File No PLC/1178

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

POLYMER OF LOW CONCERN PUBLIC REPORT

WC-52-1001

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 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 the Environment.

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

May 2014

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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/1178	PPG Industries Australia Pty Ltd	WC-52-1001	No	≤ 500 tonnes per annum	Component of internal surface coatings for aluminium beverage cans

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 assumed low hazard and the assessed use pattern, the notified polymer is not considered to pose an unreasonable risk to the 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.

- If aerosols are formed during the use of the notified polymer, engineering controls and respiratory protection should be used to prevent inhalation exposure.

- A copy of the (M)SDS should be easily accessible to employees.

- If products and mixtures containing the notified polymer are classified as hazardous to health in accordance with the Globally Harmonised System for the Classification and Labelling of Chemicals (GHS), as adopted for industrial chemicals in Australia, workplace practices and control procedures consistent with provisions of State and Territory hazardous substances legislation should 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 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 a component of internal surface coatings for aluminium beverage cans, 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 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 (M)SDS of a product containing the notified polymer was provided by the applicant. The accuracy of the information on the (M)SDS remains the responsibility of the applicant.

ASSESSMENT DETAILS

1. APPLICANT AND NOTIFICATION DETAILS

Applicants
PPG Industries Australia Pty Ltd (ABN: 82 055 500 939)
14 McNaughton Rd
CLAYTON VIC 3168

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.

2. IDENTITY OF POLYMER

Marketing Name(s)
WC-52-1001

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

The information in the table below is based on the MSDS of the product containing the notified polymer at 10-30% concentration.

Appearance at 20 °C and 101.3 kPa	Liquid
Boiling Point	> 37.78 °C (> 100 °F)
Density	1,030 kg/m^3
Water Solubility	Not determined. Expected to be water dispersible due to the combination of hydrophilic end groups on a hydrophobic backbone and its use in aqueous products.
Dissociation Constant	Not determined. The notified polymer is a salt and is expected to be ionised under environmental conditions.
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	< 60	< 60	< 60	< 60	50-500

Mode of Introduction
The notified polymer will be imported at 10-30% concentration in solvent solution in 200 L drums or 1,000 L IBCs and will not be further reformulated and repackaged in Australia.

The notified polymer may at some time in the future be manufactured in Australia.

Use
The notified polymer is a component of an internal coating for aluminium beverage cans.

6. HUMAN HEALTH RISK ASSESSMENT

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

The notified polymer will be used for direct food contact as a component of coatings for aluminium beverage cans. Once the coatings are cured and dried, the notified polymer will be bound into the coating matrix and is not expected to migrate into the food. A migration study submitted by the notifier on the finished cured coating containing the notified polymer conducted in accordance with

EU food contact regulations showed that it complied in regard to its composition and migration properties.

Overall, given the assumed low hazard of the notified polymer and provided the coatings are cured within the manufacturer's specification, the notified polymer is not considered to pose an unreasonable risk to workers or the public.

7. ENVIRONMENTAL RISK ASSESSMENT

No ecotoxicological data was submitted for the notified polymer. Anionic polymers are known to be moderately toxic to algae. The mode of toxic action is over-chelation of nutrient elements needed by algae for growth. The highest toxicity is when the acid is on alternating carbons of the polymer backbone. This may apply to the notified polymer. The toxicity to algae is likely to be reduced due to the presence of calcium ions, which will bind to the functional groups. Anionic polymers are generally of low hazard to fish and aquatic invertebrates.

Minor amounts of notified polymer will be released as import container and equipment washings during use, which are expected to be sent to a licensed waste facility for disposal in accordance with State/Territory regulations.

The coating formulation containing the notified polymer will be applied as internal lining of aluminium beverage containers by spray application in an automated industrial process. No significant environment releases are expected from this industrial process as the notified polymer is immobilised on the metal surface by heat curing. Solid wastes from residues in containers are expected to be collected and disposed of to landfill. The cured coatings which are part of an inert matrix, may be sent to landfill or thermally decomposed during metal reclamation when coated aluminium beverage containers are disposed of at the end of their useful lives. The notified polymer is expected to be immobile in landfill. It is likely to degrade in landfill or by thermal decomposition to form water and oxides of carbon and nitrogen. Bioaccumulation is not likely based on the high molecular weight of the notified polymer and its limited potential for exposure to the aquatic environment when used as proposed.

Therefore, based on its assumed low hazard and assessed use pattern, the notified polymer is not considered to pose an unreasonable risk to the environment.