File No PLC/824

April 2009

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

FULL PUBLIC REPORT

Uralac P 541

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 the Environment, Water, Heritage and the Arts.

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:

Street Address:	334 - 336 Illawarra Road MARRICKVILLE NSW 2204, 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

Uralac P 541

1. APPLICANT AND NOTIFICATION DETAILS

APPLICANT(S)
IMCD Australia Limited (ABN 44 000 005 578)
1st Floor, 372 Wellington Road, Mulgrave, VIC 3170

NOTIFICATION CATEGORY
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, and Residual Monomers/Impurities

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 P 541

MOLECULAR WEIGHT (MW)
Number Average Molecular Weight (Mn) > 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:	Colourless to off white granules
Melting Point/Glass Transition Temp	> 56°C
Density	1200 kg/m^3 at 25°C
Water Solubility	Not tested. Expected to be low based on the predominately hydrophobic chemical structure of the polymer.
Dissociation Constant	The notified polymer contains acid groups and may be ionised under normal environmental conditions.
Particle Size	Granule size 2-3 mm as imported
Reactivity	The notified polymer contains functional groups that may be slowly hydrolysed in the environment.
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	200-500	200-500	200-500	200-500	200-500

Use
A resin used in the production of powder coatings for interior and industrial purposes.

Mode of Introduction and Disposal
The notified polymer will be imported as 100% raw material into Australia in 25 kg bags.

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, inhalation and ocular exposure of workers to the notified polymer may potentially occur during certain processes, either to granules or to the small particles of 4-140 micrometres generated during formulation. However, exposure to significant amounts of the notified polymer is limited due to the largely automated processes, and the engineering controls and personal protective equipment likely to be used during such operations. The powder containing the notified polymer is sprayed in specially designed spray booths by workers using personal protective equipment. After application and once dried, the powder containing the notified polymer is cured into an inert matrix and the polymer is not bioavailable.

Overall, the OHS risk presented by the notified polymer is expected to be low, based on low exposure to workers and the low hazard of the polymer.

Public Health Risk Assessment
Members of the public may make dermal contact with a range of articles containing the notified polymer. However, exposure is expected to be low because the notified polymer should be bound within a matrix and is unlikely to be bioavailable. Therefore, the risk to public health will be low, based on very low exposure and low hazard.

7. ENVIRONMENTAL IMPLICATIONS

Hazard Characterisation
No ecotoxicological data were submitted. Some classes of anionic polymers are moderately toxic to algae. The mode of toxic action is over-chelation of nutrient elements needed for growth. The highest toxicity is when the acid is on alternating carbons of the polymer backbone. This does not apply to the notified polymer and it is not expected to be a toxic hazard to algae.

Environmental Risk Assessment
The notified polymer is expected to neither become dispersed in the environment when it is used as proposed, nor cross biological membranes, because of its very low water solubility and molecular weight, and entrapment in cured coatings. The release of the notified polymer to the environment during the manufacture of the powder coating and its application to the articles occurs principally from the disposal of the powdered solid collected by the dust collection system in the factory. The solid waste is disposed to landfill (<5% annually). Water washings of the equipment and factory floors, containing up to 1% of the notified polymer, are drained to a holding tank where the powdered solids settle prior to discharge of the waste water. The settled sludge is disposed to landfill. No significant releases of the notified polymer to the sewer are expected due to its low water solubility. Cured coatings, which are part of an inert matrix, may be sent to landfill or incinerated, during metal reclamation, when coated metallic articles are disposed of at the end of their useful lives. The notified polymer would be immobile in landfill and is expected to slowly degrade, and would be converted to water vapour and oxides of carbon by incineration.

The notified polymer will not pose a risk to the environment when it is used as proposed.

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 considered to pose a risk to the environment.

Recommendations

CONTROL MEASURES
Occupational Health and Safety

- Specific engineering controls, work practices or personal protective equipment 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 to landfill.

Emergency procedures

- Spills and/or accidental release of the notified polymer should be handled by physical 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 resin used in the production of powder coatings for interior and industrial purposes, 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 the notified polymer provided by the notifier was reviewed by NICNAS. The accuracy of the information on the MSDS remains the responsibility of the applicant.