File No PLC/1093

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

POLYMER OF LOW CONCERN PUBLIC REPORT

Polymer in Resin G 515 (A)

This Assessment has been compiled in accordance with the provisions of the *Industrial Chemicals (Notification and Assessment) Act 1989* (Cwlth) (the Act) and Regulations. The National Industrial Chemicals Notification and Assessment Scheme (NICNAS) is administered by the Australian Government 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 Australian Government Department of Sustainability, Environment, Water, Population and Communities.

For the purposes of subsection 78(1) of the Act, this Public Report may be inspected at our NICNAS office by appointment only at Level 7, 260 Elizabeth Street, Surry Hills NSW 2010.

This 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

September 2012

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SUMMARY

The following details will be published in the NICNAS *Chemical Gazette:*

ASSESSMENT REFERENCE	APPLICANT(S)	CHEMICAL OR TRADE NAME	HAZARDOUS SUBSTANCE	INTRODUCTION VOLUME	USE
PLC/1093	The Valspar (Australia) Corporation Pty Ltd	Polymer in Resin G 515 (A)	No	< 10,000 tonnes per annum	Component of industrial coatings

CONCLUSIONS AND REGULATORY OBLIGATIONS

Human Health Risk Assessment
Based on the assumed low hazard and the assessed use pattern, the notified polymer is not considered to pose an unreasonable risk to the health of workers and the public.

Environmental Risk Assessment
Based on the assessed use pattern and low anticipated hazard, the notified polymer is not expected to pose an unreasonable risk to the aquatic environment.

Health and Safety Recommendations

- 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.

Environmental Recommendations

- No specific control measures are required to minimise release of the notified polymer to the environment.

Disposal

- The notified polymer should be disposed to landfill.

Emergency Procedures

- Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.
- Spills and/or accidental release of the notified polymer should be handled by physical containment, collection and subsequent safe disposal.

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 component of industrial coatings, or is likely to change significantly;
- the amount of notified polymer being introduced has increased, or is likely to increase, significantly;
- the method of manufacture of the notified polymer in Australia has changed, or is likely to change, in a way that may result in an increased risk of an adverse effect of the notified polymer on occupational health and safety, public health, or the environment;
- additional information has become available to the person as to an adverse effect of the notified polymer 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 product containing the notified polymer was provided by the applicant. The accuracy of the information on the MSDS remains the responsibility of the applicant.

ASSESSMENT DETAILS

1. APPLICANT AND NOTIFICATION DETAILS

Applicants
The Valspar (Australia) Corporation Pty Ltd (ABN 82 000 039 396)
203 Power Street, Glendenning, NSW 2761

Exempt Information (Section 75 of the Act)
Data items and details claimed exempt from publication: chemical name, molecular and structural formulae, molecular weight, polymer constituents, residual monomers, and use details.

2. IDENTITY OF POLYMER

Marketing Name(s)
Resin G 515 (A) (containing the notified polymer at < 25%)

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

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	Liquid (product)
Melting Point/Glass Transition Temp	-30 to 48 °C
Density	1.014 kg/m^3 at 20 °C (product)
Water Solubility	Insoluble. The notified polymer is expected to have limited water solubility based on its high molecular weight, predominately hydrophobic structure and experience in use.
Dissociation Constant	Not determined. The notified polymer may have end groups that are expected to be ionised at the environmental pH range (pH 4-9). However, this is not considered to be a concern given that it is water insoluble.
Reactivity	Stable under normal environmental conditions
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	< 300	< 1,000	< 10,000	< 10,000	< 10,000

Use
The notified polymer will be manufactured in, or imported into Australia at < 60%. Products containing the notified polymer will be reformulated into final products at a concentration of < 30%.

The notified polymer is a component of a resin system used in the coating of the internal and external surfaces of food and beverage aluminium cans.

6. HUMAN HEALTH RISK ASSESSMENT

No toxicological data were submitted. The notified polymer meets the PLC criteria and is therefore assumed to be of low hazard. The risk of the notified polymer to occupational and public health is not considered to be unreasonable given the assumed low hazard and the assessed use pattern.

7. ENVIRONMENTAL RISK ASSESSMENT

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

The notified polymer may be manufactured or reformulated in Australia to produce polymer resin used to coat the internal and external surfaces of metal cans. It is estimated that ~90% of the notified polymer will be transferred to metal substrates and be cured. The main release of the notified polymer will be due to overspray (approximately 10%) during the coating application. The solid waste from this process is expected to be sent to landfill. Accidental spills during manufacture or reformulation, residues in empty containers (up to 1%) and waste from cleaning of manufacturing and application equipment are expected to be handled in the same manner as the overspray. In the case that coating residues are washed to sewer from cleaning of manufacturing, reformulation and application equipment, the majority of the notified polymer is likely to partition to sludge at sewage treatment plants. Sludge containing the notified polymer is expected to be disposed of to landfill or applied to soils. In landfill and soils, the notified polymer is expected to eventually degrade to form water and oxides of carbon. Very limited quantities of the notified polymer may be released to surface waters. However, the notified polymer is expected to be of low hazard to aquatic organisms due to its low water solubility.

Once cured, the coatings containing the notified polymer will form an inert polymer matrix, and the incorporated notified polymer will not be bioavailable. The cured notified polymer will share the fate of the articles to which it has been applied. At the end of their useful life, the majority of the articles will be sent to landfill and recycling facilities. The cured notified polymer is likely to eventually degrade biotically or abiotically in landfill or by thermal decomposition in recycling facilities; in both cases forming water and oxides of carbon. Bioaccumulation is not likely based on the high molecular weight, low water solubility of the notified polymer and its limited potential for exposure to the aquatic environment when used as proposed. Based on the assessed use pattern and low anticipated hazard, the notified polymer is not expected to pose an unreasonable risk to the aquatic environment.