File No: LTD/1187

24 March 2005

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

FULL PUBLIC REPORT

Polymer in KZ-540

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Director
Chemicals Notification and Assessment

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FULL PUBLIC REPORT

Polymer in KZ-540

1. APPLICANT AND NOTIFICATION DETAILS

APPLICANT(S)
PPG Industries Australia Pty Ltd (ABN 82 055 500 939) of McNaughton Road, Clayton, Victoria, 3168.

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
Polymer constituents
Molecular weight
Spectral data
Purity and Identity of impurities
Identity of additives
Estimated import volume

VARIATION OF DATA REQUIREMENTS (SECTION 24 OF THE ACT)
Variation to the schedule of data requirements is claimed as follows:

Physicochemical properties

PREVIOUS NOTIFICATION IN AUSTRALIA BY APPLICANT(S)
None

NOTIFICATION IN OTHER COUNTRIES
USA EPA Acc# 169632. Canada CEPA NSN # 8116.

2. IDENTITY OF CHEMICAL

MARKETING NAME(S)
KZ-540 (solvent solution of the notified polymer)

CAS NUMBER
None allocated

METHODS OF DETECTION AND DETERMINATION

ANALYTICAL METHOD	Infrared (FTIR) Spectroscopy
Remarks	Comparison of FTIR trace to the standard provided will enable identification of the notified polymer. The molecular weight distribution was determined by Gel Permeation Chromatography (GPC)

3. COMPOSITION

DEGREE OF PURITY
>98%

HAZARDOUS IMPURITIES/RESIDUAL MONOMERS
All residual monomers and hazardous impurities are present below the relevant cut-offs for classification of the notified polymer as a hazardous substance.

DEGRADATION PRODUCTS
The notified polymer is reacted with other polymers in the paint formulation under the action of heat to form a very high molecular weight stable paint film that is firmly adhered to the substrate. Under extreme heat conditions, eg fire, the polymer would burn emitting oxides of nitrogen and carbon.
The paint film will very slowly deteriorate under the action of UV from sunlight, but from experience this is insignificant over the average life of a car (20 years).

LOSS OF MONOMERS, OTHER REACTANTS, ADDITIVES, IMPURITIES
There is expected to be no loss of monomers, additives or impurities during the life of the car.

4. INTRODUCTION AND USE INFORMATION

MODE OF INTRODUCTION OF NOTIFIED CHEMICAL (100%) OVER NEXT 5 YEARS
The notified polymer will not initially be manufactured in Australia, but will be imported as a component in the polymer solution KZ-540 at a concentration of 70%. At a later date the notified polymer may be manufactured at the PPG Clayton facility depending on the economics of importation versus local manufacture. If this occurs the polymer will be manufactured as a 70% solution in solvents.

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

Year	*1*	*2*	*3*	*4*	*5*
Tonnes	10-30	10 - 30	10 - 30	10 - 30	10 - 30

USE
The notified polymer will be formulated in Australia into finished automotive spray paints. It will be spray applied by robots and operators onto car bodies and then baked to form part of the paint finish of the car.

5. PROCESS AND RELEASE INFORMATION

5.1. Distribution, transport and storage

PORT OF ENTRY
The notified polymer will initially be imported through Melbourne, by wharf.

IDENTITY OF MANUFACTURER/RECIPIENTS
The notified polymer will be formulated in Australia into finished automotive spray paints at the PPG Paint manufacturing plant in Clayton, Victoria. The paint containing this polymer will be used at Toyota Facility in Altona.

TRANSPORTATION AND PACKAGING
KZ-540 will be imported in 200 L closed head steel drums. The drums of KZ-540 will be transported by road from the wharf to the notifier's site. After conversion at the manufacturing site into the product for sale, 200 L steel drums of the product will be transported by road to the Toyota Altona facility.

5.2. Operation description

Although initially the notified polymer will only be imported into Australia, there is the potential for manufacture to occur in the future. As such an operation description for both polymer manufacture and paint formulation has been included below.

Polymer manufacture

Laboratory scale

The monomer ingredients that are polymerised to make the polymer are combined in appropriate glassware and polymerised as required to make the polymer. Typically 2 – 3 litres (but up to a maximum of 5 litres) is manufactured. The polymer solution (containing 70% notified polymer) would be subject to sampling and analysis. All handling of monomer ingredients and final polymer and the polymer manufacture process are carried out in fume hoods having appropriate extraction.

Production Scale

Once the polymer solution (containing 70% notified polymer) has been manufactured in the reactor, it is transferred via dedicated pipework into the thinning vessel. Operators sample from this vessel through a purpose built sampling port taking approximately 100 mL of polymer solution for testing. When approved the polymer is filtered and filled through automated filling equipment into 200 L drums and stored in the bund.

Paint Formulation

Laboratory Scale

The ingredients required for making the paint, including the notified polymer, are combined in a container in the laboratory under stirring. The paint (containing 20-30% notified polymer) is then sprayed onto panels in a spraybooth having appropriate extraction. The panels are baked in an oven and the finished paint film is subjected to various tests.

Production Scale

The polymer solution (containing 70% notified polymer) will be pumped from 200 L drums into the closed mixer via a lance the operator places in the drum. The lance is manually transferred from drum to drum until the required amount of polymer has been added to the mixer. Following mixing with other ingredients, approximately 500 mL of the formulated paint (containing 20-30% notified polymer) is sampled for testing. When approved the formulated paint is filled through dedicated pipework and filling equipment into closed head 200 L drums. The filling equipment automatically places a short fill pipe through the bung hole in the top of the drum and fills the drum.

QC Testing

The operator adjusts the paint containing the notified polymer and sprays panels for baking and testing. Several tests such as solids, viscosity and weight per litre are performed on the wet paint.

Paint Application

The 200 L drums of paint (containing 20-30% notified polymer) are pumped into the circulating mix tank using a dedicated lance, pipework and pump. Once in the tank, solvent is added to adjust the paint to application viscosity. This paint is pumped around a circulation system from which it is sprayed onto car bodies by robots and operators in a dedicated ventilated spray area. Operators spray the paint onto specific areas of the car that are not painted by the robots. The painted cars travel through an oven where the notified polymer undergoes a heat activated chemical reaction with other polymers in the paint, thereby forming the final paint film on the car.

During production breaks, operators use cloths dampened with solvent to clean residual paint from the spray equipment.

5.3. Occupational exposure

Number and Category of Workers

Category of Worker	*Number*	*Exposure Duration*	*Exposure Frequency*
CLAYTON SITE			
Laboratory Work			
Polymer manufacture	1	6 hours/day	10 days/year
Paint formulation and testing	3	8 hours/day	80 days/year
Polymer Manufacture			
Process sampling, testing and filling	6	6 hours/day	7 days/year
Paint Formulation			
Paint make-up	18	4 hours/day	200 days/year
QC testing	3	4 hours/day	200 days/year
Filling into drums	3	4 hours/day	200 days/year
CUSTOMER SITE			
Paint application			
Adding paint to circulation tank	18	2 hours/day	200 days/year
Hand spray pick-up	30	8 hours/day	200 days/year
Cleaning of spray equipment	18	2 hours/day	200 days/year

Exposure Details

Polymer manufacture

Laboratory scale

Exposure to drips, spills and splashes of notified polymer at a concentration of 70% could occur during sampling and analysis of the polymer solution. Workers are provided with personal protective equipment appropriate for the materials they are handling.

Production Scale

There is potential for worker exposure during sampling and from changing filters, where skin contact is possible. Workers are provided with appropriate PPE.

Paint Formulation

Laboratory Scale

There is the potential for exposure to the notified polymer at a concentration of 70% from drips and spills during transfer of the polymer solution to the mixing container. Following formulation of the paint, dermal, ocular and inhalation exposure to the notified polymer at a concentration of 20-30% could occur during transfer and spray application of the paint formulation or contact with the wet paint surface. Workers are to be provided with appropriate PPE.

Once the paint surface has been cured the polymer is bound within an inert matrix and therefore will be unavailable for exposure.

Production Scale

Potential for worker exposure to the polymer at a concentration of 70% comes from skin contact with polymer residues on the exterior of the lance. Following paint formulation, exposure to the notified polymer at a concentration of 20-30% would be due to skin contact with residues dripping off the fill pipe, and during the manual cleaning of the pipe. Workers are to be provided with appropriate PPE.

QC Testing

There is potential for dermal exposure to the notified polymer at a concentration of 20-30% during sampling and testing of the paint formulation. There is the additional potential for inhalation exposure to paint droplets during spray application. Workers are to be provided with appropriate PPE.

Once the paint surface has been cured the polymer is bound within an inert matrix and therefore will be unavailable for exposure.

Paint Application

During transfer of the paint to the circulating mix tank, potential for worker exposure to the polymer at a concentration of 20-30% comes from skin contact with paint residues on the exterior of the lance. Dermal, ocular and inhalation exposure to the notified polymer at a concentration of 20-30% could

occur during spray application of the paint formulation. Workers wear full protective clothing and vapour masks that filter atomised paint out of the air they breathe.

There is potential for exposure to paint residues containing 20-30% notified polymer during cleaning.

Once the paint surface has been cured the polymer is bound within an inert matrix and therefore will be unavailable for exposure.

5.4. Release

RELEASE OF CHEMICAL AT SITE

Release to the environment during shipping, transport and warehousing will only occur through accidental spills or leaks of the drums or steel packaged containers.

Although initially the notified polymer will only be imported into Australia, there is the potential for manufacture to occur in the future. As such releases from both polymer manufacture and paint formulation has been considered below.

During polymer manufacture

Residual waste is generated in two ways. Once polymerisation is completed the polymer is pumped from the reactor to the thinning vessel. The solvents required to thin the polymer are used to wash down the reactor and also pumped to the thinning vessel, so there is no waste in the reactor. The polymer is pumped through a filter into 200 L drums. The thinning vessel is pressurised to push the final polymer out. The thinning vessel is cleaned with solvent. This solvent and the polymer residues are collected and sent to the solvent recovery plant on site. The sludge from this plant is collected by a licensed contractor and further processed to remove solvent. This sludge will be used to power cement kilns. The second waste source comes from changing the filters. Typically one filter is used per batch, however it could be up to eight filters. The used filters containing residues of notified polymer are put in a prescribed waste bin and removed from site by a licensed contractor to be dumped in landfill. If this polymer is manufactured at Clayton, a maximum of 2% of polymer would go to waste from the polymer manufacturing process.

During paint manufacture and packaging

Spills are expected to be minimal. When spills occur, they will be contained by bunding, collected with absorbent material and sent to a licensed off site waste disposal centre. Empty drums, whether from imported polymer or locally manufactured polymer, will be sent to drum reconditioners where the waste is incinerated. Drum residual waste is expected to be 3% of imported (or manufactured) volume.

Residual waste from the mixing vessel is anticipated to be 0.5% of imported polymer volume. This waste is collected when the mixing vessel is cleaned, and is sent to the onsite solvent recovery system. Solid residues from this system will be used to power cement kilns.

RELEASE OF CHEMICAL FROM USE

Under normal use procedures, losses of the notified polymer through overspray, mixing of chemicals and cleaning of plant equipment as well as losses from residues in containers have been estimated to be a maximum of 40%, which equates to a maximum of 12 tonnes per annum. Wastes from application will be hardened and disposed of to landfill.

Empty drums that contained the paint will be sent to drum reconditioners where the waste is incinerated. Residual waste of the notified polymer in paint drums is expected to be 2% of imported volume.

The remainder of the notified polymer undergoes a chemical reaction with other polymer components in the paint during the paint baking process, to form the final paint film. It is not available for direct release to the environment. Disposal of the automobile may be through landfill or recycling, and the fate of the paint will be related to that of the automobile.

5.5. Disposal

Drums that contained the notified polymer, or paint containing the notified polymer are sent to a Drum Recycler where the waste residues are consumed in a high temperature incinerator. It is anticipated that up to 1.5 tonnes of polymer will be disposed of in this manner.

If PPG manufactures the polymer at the Clayton facility, residues from cleaning the manufacturing and filling equipment will be collected and processed to remove the solvent and solidify the polymer which will be disposed of through a licensed waste contractor. This sludge will be used to power cement kilns. If manufacture occurs at Clayton it is anticipated that up to 600 kg of polymer will be disposed of in this manner.

Residues of notified polymer generated from cleaning of the mixer and filling equipment used in the manufacture of the paint are collected and processed to solidify the polymer residues and either be used to power cement kilns or disposed of in landfill. It is anticipated that up to 150 kg of notified polymer will be disposed of in this way.

Residues from overspray generated in the painting operation are collected, treated and solidified. These solid residues are disposed of in landfill. It is anticipated that up to 12 tonnes of notified polymer will be disposed of in this manner.

5.6. Public exposure

The notified polymer will not be directly available to the public. The notified polymer is used in an automotive paint that is cured prior to reaching the public. Therefore, although the public will come into contact with the exterior of car bodies, the notified polymer will not be available for exposure.

6. PHYSICAL AND CHEMICAL PROPERTIES

The polymer is not isolated from solution and therefore it is not possible to determine physicochemical properties for the notified polymer itself. Limited physicochemical data has been provided for KZ-540 which contains approximately 70% notified polymer in various solvents.

Appearance at 20ºC and 101.3 kPa	A clear viscous slightly yellow liquid (KZ-540)
Boiling Point	Not determined
Remarks	By analogy with other polymers this polymer is not volatile under the normal conditions of use. The polymer solution KZ-540 is expected to boil initially at the boiling point of n-butanol. 118ºC.
Density	1237 kg/m^3 at 20ºC (notified polymer, estimated)
Remarks	This figure has been calculated from the density of the polymer solution (1040 kg/m^3) and the density of the solvents in that solution.
Vapour Pressure	2.6Pa (KZ-540, temperature not specified)
Remarks	This vapour pressure is considered to be due to the solvent content of the polymer solution. The notified polymer is not expected to be volatile. Data taken from MSDS. Study report not provided.
Water Solubility	~0.4% of the polymer is water soluble
METHOD	50 grams of water were added to 10 grams of polymer solution containing 70% notified polymer. The mixture was shaken vigorously, and the “globules” of resin allowed to settle. The aqueous layer was slightly “cloudy” after the polymer globules had settled, suggesting “micro particles” of polymer may be suspended in the water following their generation by the vigorous shaking. The solid content of this “cloudy” aqueous layer was measured via a gravimetric method in which an aliquot of the aqueous layer was evaporated to dryness and the residual solid weighed. The result was 0.424 g per litre. The remaining mixture comprising 20 g

of water and 10 g of polymer solution was left to sit in the laboratory at room temperature for 3 weeks. After this time the aqueous layer was clear. The solids content of this aqueous layer was measured and converted to grams per litre. The result was 1.4 g per litre.

Remarks: Polymers consist of a range of different species having different molecular weights and hence different water solubilities. Using the above results, it is calculated that the percentage of water soluble polymer species in the notified polymer is 0.4%.

TEST FACILITY: PPG (2004)

Hydrolysis as a Function of pH Not Determined

Remarks: Based on the structure, although there are some groups susceptible to hydrolysis, this is not likely to occur at normal environmental pH range (4-9).

Partition Coefficient (n-octanol/water) Not Determined

Remarks: Given the nature of the polymer it is likely to have a high partition coefficient, as it is hydrophobic.

Adsorption/Desorption Not Determined

Remarks: The notified polymer is expected to have an affinity to lipids and is therefore expected to adsorb onto organic matter and be immobile in soils.

Dissociation Constant Not determined

Remarks: The notified polymer does not contain any functional groups which would undergo dissociation.

Particle Size Not determined

Remarks: Notified polymer is not isolated from solution

Flash Point 40ºC (KZ-540, pressure not specified)

Remarks: This flash point is considered to be due to the solvent content of the polymer solution. Data taken from MSDS. Study report not provided.

Flammability Limits Upper: 11.2% (KZ-540)
Lower: 0.5% (KZ-540)

Remarks: These flammability limits are based on the solvent content of the polymer solution. The notified polymer is not expected to be flammable. Data taken from MSDS. Study report not provided.

Autoignition Temperature 367ºC (KZ-540)

Remarks: This autoignition temperature is considered to be due to the solvent content of the polymer solution. The notified polymer is not expected to autoignite. Data taken from MSDS. Study report not provided.

Explosive Properties Not predicted to be explosive

Remarks: From examination of the structure, there are no chemical groups that would infer explosive properties, therefore the result has been predicted negative.

Reactivity

Remarks: The notified polymer will thermally degrade at temperatures above 200ºC although the specific temperature is unknown. KZ-540 is incompatible with

strong mineral acids, strong alkalis and strong oxidising agents.

7. TOXICOLOGICAL INVESTIGATIONS

No toxicity data were submitted.

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

No environmental exposure of the notified polymer is expected when the polymer is incorporated into the paint product and used to coat motor vehicles because the polymer will be cured to form a hard surface coating, which will be inert. As the coating physically degrades over time, any fragments, chips and flakes of the coating will be of little concern as they are expected to be chemically inert. At the end of their useful life, the metal panels coated with the paint are likely to be either recycled for steel reclamation or placed into landfill.

Less than 14 tonnes of the notified polymer is expected to be generated as waste each year during formulation or application of the end use coating product. The majority of this will result from overspray (up to 12 tonnes) and be disposed of to landfill. The notified polymer will be immobile due to its low water solubility and high molecular weight. While the notified polymer is not expected to be readily degradable, it will undergo slow degradation through both biotic and abiotic processes.

Residues from the cleaning of paint mixing and filling equipment (up to 150 kg) will either be incinerated if used to power cement kilns or disposed of in landfill. Drum residues (up to 1.5 tonnes) will be incinerated during the drum reconditioning. If polymer manufacture occurs at the PPG Clayton facility wastes (up to 600 kg) will be collected by a licensed waste disposal contractor, and will be incinerated. Recycled car panels containing the notified polymer are likely to be destroyed in blast furnaces thereby incinerating the polymer in the paint. Incineration of the notified polymer is expected to destroy the polymer, producing water vapour and oxides of carbon.

Given its very high molecular weight, the polymer is not expected to cross biological membranes and bioaccumulate.

9.1.2. Environment – effects assessment

No ecotoxicological data were provided in the notification dossier. However, under normal usage, the notified polymer is not expected to enter the aquatic compartment and pose a threat to aquatic organisms. Nonionic polymers which have molecular weights greater than 1000 are of low concern (Boethling and Nabholz 1997).

9.1.3. Environment – risk characterisation

The notified polymer is unlikely to present a risk to the environment when it is incorporated into paint and applied to motor vehicles. The automobiles will be recycled or consigned to landfill at the end of their useful life and the paint containing the notified substance will share the fate of the motor vehicle.

The main environmental exposure arises from landfill disposal of recovered waste paint containing the polymer (up to 14 tonnes of that imported). Such material will be cross-linked into an inert matrix and bound to soil and remain immobile in the environment. Under normal usage there will be no release into the aquatic environment.

9.2. Human health

9.2.1. Occupational health and safety – exposure assessment

Although initially the notified polymer will only be imported into Australia, there is the potential for manufacture to occur in the future. As such exposure during both polymer manufacture and paint formulation has been considered below.

Polymer manufacture

Laboratory scale

Although exposure to the notified polymer at a concentration of 70% could occur during sampling and analysis, exposure is expected to be low due to the relatively small amounts involved, the low frequency of exposure and the use of PPE.

Production Scale
The majority of the polymer manufacture process including filling is automated and hence exposure is expected to be negligible. Exposure to the notified polymer could occur from skin contact during sampling and changing of filters. This, however, is expected to be low due to the low frequency of exposure and the use of PPE.

Paint Formulation
Laboratory Scale
Dermal and possibly ocular exposure to the notified polymer at a concentration of 70% (pre-manufacture) and 20-30% (post-manufacture) could occur. However, exposure is expected to be low due to the relatively small amounts involved and the use of PPE. Exposure by inhalation during spray application is not expected as the paint is only sprayed in a properly designed spraybooth. Once the paint surface has dried, the notified polymer is bound within an inert matrix and as such exposure is expected to be negligible.

Production Scale
There is potential for dermal exposure to the notified polymer at a concentration of 70% and 20-30% during transfer and filling and cleaning operations respectively. Exposure will be limited by the use of PPE.

QC Testing
There is potential for dermal exposure to the notified polymer at a concentration of 20-30% during sampling and testing of the notified polymer. However, exposure is expected to be low due to the relatively small amounts involved and the use of PPE. Certain quality control tests involve spraying but inhalation exposure is expected to be negligible as the paint is only sprayed in a properly designed spraybooth. Once the paint surface has dried, the notified polymer is bound within an inert matrix and as such exposure is expected to be negligible.

Paint Application
Dermal exposure to the notified polymer at a concentration of 20-30% could occur from contact with paint residues during transfer and cleaning operations. However, exposure is expected to be low due to the use of PPE. The majority of the spray application is automatic (by robots) and hence exposure to the notified polymer is not expected. Although there is potential for inhalation exposure where manual spray coating occurs, this is considered to be negligible due to the use of engineering controls (ventilated (downdraft) spray area) and respiratory PPE (vapour masks).

9.2.2. Public health – exposure assessment

Public exposure to the notified polymer is expected to be negligible as the notified polymer will not be directly available to the public and although the public will come into contact with the exterior of car bodies painted with notified polymer, the notified polymer will be bound within an inert matrix and hence unavailable for exposure.

9.2.3. Human health – effects assessment

No toxicological data have been provided for the notified polymer and therefore the substance cannot be classified in accordance with the NOHSC Approved Criteria for Classifying Hazardous Substances (NOHSC, 2004).

The notified polymer contains one type of high concern reactive functional group. The health concern for this type of functionality are cancer and reproductive effects. However, health concerns are restricted to species with molecular weights <500 if exposure is limited to the dermal route (US EPA). The notified polymer is of a high molecular weight (>1000 daltons), and contains only a small percentage of low molecular weight species (<500). Therefore, the notified polymer is expected to have a low order of toxicity if exposure is limited to the dermal route.

9.2.4. Occupational health and safety – risk characterisation

The major route of exposure to workers involved in polymer and paint formulation and paint application is expected to be dermal. Dermal exposure may occur during transfer of the notified polymer and formulated paint product, collection of quality control samples, quality control testing, cleaning of the tanks and general maintenance. Dermal exposure is limited by the use of PPE. In addition, the notified polymer is expected to have a low order of toxicity if exposure is limited to the dermal route. Therefore, the risk to workers is expected to be low.

Significant inhalation exposure to the notified polymer during spray application of the paint is not expected due to the use of engineering controls (spraybooth/ventilated (downdraft) spray area) and in the case of spray application at the Toyota plant respiratory PPE (vapour masks). As such the risk to workers involved in spray application is expected to be low.

9.2.5. Public health – risk characterisation

Public exposure to the notified polymer is expected to be negligible and therefore the risk to public health is also expected to be negligible.

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

10.1. Hazard classification

No toxicological data have been provided for the notified polymer and therefore the substance cannot be classified in accordance with the NOHSC Approved Criteria for Classifying Hazardous Substances. (NOHSC, 2004).

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 for KZ-540 provided by the notifier was in accordance with the NOHSC *National Code of Practice for the Preparation of Material Safety Data Sheets* (NOHSC 1994a). 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 KZ-540 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 engineering controls to minimise occupational exposure to the notified polymer in formulated paint products:
  - Spray application should be conducted in a down draft spray booth.

- Employers should implement the following safe work practices to minimise occupational exposure during handling of the notified polymer as introduced and in formulated paint products:
  - Avoid skin and eye contact
  - Use of spray paints containing the notified polymer should be accordance with the NOHSC National Guidance Material for Spray Painting (NOHSC, 1999)

- Employers should ensure that the following personal protective equipment is used by workers to minimise occupational exposure to the notified polymer as introduced and in formulated paint products:
  - Impermeable gloves;
  - Overalls;
  - Chemical goggles/face shields for industrial spray painters;
  - Vapour respirators if required.

  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 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.

Disposal

- The waste notified chemical should be disposed of to landfill or incinerated.

Emergency procedures

- Spills/release of the notified chemical should be soaked up with inert absorbent material and disposed of in accordance with State regulations. Do not allow spills to enter drains.

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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