File No SAPLC/102

October 2009

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

FULL PUBLIC REPORT

Polymer in Schooner Gold and Compass

This Self Assessment has been compiled by the applicant and adopted by NICNAS in accordance with the provisions of the *Industrial Chemicals (Notification and Assessment) Act 1989* (Cwlth) (the Act) and Regulations. This legislation is an Act of the Commonwealth of Australia. The National Industrial Chemicals Notification and Assessment Scheme (NICNAS), administered by the Department of Health and Ageing and the Department of Environment, Water, Heritage and the Arts has screened this assessment report. The data supporting this assessment will be subject to audit by NICNAS.

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

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

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Director
NICNAS

FULL PUBLIC REPORT

Polymer in Schooner and Gold Compass

1. APPLICANT AND NOTIFICATION DETAILS

Akzo Nobel Pty Ltd (ABN 59 000 119 424)
115 Hyde Road, Yeronga QLD 4104

NOTIFICATION CATEGORY
Self Assessment: Polymer of Low Concern

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, Polymer Constituents, Residual Monomers, Use Details and Import Volume.

PREVIOUS NOTIFICATION IN AUSTRALIA BY APPLICANT(S)
None

NOTIFICATION IN OTHER COUNTRIES
UK

2. IDENTITY OF CHEMICAL

MARKETING NAME(S)
Polymer in Schooner Gold and Compass

MOLECULAR WEIGHT (MW)
Number Average Molecular Weight (NAMW) >1000 Da

REACTIVE FUNCTIONAL GROUPS
The notified polymer contains only low concern functional groups.

3. PLC CRITERIA JUSTIFICATION

Criterion	*Criterion met*
Molecular Weight Requirements	Yes
Functional Group Equivalent Weight (FGEW) Requirements	Yes
Low Charge Density	Yes
Approved Elements Only	Yes
Stable Under Normal Conditions of Use	Yes
Not Water Absorbing	Yes
Not a Hazard Substance or Dangerous Good	Yes

The notified polymer meets the PLC criteria.

4. PHYSICAL AND CHEMICAL PROPERTIES

Appearance at 20°C and 101.3 kPa	Clear viscous liquid.
Melting Point/Glass Transition Temp	Polymer is not isolated from solution
Density	0.90kg/m^3 at 20°C (on solution)
Water Solubility	Insoluble based on structure.
Reactivity	Stable under normal environmental conditions. While it contains hydrolysable

	functionalities, this should not occur under ambient environmental conditions (pH range 4-9).
Degradation Products	None under normal conditions of use

5. INTRODUCTION AND USE INFORMATION

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

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

USE AND MODE OF INTRODUCTION AND DISPOSAL

Mode of Introduction

The notified polymer will be imported as part of two finished paint formulations in sealed 1L closed cans. It will be imported via the port of Brisbane and stored at the notifier's warehouse on the Gold Coast and distributed to trade centers and customers for use.

Reformulation/manufacture processes

The product will not be re-formulated. The notified polymer will not be manufactured in Australia.

Use

The two alkyd varnishes (which consist of the notified polymer) will be used as an aesthetic coating on the topsides and interiors of pleasure craft. It will be sold only to the professional applicator who will be based at the numerous slipways throughout Australia.

6. HUMAN HEALTH IMPLICATIONS

6.1. Exposure Assessment

OCCUPATIONAL EXPOSURE

Warehouse and transport staff will only handle Compass and Schooner Gold in the original sealed containers, therefore, exposure is not expected to occur.

The paint will only be handled by professional applicators.

Application is normally by spray. The applicator crew normally consists of the sprayer and a "potman." The latter is responsible for ensuring that the spray equipment is fed with a continual supply of mixed paint. The potman therefore mixes the two parts of the products, adds any necessary thinner and supplies this to the spray equipment in the original packaging. The packing is designed so that the curing agent can be added to the base can for mixing. The potman will work at a distance from the sprayer. This will depend of the length of hose and the working environment.

The coating contains solvents and other components which are hazardous. Protective measures used to prevent exposure to the solvents, namely personal protective equipment (PPE) and exhaust ventilation should provide sufficient protection against the notified polymer.

Spray applicators may experience dermal, ocular, and inhalation exposure to the two paints (Schooner Gold containing 35.5% by weight of the notified polymer and Compass containing 56.5% by weight of the notified polymer). Exposure will be reduced because all members of the application team will wear specified PPE: long-sleeved overalls, boots, gloves, goggles or face shield and respirator. Such PPE must conform to AS/NZS1337 for eyewear and AS/NZS1716 for respiratory protective equipment. These measures should be regarded as a minimum.

At the end of the spraying operation the applicator crew will clean out the spray equipment using solvent. This cleaning solvent will be used several times and is often recovered material. The used cleaning solvent may be sent for recovery or incineration. All disposal will be in accordance with locally applicable regulations. The level of exposure to the notified polymer by cleaning workers is

not expected to be significant.

The notified polymer will react as part of the paint curing process. Thus any dry paint will no longer contain any of the notified polymer which will be incorporated into a complex polymer network. Thus once cured there is negligible exposure potential.

PUBLIC EXPOSURE

Schooner Gold and Compass is intended for industrial or professional use only. It will not be sold to the general public. The public may come into contact with surfaces coated with the varnishes containing the notified polymer. However, once dried and cured, the notified polymer will not be bioavailable.

6.2. Toxicological Hazard Characterisation

No toxicological data were submitted. The notified polymer meets the PLC criteria and can therefore be considered to be of low hazard.

6.3. Human Health Risk Assessment

OCCUPATIONAL HEALTH AND SAFETY

The paint will only be handled by professional applicators. It is noted that the coating contains solvents and other components which are hazardous. Although exposure to the notified polymer may occur, the risk to workers is not considered to be unacceptable based on the PPE, engineering control and assumed low hazard of the polymer.

PUBLIC HEALTH

Schooner Gold and Compass is intended for industrial or professional use only. It will not be sold to the general public. The public may come into contact with surfaces coated with the varnishes containing the notified polymer, however, the notified polymer will not be bioavailable. Hence, the risk to public health from the notified polymer is not considered to be unacceptable.

7. ENVIRONMENTAL IMPLICATIONS

7.1. Exposure Assessment

ENVIRONMENTAL RELEASE

Release to the environment during shipping, transport and warehousing will only occur through accidental spills or leaks of the steel packaged containers. When spills occur they will be contained by bunding, collected with absorbent material and sent to a licensed off site waste disposal centre for disposal to landfill.

Residual notified polymer within import and end-use containers is expected to account for <2% of the annual introduction volume. It is expected that this will be ultimately disposed of to landfill or be thermally decomposed should metal cans be recycled, forming simple organic and nitrogenous compounds.

The notified polymer will be applied by spray, and thus up to 30% may be lost as overspray. It is expected that overspray will be contained by physical means (spray curtains) and once cured, will be disposed of to landfill.

At the end of its useful life, the notified polymer is expected to be physically removed from the hull through sanding, and be disposed of to landfill.

ENVIRONMENTAL FATE

The notified polymer is expected to be hydrolytically stable and to not be readily biodegradable. Due to its hydrophobic nature, it is expected that the notified polymer in landfill will associate with sediments and organic phases of soil and sediments, and slowly degrade to simple organic and nitrogenous compounds via biotic and abiotic processes.

7.2. Environmental Hazard Characterisation

No ecotoxicological data were submitted. PLCs without significant ionic functionality are of low concern to the aquatic environment.

7.3. Environmental Risk Assessment

Given the notified polymer's use pattern, aquatic exposure to uncured notified polymer is not expected at any stage of its life in Australia. On curing, the notified polymer is expected to be physically and chemically entrapped with the surface coating matrix, precluding any release to the marine environment. Residual, overspray and cured polymer removed by sanding is expected to be disposed of to landfill. Therefore, the notified polymer is expected to pose minimal risk to the aquatic environment when used in the manner and levels indicated.

8. CONCLUSIONS

8.1. Level of Concern for Occupational Health and Safety

There is Low Concern to occupational health and safety under the conditions of the occupational settings described.

8.2. Level of Concern for Public Health

There is Negligible Concern to public health when used in the proposed manner. The two products are not available to the public for sale.

8.3. Level of Concern for the Environment

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

9. MATERIAL SAFETY DATA SHEET

9.1. Material Safety Data Sheet

The notifier has provided MSDS as part of the notification statement. The accuracy of the information on the MSDS remains the responsibility of the applicant.

10. RECOMMENDATIONS

CONTROL MEASURES

Occupational Health and Safety

- No specific engineering controls, work practices or personal protective equipment are required for the safe use of the notified polymer itself; however, these should be selected on the basis of all ingredients in the formulation.

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

- Spray application should be carried out in accordance with the Safe Work Australia National Guidance Material for Spray Painting *[NOHSC: 1999]*

- 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.

Disposal

- The notified polymer should be disposed of by landfill.

Storage

- The following precautions should be taken by the notifier and the end user regarding storage of the notified polymer:

- Store at ambient temperatures in well-ventilated conditions, away from heat, sparks and flame. It is recommended that forklift trucks and electrical equipment are protected to applicable standards.
- Always keep containers tightly closed when not in use.

Emergency procedures

- Spills/release of the notified polymer should be handled by absorbing with sand and put into suitable container for disposal. Contaminated containers can be re-used after cleaning.

11. REGULATORY OBLIGATIONS

Secondary Notification
This risk assessment is based on the information available at the time of notification. The Director may call for the reassessment of the chemical under secondary notification provisions based on changes in certain circumstances. Under Section 64 of the *Industrial Chemicals (Notification and Assessment) Act (1989)* the notifier, as well as any other importer or manufacturer of the notified chemical, have post-assessment regulatory obligations to notify NICNAS when any of these circumstances change. These obligations apply even when the notified chemical is listed on the Australian Inventory of Chemical Substances (AICS).

Therefore, the Director of NICNAS must be notified in writing within 28 days by the notifier, other importer or manufacturer:

(1) Under Section 64(1) of the Act; if
- the notified polymer is introduced in a chemical form that does not meet the PLC criteria.

or

(2) Under Section 64(2) of the Act; if
- the function or use of the chemical has changed from a component of varnish, or is likely to change significantly;
- the amount of notified polymer being introduced has increased, or is likely to increase, significantly;
- the chemical has begun to be manufactured in Australia;
- additional information has become available to the person as to an adverse effect of the chemical on occupational health and safety, public health, or the environment.

The Director will then decide whether a reassessment (i.e. a secondary notification and assessment) is required.