

File No PLC/949

October 2010

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

FULL PUBLIC REPORT

Polymer in Uralac SN865 S2-75 ND

This Assessment has been compiled 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) is administered by the Department of Health and Ageing, and conducts the risk assessment for public health and occupational health and safety. The assessment of environmental risk is conducted by the Department of Sustainability, Environment, Water, Population and Communities.

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 Level 7, 260 Elizabeth Street, Surry Hills NSW 2010.

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:

Street Address:	Level 7, 260 Elizabeth Street, SURRY HILLS NSW 2010, AUSTRALIA.
Postal Address:	GPO Box 58, SYDNEY NSW 2001, AUSTRALIA.
TEL:	+ 61 2 8577 8800
FAX	+ 61 2 8577 8888.
Website:	www.nicnas.gov.au

**Director
NICNAS**

TABLE OF CONTENTS

FULL PUBLIC REPORT	3
1. APPLICANT AND NOTIFICATION DETAILS	3
2. IDENTITY OF CHEMICAL	3
3. PLC CRITERIA JUSTIFICATION	3
4. PHYSICAL AND CHEMICAL PROPERTIES.....	4
5. INTRODUCTION AND USE INFORMATION.....	4
6. HUMAN HEALTH IMPLICATIONS	4
7. ENVIRONMENTAL IMPLICATIONS	5
8. CONCLUSIONS AND RECOMMENDATIONS	5

FULL PUBLIC REPORT**Polymer in Uralac SN865 S2-75 ND****1. APPLICANT AND NOTIFICATION DETAILS**

APPLICANT(S)

Reschem Technologies Pty Ltd (ABN 90 315 656 219)
6/56 Kalang Road
Elanora Heights NSW 2101

NOTIFICATION CATEGORY

Polymer of Low Concern

EXEMPT INFORMATION (SECTION 75 OF THE ACT)

Data items and details claimed exempt from publication: Chemical Name, CAS Number, Molecular and Structural Formulae, Molecular Weight, Polymer Constituents, Residual Monomers/Impurities and Import Volume.

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

None

2. IDENTITY OF CHEMICAL

MARKETING NAME(S)

Uralac SN865 S2-75 ND (contains 75% notified polymer)

MOLECULAR WEIGHT (MW)

Number Average Molecular Weight (Mn) > 1,000 Da

REACTIVE FUNCTIONAL GROUPS

The notified polymer contains only low concern functional groups.

3. PLC CRITERIA JUSTIFICATION*Criterion*

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

Criterion met

Yes
Yes
Yes
Yes
Yes
Yes
Yes

The notified polymer meets the PLC criteria.

4. PHYSICAL AND CHEMICAL PROPERTIES

Appearance at 20°C and 101.3 kPa	Clear, colourless liquid*
Melting Point/Glass Transition Temp	Imported as a solvent solution.
Density	1100 kg/m ³ at 23°C*
Water Solubility	Not determined. The notified polymer is expected to have low solubility in water based on its predominantly hydrophobic structure and use in solvent based coil coating products.
Dissociation Constant	Not determined. The notified polymer has no readily dissociable functions.
Reactivity	Stable under normal environmental conditions. Hydrolysis of the notified polymer is expected to be slow in the environmental pH range (4 – 9) despite the presence of hydrolysable functional groups in the polymer.
Degradation Products	None under normal conditions of use
*For the product Uralac SN865 S2-75 ND containing 75% notified polymer.	

5. INTRODUCTION AND USE INFORMATION

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>
Tonnes	< 600	< 600	< 600	< 600	< 600

Use

The notified polymer will be used as a component of coatings for metal coils.

The imported product (Uralac SN865 S2-75 ND) containing the notified polymer at a concentration of 75% will be reformulated in a predominantly closed system using local exhaust ventilation. The reformulated surface coating products containing the notified polymer will be applied using closed processes with exhaust ventilation to the exterior of articles via transfer rollers. The surface coatings containing the notified polymer will be cured in an oven after application to the coils.

Mode of Introduction and Disposal

The notified polymer will not be manufactured in Australia, it will be imported in 200 L steel drums and 1000 L IBCs as a 75% solution in naptha.

6. HUMAN HEALTH IMPLICATIONS

Hazard Characterisation

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

Occupational Health and Safety Risk Assessment

Dermal and ocular exposure may potentially occur during transfer of the notified polymer (75% concentration) from the imported containers to a reservoir during the reformulation process (mainly during the connection and disconnection of hoses), and during the cleaning and maintenance of equipment. However, exposure to significant amounts of the notified polymer should be limited by the expected use of personal protective equipment by workers. Further exposure during reformulation and application of coatings is not expected due to the use of enclosed, automated processes and PPE worn by workers.

Workers may come into dermal contact with surface coatings containing the notified polymer however, after curing the notified polymer will be incorporated into the polymer matrix and will not be available for exposure.

Although exposure could occur, the notified polymer is not considered to pose an unacceptable risk to the health of workers due to the control measures and the assumed low hazard of the notified polymer.

Public Health Risk Assessment

The notified polymer is intended only for use in industry and as such public exposure to the notified polymer is not expected. The public may come into dermal contact with surface coatings containing the notified polymer, however, in this state the notified polymer will be bound within the polymer matrix of the coating and will be unavailable for exposure.

7. ENVIRONMENTAL IMPLICATIONS

Hazard Characterisation

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

Environmental Risk Assessment

The coating formulation containing the notified polymer will be applied by transfer rollers to metal sheets which are fed through a coating machine. During application, any residual coating formulation remaining on the application roller will be removed by a scraper and returned into the reservoir via a drip tray for reuse. Excess notified polymer arising from coating applications (including equipment cleaning) and cleaning of import containers (up to 10% and 1% of the total import volume, respectively) will either be recycled or sent to landfill after processing in a solvent recovery plant. Once the applied coating containing the notified polymer is oven dried, it is cured into an inert matrix and the notified polymer will therefore not be bioavailable. The majority of the notified polymer disposed of to landfill is anticipated to be immobile due to its inert state and expected low solubility in water. Although not expected to be readily biodegradable, it is anticipated that in landfill the notified polymer would slowly degrade through biotic and abiotic processes to give water vapour and oxides of carbon. Some articles containing the notified polymer are expected to be recycled and the notified polymer will be destroyed thermally during metals reclamation. The high molecular weight of the notified polymer indicates a low potential for bioaccumulation. Based on its exposure levels and use pattern, the polymer is not expected to pose a risk to the environment.

8. CONCLUSIONS AND RECOMMENDATIONS

Human health risk assessment

Under the conditions of the occupational settings described, the notified polymer is not considered to pose an unacceptable risk to the health of workers.

When used in the proposed manner, the notified polymer is not considered to pose an unacceptable risk to public health.

Environmental risk assessment

Based on the reported use pattern, the notified polymer is not expected to pose a risk to the environment.

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.

- 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 *Approved Criteria for Classifying Hazardous Substances* [NOHSC:1008(2004)],

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 to landfill.

Emergency procedures

- Spills and/or accidental release of the notified polymer should be handled by containment, collection and subsequent safe disposal.

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 polymer 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 polymer, have post-assessment regulatory obligations to notify NICNAS when any of these circumstances change. These obligations apply even when the notified polymer 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 notified polymer has changed from a component of industrial surface coatings, or is likely to change significantly;
 - the amount of notified polymer being introduced has increased, or is likely to increase, significantly;
 - the notified polymer 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.

Material Safety Data Sheet

The MSDS of products containing the notified polymer provided by the notifier were reviewed by NICNAS. The accuracy of the information on the MSDS remains the responsibility of the applicant.