File No PLC/1105

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

POLYMER OF LOW CONCERN PUBLIC REPORT

Priplast 3159

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

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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/1105	Croda Singapore Pte Ltd (trading as Croda Australia) PPG Industries Australia Pty Ltd	Priplast 3159	No	< 2 tonnes per annum	Component of sealants, coatings and plastics

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.

- A copy of the MSDS should be easily accessible to employees.

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

- 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.

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 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 component of sealants, coatings and plastics, 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 MSDS of a 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

PPG Industries Australia Pty Ltd (ABN 82 055 500 939)
23 Ovata Drive
Tullamarine VIC 3043

Croda Singapore Pte Ltd (trading as Croda Australia) (ABN 34 088 345 457)
Suite 102, 447 Victoria Street
Wetherill Park NSW 2164

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, reactive functional groups, polymer constituents, residual monomers/impurities and use details.

2. IDENTITY OF POLYMER

Marketing Name(s)
Priplast 3159

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	Light yellow liquid
Pour point	0 °C
Density	1,100 kg/m^3 at 25 ˚C
Water Solubility	Not determined. Expected to have limited solubility based on the predominantly hydrophobic structure of the notified polymer.
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	< 2	< 2	< 2	< 2	< 2

Use
The notified polymer will be imported into Australia (at < 60% concentration) as a component of two pack sealants and single component coatings (e.g. for use on metal substrates). The imported coatings (in 20 L drums) may be repackaged prior to distribution to end-users.

The notified polymer may also be imported at 100% concentration and reformulated (end-use concentration < 60%) into industrial coatings or used in a variety of plastics applications (e.g. food packaging).

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 public may be exposed to products to which the coatings (or sealants or other products, e.g. food packaging) containing the notified polymer have been applied. However, the polymer is not expected to be bioavailable, unless leaching or migration occurs. While no migration studies are available, the notifier has advised that the notified polymer is considered to have a high resistance to migration when used in food contact materials, and has been approved for use in food contact materials in the USA and Europe. Therefore, public exposure to the notified polymer is expected to be low.

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 will be imported into Australia as a component of coatings and sealants for industrial applications or as a plasticiser for plastics applications. Reformulation of the notified polymer into final product may occur locally. During reformulation processes, up to 3% of the total annual import volume of notified polymer (including spills, residues in empty containers and waste from the cleaning of equipment) is estimated to be released to the environment. These releases are expected to be collected and disposed of to landfill. The main release during industrial use (up to 60% as overspray) will typically entail landfill disposal, after interception by spray filters in spray booths or collected by protective sheeting. Up to 1% of notified polymer is estimated to be released to sewers during use as residues in application equipment washings. However, due to its expected low water solubility and high molecular weight the majority of the notified polymer is expected to absorb to sludge during sewage treatment and be disposed of to landfill.

Most of the notified polymer will be physically incorporated within an inert polymer matrix of coatings, sealants or plastics. The notified polymer is expected to share the fate of articles to which it has been applied to and be either disposed of to landfill or recycled for metal reclamation when applied to metal substrates. The notified polymer is not expected to be readily biodegradable. However, due to its high molecular weight it is not expected to cross biological membranes and it is therefore not expected to bioaccumulate. The notified polymer is expected to eventually degrade in landfill, or be thermally decomposed during metals reclamation, to form water and oxides of carbon. 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.