boiling peak was observed in the DSC. Of the five scans conducted on the notified polymer, some show a small exothermic rise until around 160-180°C, whereas others show an endotherm or neutral position over the same range. All scans show a broad endotherm above 200°C, which is indicative of decomposition.
TEST FACILITY	Syngenta (2003)
Density	1100 kg/m ³ at 20°C
METHOD	In-house method.
Remarks	Relative density was measured by direct testing with pycnometers.
TEST FACILITY	Avecia (2001)
Vapour Pressure	<10 ⁻⁶ kPa at 25°C
METHOD	EC Directive 92/69/EEC A.4 Vapour Pressure - Effusion Manometry Method.
Remarks	The vapour pressure at 25°C was determined using the vapour pressures measured at 27°C and 52°C and molecular masses spanning a typical range of 608-1178.
TEST FACILITY	Syngenta (2003)
Water Solubility	1.1 x 10 ⁻³ g/L at 22±1°C
METHOD	EC Directive 92/69/EEC A.6 Water Solubility.
Remarks	The water solubility was determined by monitoring the decrease in turbidity with decreasing concentration in the range of 0.003 to 31.3 mg/L. A graph was plotted of log concentration vs log of turbidity which gave two straight lines, one for the decrease in turbidity as the substance tends towards solubility and the other the plateau produced when the substance is in solution. The water solubility of the notified polymer is taken where the two lines intersect.
TEST FACILITY	Avecia (2001)
Hydrolysis as a Function of pH	<10% after 5 days at 50°C at pH 4, 7 and 9
METHOD	EC Directive 92/69/EEC C.7 Degradation: Abiotic Degradation: Hydrolysis as a Function of pH.
Remarks	Ethyl acetate extracts of the buffer test solutions were analysed by GC-MS for two expected breakdown products of the notified polymer. Due to low response caused by column deterioration the values obtained for Day 0 analysis were considered anomalous. The subsequent figures for Day 1 and 5 analyses, with better response and therefore more sensitivity, were considered to be more accurate.
TEST FACILITY	Avecia (2003a)
Fat (or n-octanol) Solubility	Miscible in all proportions
METHOD	In-house method.
Remarks	The octanol solubility was determined by visual method.
TEST FACILITY	Avecia (2001)
Partition Coefficient (n-octanol/water)	log Pow = 5.0 (estimated)
METHOD	In-house method.
Remarks	Due to problems with recoveries using the shake flask method, the log P was calculated using the ratio of the octanol solubility to the water solubility. The

octanol solubility was chosen to be 10% w/w or 10000 mg/L and the water solubility was 1.0 mg/L.
 TEST FACILITY Avecia (2001)

Adsorption/Desorption

Not technically feasible

METHOD OECD TG 121 Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge Using High Performance Liquid Chromatography (HPLC)
 Remarks Due to lack of a chromophore, the Koc of the notified polymer cannot be determined based on the dual detection, inverse photometric detection and mass spectrometry methods.
 Due to the low water solubility and high partition coefficient it is anticipated that the notified polymer will associate with soil and sediment.
 TEST FACILITY AstraZeneca (2004)

Dissociation Constant

pKa = 3.81 and 7.50 at 23°C (calculated)

METHOD EC Directive 92/69/EEC C.7 Degradation: Abiotic Degradation: Hydrolysis as a Function of pH.
 Remarks The 'ideal' dissociation constants above were calculated by extrapolation to a zero weight of a plot of individual pKa results vs sample weight. The individual pKa was determined using inflection points on the titration curve with acid or base. Due to poor solubility of the notified polymer, the analysis was carried out using a solution of the test sample in water plus a minimal amount of methanol.
 TEST FACILITY Avecia (2003a)

Particle Size

Not applicable

Remarks The notified polymer is a liquid under normal conditions of use.

Flash Point

162±4°C at 100.1 kPa

METHOD EC Directive 92/69/EEC A.9 Flash Point - Pensky-Martens Closed Cup Method.
 Remarks The notified polymer is not classified as flammable in terms of its flash point.
 TEST FACILITY Syngenta (2003)

Flammability Limits

Not highly flammable

METHOD EC Directive 92/69/EEC A.12 Flammability (Contact with Water).
 EC Directive 92/69/EEC A.13 Pyrophoric Properties of Solids and Liquids.
 Remarks The notified polymer did not evolve highly flammable gases on contact with water nor spontaneously ignite on contact with air at ambient temperature. It is not classified as highly flammable in terms of its reactivity with water or its pyrophoric properties.
 TEST FACILITY Syngenta (2003)

Autoignition Temperature

335±5°C

METHOD 92/69/EEC A.15 Auto-Ignition Temperature (Liquids and Gases).
 Remarks The test temperatures were made at 5°C increments rather than the specified 2°C increments.
 TEST FACILITY Syngenta (2003)

Explosive Properties

Not explosive

METHOD In-house method.
 Remarks By comparing the bond groupings in the chemical structure of the notified polymer with those known to confer explosivity, it was concluded that the notified polymer is not an explosive.
 TEST FACILITY Avecia (2003b)

Reactivity Stable, $t_{1/2} \geq 2$ years at normal environmental conditions

METHOD In-house method.
Remarks To determine storage stability, the notified polymer, after an accelerated heating at $54 \pm 2^\circ\text{C}$ for 14 days, was examined by NMR spectroscopy. It was concluded that the differences in NMR spectra of the test sample are due to the degradation of an impurity with no significant active ingredient degradation, indicating an ambient shelf life of ≥ 2 years.
 The notified polymer is acidic and thus likely to react with alkaline and oxidising materials.
TEST FACILITY Avecia (2001)

7. TOXICOLOGICAL INVESTIGATIONS

<i>Endpoint and Result</i>	<i>Assessment Conclusion</i>
Genotoxicity – bacterial reverse mutation	non mutagenic

7.1. Genotoxicity – bacteria

TEST SUBSTANCE Notified polymer

METHOD OECD TG 471 Bacterial Reverse Mutation Test.
 EC Directive 2000/32/EC B.13/14 Mutagenicity – Reverse Mutation Test using Bacteria.
 Japan METI/MHLW/MAFF Bacterial Mutagenicity Test.
 US EPA (TSCA) OPPTS Harmonised Guidelines.
 Plate incorporation procedure

Species/Strain *S. typhimurium*: TA1535, TA1537, TA98, TA100
E. coli: WP2uvrA

Metabolic Activation System S9 fraction from phenobarbital and β -naphthoflavone induced rat liver.

Concentration Range in Main Test a) With metabolic activation: 15, 50, 150, 500, 1500, 5000 $\mu\text{g}/\text{plate}$.
 b) Without metabolic activation: 15, 50, 150, 500, 1500, 5000 $\mu\text{g}/\text{plate}$.

Vehicle Dimethyl sulphoxide

Remarks - Method Two independent tests were conducted in triplicate.
 WP2uvrA strain was not tested at 15 $\mu\text{g}/\text{plate}$.

RESULTS

<i>Metabolic Activation</i>	<i>Test Substance Concentration ($\mu\text{g}/\text{plate}$) 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	≥ 5000 (TA100)	≥ 1500 (<i>Salmonella</i>)	≥ 5000	Negative
Test 2	--	≥ 1500 (<i>Salmonella</i>)	≥ 5000	Negative
<i>Present</i>				
Test 1	≥ 5000 (TA100)	≥ 1500 (<i>Salmonella</i>)	≥ 5000	Negative
Test 2	--	≥ 1500 (<i>Salmonella</i>)	≥ 5000	Negative

Remarks - Results Cytotoxicity was observed at 5000 $\mu\text{g}/\text{plate}$ (TA100) in the preliminary test and at ≥ 1500 $\mu\text{g}/\text{plate}$ with all *Salmonella* tester strains both with and without metabolic activation in the main tests. No toxicity was noted to *E. coli* strain WP2uvrA. An oily precipitate at 5000 $\mu\text{g}/\text{plate}$ was not considered to prevent the scoring of revertant colonies. The vehicle, negative and positive controls confirmed the sensitivity of the test system.

CONCLUSION The notified polymer was not mutagenic to bacteria under the conditions

of the test.

TEST FACILITY

SPL (2003)

8. ENVIRONMENT

8.1. Environmental fate

No environmental fate data were submitted.

8.2. Ecotoxicological investigations

No ecotoxicity data were submitted for the notified polymer. However, the summary for the US EPA pre-manufacture notification (PMN) indicates that a structurally similar substance to the notified polymer has acute toxicity to fish (96 h LC50) >10 mg/L, with EC50 for *Daphnia magna* (48 h) and algae (72 h) >3.2 mg/L. It is expected to show low toxicity to sewage microorganisms. No information on the composition of the analogue or details of the test method used in determining these results was given. Hence, it is not possible to assess the appropriateness of this surrogate data.

9. RISK ASSESSMENT

9.1. Environment

9.1.1. Environment – exposure assessment

The notified polymer will be imported and reformulated into moulding resins for the fibreglass industry. As such the majority of the notified polymer will be bound within the polymer matrix of the cured articles. Some release of the notified polymer into the environment may occur during reformulation and cleaning of mixing equipment.

The notifier estimates approximately 70 kg per year of the notified polymer will be wasted during reformulation, either as spills, waste in import containers or as washings of mixing equipment. These wastes will be collected by a licensed waste contractor and disposed of by incineration. A further 30 kg per annum will be incinerated as wastes from cleaning resin application and residues in resin drums. Any incineration of the notified polymer will generate water oxides of carbon and phosphoric acid or its salts.

Around 50 kg per annum will be consigned to landfill in cured resins as overspray in moulding operations. The notified polymer is not expected to be mobile in landfill as it will be trapped in the polymer matrix of the cured resins.

The majority of the notified polymer will be disposed of in landfill bound within the polymer matrix in the articles into which it has been cast at the end of their useful lifetime. In landfill, it is anticipated that the cured polymer will not be mobile and will degrade slowly to give water and oxides of carbon.

While it is insoluble in water and has an estimated log Pow of 5.0, bioaccumulation of the notified polymer is not anticipated due to the high molecular weight of the polymer and the anticipated limited exposure to the aquatic compartment.

9.1.2. Environment – effects assessment

No data were provided for the notified polymer. Results provided for a reportedly structurally similar analogue indicate the notified polymer is not likely to be toxic up to the limit of its solubility in water. No details of the test methods or structure of this analogue have been provided.

Based on the low water solubility and high molecular weight, it is anticipated that the notified polymer would have low aquatic toxicity.

9.1.3. Environment – risk characterisation

The notified polymer is an additive in composite resins, and as such, most of the polymer will be incorporated into the inert plastic matrix, posing little risk to the environment.

Most wastes generated during moulding and in container residues are typically allowed to harden, where the polymer is bound within the plastic matrix in an inert manner, hence environmental risks are low, particularly in landfills with leachate collection and treatment plants.

9.2. Human health

9.2.1. Occupational health and safety – exposure assessment

During transport and storage, workers are unlikely to be exposed to the notified polymer. In the event of an accident, spills will be removed in accord with the MSDS and government regulations.

Inhalation, dermal and ocular exposure will potentially occur during reformulation, moulding/spraying applications and cleaning procedures due to spillages, mist and dust of the notified polymer. However, exposure to significant amounts of the notified polymer is limited because of the engineering controls, good work practices, and personal protective equipment worn by workers. Employers are responsible for maintaining the level of atmospheric nuisance dust and organic vapours below the relevant NOHSC exposure standards (OHSC, 1995). Following incorporation of the notified polymer in cured composites, it is encapsulated in a polymer matrix where the bioavailability will be low and therefore negligible exposure is expected.

9.2.2. Public health – exposure assessment

The notified polymer is intended for use in the composite manufacturing industry only. It will not be sold to the public except in the form of finished articles, which is inert, chemically stable and unlikely to be bioavailable. Indirect exposure via accidental spill or environmental release will be negligible taking into account the physicochemical characteristics of the new chemical such as high molecular weight, low vapour pressure and water solubility. The public exposure is therefore determined to be low.

9.2.3. Human health – effects assessment

Solplus D520 is a polymeric dispersant with a low vapour pressure. It is sparingly soluble in water (1.1 mg/L) and miscible in n-octanol in all proportions. It was not mutagenic in a bacterial reverse mutation assay. With an acidic pH of approx. 1, the notified polymer is classified as corrosive so avoiding skin and eye contact.

Based on the available data, the notified polymer is **classified** as a hazardous substance in accordance with the NOHSC *Approved Criteria for Classifying Hazardous Substances* (NOHSC, 2002).

9.2.4. Occupational health and safety – risk characterisation

The notified polymer will only be used at industrial sites where operatives are familiar in using such products and good handling procedures and housekeeping are the norm. Therefore, the OHS risk presented by the notified polymer is expected to be low, given the engineering controls, the good work practices and safety measures including use of appropriate personal protective equipment by workers.

The notified polymer may be present in formulations containing hazardous ingredients. If these formulations 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.

9.2.5. Public health – risk characterisation

Members of the public may make dermal contact with finished reinforced plastic articles containing the notified polymer. However, the risk to public health will be negligible because the chemical is present at low concentrations, bound within a matrix and not bioavailable.

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

10.1. Hazard classification

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

R34 - Causes burns

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 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 the proposed manner.

11. MATERIAL SAFETY DATA SHEET

11.1. Material Safety Data Sheet

The MSDS of the notified polymer 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 notified polymer 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 NOHSC Chemicals Standards Sub-committee should consider the following physicochemical hazard classification for the notified polymer:
 - R34 - Causes burns
- Use the following risk phrases for products/mixtures containing the notified chemical:
 - $\geq 10\%$: R34 - Causes burns
 - $<5\% \leq \text{conc} < 10\%$: R36/38 - Irritating to eyes and skin

CONTROL MEASURES

Occupational Health and Safety

- Employers should implement the following engineering controls to minimise

occupational exposure during handling of the notified polymer:

- Enclosed and automated processes at the mixing and moulding application sites, including enclosed and automatic transfer lines/pumps for loading and emptying of the mixing and transport vessels;
 - Adequate ventilation for the plant operators and fume cupboard or local exhaust ventilation for spraying and quality control personnel.
- Employers should implement the following safe work practices to minimise occupational exposure during handling of the notified polymer:
 - Adequate training for staff in handling corrosive resin formulations;
 - Implementation of general health surveillance and monitoring programs as required.
 - Employers should ensure that the following personal protective equipment is used by workers to minimise occupational exposure during handling of the notified polymer:
 - Safety glasses with side-shields/chemical goggles;
 - Dust masks or appropriate respirators if required;
 - Industrial standard protective clothing and gloves;

Guidance in selection of personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.

- 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

- The following control measures should be implemented by end users to minimise environmental exposure during use of the notified chemical:
 - Do not allow material or contaminated packaging to enter drains, sewers or water courses.

Disposal

- The waste material containing the notified polymer should be incinerated in a suitable incineration plant observing local authority regulations.
- The waste composite containing the notified polymer should be disposed of to landfill.

Emergency procedures

- Spills/release of the notified chemical should be absorbed into dry, inert material (eg sand, vermiculite), and then put into appropriately labelled drums for disposal as chemical waste. Prevent product from entering drains and do not contaminate surface water.

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(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.

13. BIBLIOGRAPHY

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