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NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME

FULL PUBLIC REPORT

Polymer in UHS PLUS

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Director
Chemicals Notification and Assessment

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FULL PUBLIC REPORT

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1. APPLICANT

Rohm and Haas Australia Pty Limited of 969 Burke Road Camberwell, Victoria, 3124 has submitted a notification statement in support of their application for an assessment certificate for the synthetic polymer of low concern Polymer in UHS PLUS.

2. IDENTITY OF POLYMER

Chemical name: Exempt

CAS number: Exempt

Other names: AK-6272 NCS

Trade names: Polymer in UHS PLUS

Molecular formula: Exempt

Structural formula: Exempt

Reactive functional groups:
The notified polymer does not contain any reactive functional groups of moderate or high concern.

Molecular weight (MW):

Number-average MW	Weight-average MW	% MW < 1000	% MW < 500	Method
> 1000	> 1000	< 25 %	< 10 %	GPC

Structural identification method
Infrared (IR) spectrometric data were submitted for the identification of the notified substance.

3. POLYMER COMPOSITION AND PURITY

Polymer constituents
Residual monomer/reactants are present at a total concentration of less than 0.15 %. No impurities are present at above the concentration cut-off for the notified polymer to be classified as a hazardous substance.

Purity (%): > 99 %

Hazardous impurities (other than residual monomers and reactants): None stated.

Non-hazardous impurities at 1% by weight or more: None stated.

Additives/adjuvants: None stated.

4. PLC JUSTIFICATION

The notified polymer meets the PLC criteria.

5. PHYSICAL AND CHEMICAL PROPERTIES

Property	Result	Comments
Appearance	milky white emulsion with ammonia odour	
Melting point	not provided	at temperatures > 177 °C, thermal decomposition may yield monomers.
Density	1000 to 1200 kg/m^3	
Water solubility	<1.0 mg/L at 25 °C	see below
Particle size	not provided	imported as a component of an aqueous emulsion, hence not applicable.
Explosive properties	not explosive	
Stability/reactivity	expected to be stable under normal environmental conditions	at temperatures > 177 °C, thermal decomposition to monomers will begin
Dissociation Constant	not provided	

5.1. Comments on Physico-Chemical Properties

The polymer was never isolated as a defined entity and the data provided was from the MSDS for the < 50 % polymer emulsion in water (known as UHS PLUS). By analogy with similar polymers, the polymer is not expected to be volatile under the conditions of use. The polymer solution is also expected to boil at the temperature of water, while the vapour pressure of the polymer is also expected to be that of water.

The water solubility was not determined, but the notifier states that the polymer is expected to be of low solubility (< 1 mg/L) by comparison with similar polymers and since it is of high molecular weight and contains a high level of aliphatic and hydrophobic groups. It is, however, dispersible in water.

The polymer contains ester linkages that could be expected to undergo hydrolysis under extreme pH conditions. However, due to the low water solubility, this is unlikely in the environmental pH range of between 4 and 9.

The determination of partition coefficient and adsorption/desorption was not undertaken as the notified polymer is expected to be insoluble in water and will largely partition into *n*-octanol rather than water. Due to its low water solubility, the polymer is expected to become associated with the organic component of soils and sediments.

6. USE, VOLUME AND FORMULATION

Use:
The notified polymer in UHS PLUS will be used as a binding agent of floor polishes for commercial and industrial applications. No manufacture of the notified polymer will occur in Australia. The notified polymer will be imported as a component in UHS PLUS, which in turn will be used in the formulation of floor polishes at up to three customer sites.

Manufacture/Import volume:
The polymer emulsion, UHS PLUS, will be imported in 200 L open head steel drums and transported by road to the customer warehouse. The estimated imported volume of the notified polymer will be less than 50 tonnes per annum during the first five years of importation.

Formulation details:
The notified polymer is present in the imported product, UHS PLUS, at < 50 % by weight in water. This will be reformulated at several sites to produce floor polishes, containing < 25 % notified polymer. The final polish products will be packed into 4 and 20 L plastic containers for distribution to wholesalers for sale to cleaners of industrial and commercial premises.

7. OCCUPATIONAL EXPOSURE

Exposure route	Exposure details	Controls indicated by notifier
Formulation		
Laboratory technicians (5 workers, 8 h/day, 2 days/year)		
dermal < 50 % emulsion	polymer emulsion expected to be handled in small quantities under laboratory conditions	exposure controls not indicated
Mixing plant operators (10 workers, 8 h/day, 200 days/year)		
dermal < 50 % emulsion	polymer emulsion is dispensed into stainless steel 1,000 L mixing vessels by placing a spear into the drum and pumping the contents out; exposure to drips and spills may occur while placing or removing drum spears and during packaging; greatest potential for exposure during weighing and mixing	entire process is fully automated, under local exhaust ventilation and general ventilation neoprene gloves, protective eyewear, safety boots and long sleeved overalls will be worn
End use		
Floor polishing (500 workers, 1 h/day, 10 days/year)		
dermal < 25 % in floor polish	floor polishers are expected to handle the floor polish in accordance with the safety directions provided on the labels	Material Safety Data Sheet (MSDS) indicates coveralls, rubber gloves and boots; protective eyewear should be used during pouring
Transport and storage		
Handling drums (10 workers, 2-3 h/day, 2 days/year)		
none < 50 % emulsion	handling sealed drums; no exposure expected except in case of accident	none

8. PUBLIC EXPOSURE

The notified polymer is not available for sale to the general public and will be used as an ingredient in commercial and industrial floor polish products. The potential for public exposure to the notified polymer during transport and use or from disposal is assessed as negligible. Although dermal contact with floor polish containing the notified polymer is possible, it likely to be infrequent and exposure to the notified polymer after polish has dried will be negligible because the notified polymer is unlikely to be bioavailable.

9. ENVIRONMENTAL EXPOSURE

9.1. Release

There is potential for release during the polish reformulation, application and stripping.

The reformulation process will take place at the 2 sites in Victoria and any spills that occur will be contained by the plant bunding. The spilt material will be soaked up using absorbent material which will be disposed of to landfill. The notifier estimates that up to 0.5 % of the import volume of the polymer may be lost due to spills and leaks.

Some residue will also remain in the 'empty' import drums after use. It is estimated that < 0.5 % of the import volume of the notified polymer will remain as residue in the containers to be disposed to landfill with the drums.

Equipment washings should cause no environmental release as the company claims that most washings are re-used in the next batch of polish. Any off-site disposal will be by licensed waste contractors.

The floor polish containing the notified polymer will be applied by high speed buffing by professional cleaners to industrial and commercial premises. The notifier estimates that *ca.* 98% will adhere to the floor with the remaining 2 % residual being disposed of down the drain to the sewers.

The polish will dry and remain on the floors, being gradually worn down by use. Finally it will be removed from the floors by the professional cleaners using a stripping process that will result in *ca.* 95 % of the polish being disposed down the drain to the sewers in the dirty wash water.

The notifier also estimates that 2 % of the floor polish would remain as residue in the plastic containers after 'emptying'. This will be disposed to landfill along with the containers.

9.2. Fate

The waste generated in the reformulation process (0.5 % of the import volume), remaining in the 'empty' import drums (0.5 % of the import volume) and plastic polish containers (2 % of the import volume) will be disposed of to landfill or incinerated. The total quantity disposed of in this way will be less than 1.5 tonnes per annum. Leaching of the polymer from landfill from these sites is unlikely, given the low solubility of the substance.

The waste from the polish application and removal processes will total approximately 97 % of the import volume of the notified polymer (< 49 tonnes per annum). All of this waste polymer will be tipped down the drain with the wash water and end up in the sewers. Due to its structural properties, most of the polymer is likely to absorb to the sludge and be removed in the treatment plant and farm.

9.3. Biodegradation

A biodegradation test using a modified Zahn-Wellens test (OECD TG 302B) (Inveresk Research International, 1993) was carried out on an analogous polymer and resulted in 36 % elimination after 28 days, *i.e.* the substance is inherently biodegradable. A control solution of sodium benzoate showed 81 % elimination after 28 days. The polymer is not expected to cross biological membranes, due to the low solubility and high molecular weight, and not bioaccumulate (Connell, 1990).

10. EVALUATION OF HEALTH EFFECTS DATA

No toxicological data were submitted for the notified polymer, however some summary data on acute toxicity studies have been submitted for two analogous polymers, referred to in the Full Public Report as "Polymer in Emulsion 1" and "Polymer in Emulsion 2". The analogues are considered to be sufficiently similar to the notified polymer that the data will give an adequate indication of the toxicity of the notified polymer.

The summaries indicate that the test substances were emulsions and were used as provided. No indication of the ingredients of the emulsions apart from the analogue polymers was provided by the notifier.

10.1 Acute Toxicity

Summary of the acute toxicity of analogue data of Polymers in Emulsions 1 and 2

Test	*Species*	*Outcome*	*Reference*
acute oral toxicity (Polymers in Emulsions 1 and 2)	rat	LD_{50} > 5000 mg/kg	Rohm & Haas, 1986
acute dermal toxicity (Polymers in Emulsions 1 and 2)	rabbit	LD_{50} > 5000 mg/kg	Rohm & Haas, 1986
skin irritation (Polymers in Emulsions 1 and 2)	rabbit	non-irritating	Rohm & Haas, 1986
eye irritation Polymer in Emulsion 1 Polymer in Emulsion 2	rabbit	 non-irritating slight irritant	Rohm & Haas, 1986

10.1.1(a) Oral Toxicity, Polymer in Emulsion 1 (Rohm & Haas, 1986)

Species/strain: rat/Charles River Kingston CD

Number/sex of animals: 10/male

Observation period:	14 days
Method of administration:	gavage; dose 5000 mg/kg
Test method:	in-house method; protocol supplied
Mortality:	no deaths occurred during the study
Clinical observations:	1/10 showed signs of diarrhea; no other signs of toxicity were reported.
Morphological findings:	no macroscopic abnormalities were observed
LD_{50}:	> 5000 mg/kg
Result:	the test substance was of very low acute oral toxicity in rats.

10.1.1(b) Oral Toxicity, Polymer in Emulsion 2 (Rohm & Haas, 1986)

Species/strain:	rat/Charles River Kingston CD
Number/sex of animals:	10/male
Observation period:	14 days
Method of administration:	gavage; dose 5000 mg/kg
Test method:	in-house method; protocol supplied
Mortality:	no deaths occurred during the study
Clinical observations:	1/10 showed brown strained urogenital area; no other signs of diarrhea; no other signs of toxicity were reported
Morphological findings:	no macroscopic abnormalities were observed
Comment:	the summary indicated that the initial mean weight was 176 g and the final mean weight was 30 g; this is considered likely to be a typographical error
LD_{50}:	> 5000 mg/kg
Result:	the test substance was of very low acute oral toxicity in rats

10.1.2(a) Acute Dermal Toxicity, Polymer in Emulsion 1 (Rohm & Haas, 1986)

Species/strain:	rabbit/New Zealand white
Number/sex of animals:	6/male
Observation period:	14 days
Method of administration:	single 24 hr occlusive application; dose 5000 mg/kg
Test method:	in-house method; protocol supplied
Mortality:	no deaths occurred during the study
Clinical observations:	no clinical signs of toxicity were observed
Morphological findings:	no macroscopic abnormalities were observed
Comment:	very slight to moderate erythema and slight to moderate oedema were observed on day 1; severe erythema was observed on days 3-6; very slight erythema persisted until the end of the study (day 14) while oedema was no longer evident by day 7
LD_{50}:	> 5000 mg/kg.
Result:	the test substance was of low dermal toxicity in rats

10.1.2(b) Acute Dermal Toxicity, Polymer in Emulsion 2 (Rohm & Haas, 1986)

Species/strain:	rabbit/New Zealand white
Number/sex of animals:	6/male
Observation period:	14 days
Method of administration:	single 24 hr occlusive application; dose 5000 mg/kg
Test method:	in-house method; protocol supplied
Mortality:	no deaths occurred during the study
Clinical observations:	no clinical signs of toxicity were observed
Morphological findings:	no macroscopic abnormalities were observed
Comment:	none to moderate erythema and no oedema to severe oedema was observed on day 1; oedema disappeared by day

	2 and erythema disappeared by day 6; dessication was observed on day 4 and disappeared by day 12
LD_{50}:	> 5000 mg/kg.
Result:	the test substance was of low dermal toxicity in rats

10.1.4(a) Skin Irritation, Polymer in Emulsion 1 (Rohm & Haas, 1986)

Species/strain:	rabbit/New Zealand white
Number/sex of animals:	6/male
Observation period:	7 days
Method of administration:	0.5 mL test substance applied to clipped skin under occlusive conditions for 4 hr
Test method:	in-house method; protocol supplied
Comment:	all Draize scores were zero
Result:	the test substance was non-irritating to the skin of rabbits.

10.1.4(b) Skin Irritation, Polymer in Emulsion 2 (Rohm & Haas, 1986)

Species/strain:	rabbit/New Zealand white
Number/sex of animals:	6/male
Observation period:	7 days
Method of administration:	0.5 mL test substance applied to clipped skin under occlusive conditions for 4 hr
Test method:	in-house method; protocol supplied
Comment:	all Draize scores were zero
Result:	the test substance was non-irritating to the skin of rabbits.

10.1.5(a) Eye Irritation, Polymer in Emulsion 1 (Rohm & Haas, 1986)

Species/strain:	rabbit/New Zealand white
Number/sex of animals:	9/male

Observation period:	7 days
Method of administration:	single application of 0.1 mL test substance to corneal surface; the eyes of three animals were irrigated after 20-30 seconds
Test method:	in-house method; protocol supplied
Comment:	all Draize scores were zero for unirrigated and irrigated eyes
Result:	the test substance was non-irritating to the eyes of rabbits

10.1.5(b) Eye Irritation, Polymer in Emulsion 2 (Rohm & Haas, 1986)

Species/strain:	rabbit/New Zealand white
Number/sex of animals:	9/male
Observation period:	7 days
Method of administration:	single application of 0.1 mL test substance to corneal surface; the eyes of three animals were irrigated after 20-30 seconds
Test method:	in-house method; protocol supplied
Comment:	all Draize scores were zero; on fluoroscein staining several "linear striations" appeared in the cornea and a 2-3 mm area of the cornea stained green; the test chemical also adhered to the eyelids unspecified conjunctival effects were observed at 24 hr, but were reversible by 72 hr all Draize scores were zero for irrigated eyes
Result:	the test chemical was slightly irritating to the eyes of rabbits.

10.2 Overall Assessment of Toxicological Data

The analogue polymer emulsions were of very low acute oral toxicity and low dermal toxicity. They were not skin irritants and ocular irritant effects for Emulsion 2 were slight and were found to clear after two days. Emulsion 1 was found to be non-irritating to eyes.

Based on the analogue data, the notified polymer is not classified as a hazardous substance in

accordance with the NOHSC *Approved Criteria for Classifying Hazardous Substances* (NOHSC, 1999). It contains low levels of residual monomers and hazardous impurities.

The notified polymer as manufactured contains a number of additives and adjuvants. It is not classified as a hazardous substance according to NOHSC *Approved Criteria for Classifying Hazardous Substances* (NOHSC, 1999) as none of the ingredients are present at above the cutoffs for classification of the notified polymer as hazardous. The polymer dispersion contains aqueous ammonia, for which there is an exposure standard of 25 ppm TWA, 35 ppm STEL (NOHSC, 1995).

10. EVALUATION OF ENVIRONMENTAL EFFECTS DATA

While not required by the Act for polymers with NAMW > 1000, the notifier has supplied ecotoxicity studies summarised in the following table. The tests were performed on an analogous substance, Polymer in Emulsion 2, in compliance with OECD/EEC Test Methods and according to OECD Principles of Good Laboratory Practices.

Ecotoxicity Test Results

Test	Species	Results (ppm)	References
Acute Toxicity (Static Test) (OECD TG 203)	Rainbow trout *Oncorhynchus mykiss*	96 h EC_{50} = >100 96 h NOEC = 100	Inveresk Research International, 1994a
Acute Toxicity - Immobilisation (Static Test) (OECD TG 202)	Water Flea (*Daphnia magna*)	48 h EC_{50} = >100 48 h NOEC = 100	Inveresk Research International, 1994b
Growth Inhibition Growth (μ) & Biomass (b) (Static Test) (OECD TG 201)	Green Algae (*Selenastrum capricornutum*)	72 h $E\mu C_{50}$ = >100 72 h EbC_{50} = >100 72 h NOEC = 100	Inveresk Research International, 1994c
Respiration Inhibition (OECD TG 209)	Activated Sludge - Aerobic Waste Water Bacteria	3 h EC_{50} > 100	Inveresk Research International, 1994d

Fish

A limit test was carried out over 96 h under static conditions. Five test tanks with the analogue polymer emulsion present at a concentration of 100 ppm and one control tank at 0 ppm were set up. Ten fish were added to each tank and observed at 1 h, 3 h, 6 h, 24 h then daily until 96 h. No abnormalities or deaths were observed in any of the test tanks but one death was recorded in the control tank at the 96 h observation. All test solutions were opaque throughout the test period. Water quality parameters (pH, temperature, conductivity and

dissolved oxygen) were measured and remained within protocol specification throughout the test.

Aquatic Invertebrates

A limit test was carried out over 48 h under static conditions. Twenty test tanks with the analogue polymer present at a concentration of 100 ppm and four control tanks at 0 ppm were set up. Five daphnia were added to each tank and observed at 24 and 48 h. One daphnia was observed as being immobile in the test tanks (this is within the acceptance of 10 % immobilisation allowable in the controls). No immobilities were observed in any of the control tanks. All test solutions were opaque throughout the test period. Water quality parameters (pH, temperature, conductivity and dissolved oxygen) were measured and remained within protocol specification throughout the test.

Algae

A limit test was carried out over 72 h. Ten test flasks with the analogue polymer emulsion present at a concentration of 100 ppm and six control flasks at 0 ppm were set up. Each flask was inoculated with 0.08 x 10^5 cells/mL of the algae. There was no significant difference between the growth rate in the control flasks and that in the test flasks over the tests. All test solutions were opaque throughout the test period. Water quality parameters (pH, temperature, conductivity and dissolved oxygen) were measured. The pH of all flasks increased by more than one unit over test period, associated with algal growth. The temperature ranged from 20-22^{o}C throughout the test.

After 72 hours exposure of the analogue polymer emulsion to green algae *Selenastrum capricornutum* the EμC$_{50}$ was determined to be greater than 100 mg/L and the E$_b$C$_{50}$ was determined to be >100 mg/L.

Microorganisms

The effect of the analogue polymer emulsion on the respiration of activated sewage sludge microorganisms was studied. A 3 hour EC$_{50}$ of greater than 100 mg/L was determined. The notified test substance did not inhibit respiration of the activated sludge in the tested range of concentrations (5, 25, 50, 75 and 100 ppm).

Conclusion

The ecotoxicity data for the analogue polymer suggests that it is not toxic to fish, aquatic invertebrates, algae and microorganisms up to the limits of its water solubility.

12. ENVIRONMENTAL RISK ASSSESSMENT

The environmental hazard presented by the importation and use of the polymer is expected to be low.

The products containing the notified substance could be used throughout Australia or only in the Melbourne metropolitan area. The major environmental exposure to the substance will come from discharge of domestic wash waters to waste water treatment systems.

The notifier provides a Predicted Environmental Concentration (PEC) calculation for Australia-wide distribution, use and disposal of the polish containing the notified polymer which gives a figure of 0.028 ppm. A worst case scenario for the use pattern for this polymer would be that it was all used and released into a metropolitan sewerage system and ending up ultimately at a single treatment plant. If it is presumed that 80 % of the polymer is removed in the treatment plant, then less than 10 tonnes/annum may reach the aquatic environment. The following table contains the PECs for 80% removal and no removal of the polymer at a typical metropolitan treatment plant and the Werribee Treatment Plant:

Total discharge of polymer to the sewer < 50 tonnes/annum

	No Removal	80 % Removal
In typical STP (250 ML/day)	< 1000 ppb	< 200 ppb
In receiving water (1:10 dilution)	< 100 ppb	< 20 ppb
In Werribee plant (500 ML/day)	< 500 ppb	< 100 ppb
In receiving water (1:10 dilution)	< 50 ppb	< 10 ppb

PEC calculations (resulting in a worst case scenario prediction of 100 ppb) show that exposure levels to fish and other aquatic organisms are unlikely to cause any significant effects as ecotoxicity tests on a similar analogous polymer indicate that it should be non-toxic to aquatic species up to the limits of its water solubility. Adsorption to sludge, soil and sediment as well as swift dilution in receiving waters should reduce environmental concentrations to negligible levels. The polymer is not expected to persist in the aquatic environment, being removed through a combination of sorption to particulates and eventual chemical degradation.

Polymer is spilt on land, either during usage or transport, is expected to immobilise in the soil layer. Contaminated soil can then be collected and disposed to landfill. Polymer disposed to landfill from spills, the reformulation process or drum residues, will similarly remain bound in the soil and sediments.

Given the above, environmental exposure and the overall environmental hazard is expected to be low.

13. HEALTH AND SAFETY RISK ASSESSMENT

13.1. Hazard assessment

Summaries of toxicity data on two close analogues of the notified polymer were provided by the notifier. The analogue polymer emulsions were of very low acute oral toxicity and low dermal toxicity. They were not skin irritants and either non-irritating or slightly irritating to eyes. Based on the limited data, the notified polymer cannot be fully classified in accordance with the NOHSC *Approved Criteria for Classifying Hazardous Substances* (NOHSC, 1999). However, the notified polymer is not expected to be hazardous as polymers of high molecular weight and low water solubility do not readily cross biological membranes.

The polymer dispersion UHS PLUS is not a hazardous substance. The Material Safety Data Sheet (MSDS) for the polymer solution UHS PLUS lists a number of potential health effects, namely nausea, headaches and skin, eye and respiratory irritation. These relate mainly to additional components of the emulsion, rather than the notified polymer.

13.2. Occupational health and safety

There is little potential for significant occupational exposure to the notified polymer in the transport and storage of the polymer emulsion or floor polish. There will be exposure during the local production of the floor polish, and in the use and disposal of the floor polish.

During the reformulation processes, the main exposure route for the notified polymer will be dermal. The polymer is not expected to cause systemic toxicity following dermal exposure as the high molecular weight will preclude absorption through the skin. Standard protective measures including local exhaust ventilation, overalls, protective eyewear and impervious gloves used during reformulation should provide sufficient protection against the notified polymer. The MSDS provided by the notifier indicates that neoprene gloves should be used.

Cleaners using the floor polishes may be exposed to the notified polymer by the dermal route. Given the low polymer toxicity, this exposure is not expected to lead to any significant risk to health. The notifier indicated that the polish will be used in accordance with safety directions on the labels. The MSDS indicates coveralls, rubber gloves and boots should be worn; protective eyewear should be used during pouring

Upon application of the polish to the floors, approximately 98 % will adhere, and the notified polymer is unlikely to be released from the dried polish until it is stripped off. The polymer released during the stripping operation is expected to be at low concentration and should not pose a health hazard to the cleaners.

There is a NOHSC exposure standards for ammonia, identified as an ingredient in the product UHS PLUS. The employer is responsible for ensuring that this exposure standard is not exceeded in the workplace.

The notified polymer presents a low hazard to human health, and the control measures indicated by the notifier should ensure sufficient protection against the notified polymer.

13.3. Public health

The notified polymer is not available for sale to the general public and will be used in floor polish products for commercial and industrial applications. Although members of the public may make dermal contact with floor polish containing the notified polymer, the risk to public health from the notified polymer will be negligible because exposure to the notified polymer is likely to be infrequent and the notified polymer is unlikely to be bioavailable.

Based on the use pattern of the notified polymer and its physico-chemical properties, it is considered not to pose a significant hazard to public health.

14. MSDS AND LABEL ASSESSMENT

MSDS

The MSDS for the emulsion containing 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, 1994a). It is published here as part of the assessment report. The accuracy of the information on the MSDS remains the responsibility of the applicant.

Label

The label for the emulsion containing the notified polymer 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.

15. RECOMMENDATIONS

To minimise occupational exposure to Polymer in UHS PLUS, the following precautions should be observed:

- Protective eyewear, chemical resistant industrial clothing and footwear and impermeable gloves should be used during occupational use of the products containing the notified polymer; neoprene gloves should be selected;
- Spillage of the notified chemical should be avoided. Spillages should be cleaned up promptly with absorbents which should then be put into containers for disposal;
- Good personal hygiene should be practised to minimise the potential for ingestion;
- A copy of the MSDS should be easily accessible to employees.

If products containing the notified chemical are hazardous to health in accordance with the NOHSC *Approved Criteria for Classifying Hazardous Substances* (NOHSC, 1999),

workplace practices and control procedures consistent with State and territory hazardous substances regulations must be in operation.

Guidance in selection of protective eyewear may be obtained from Australian Standard (AS) 1336 (Standards Australia, 1994) and Australian/New Zealand Standard (AS/NZS) 1337 (Standards Australia/Standards New Zealand, 1992); for industrial clothing, guidance may be found in AS 3765.2 (Standards Australia, 1990); for impermeable gloves or mittens, in AS 2161.2 (Standards Australia/ Standards New Zealand, 1998); for occupational footwear, in AS/NZS 2210 (Standards Australia/ Standards New Zealand, 1994a).

16. REQUIREMENTS FOR SECONDARY NOTIFICATION

Secondary notification may be required if:

(i) any of the circumstances stipulated under subsection 64(2) of the Act arise. If any importer or manufacturer of (the notified chemical) becomes aware of any of these circumstances, they must notify the Director within 28 days; or

(ii) the notified polymer is introduced in a chemical form that does not meet the PLC criteria.

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