

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

POLYMER OF LOW CONCERN PUBLIC REPORT

Polymer in IMPRANIL DLV/1

This Assessment has been compiled in accordance with the provisions of the *Industrial Chemicals (Notification and Assessment) Act 1989* (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 and Energy.

This Public Report is 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**

November 2018

Table of Contents

| | |
|---|---|
| SUMMARY | 2 |
| CONCLUSIONS AND REGULATORY OBLIGATIONS..... | 2 |
| ASSESSMENT DETAILS..... | 4 |
| 1. APPLICANT AND NOTIFICATION DETAILS | 4 |
| 2. IDENTITY OF POLYMER | 4 |
| 3. PLC CRITERIA JUSTIFICATION | 4 |
| 4. PHYSICAL AND CHEMICAL PROPERTIES..... | 4 |
| 5. INTRODUCTION AND USE INFORMATION | 5 |
| 6. HUMAN HEALTH RISK ASSESSMENT..... | 5 |
| 7. ENVIRONMENTAL RISK ASSESSMENT | 5 |

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/1508 | Covestro Pty Ltd and DuPont (Australia) Pty Ltd | Polymer in IMPRANIL DLV/1 | No | ≤ 30 tonnes per annum | Component of textile pre-treatment solution |

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 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 of 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

- Where reuse or recycling are not appropriate, dispose of the notified polymer in an environmentally sound manner in accordance with relevant Commonwealth, state, territory and local government legislation.

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 textile pre-treatment solution, 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.

Safety Data Sheet

The SDS of the products containing the notified polymer was provided by the applicant. The accuracy of the information on the SDS remains the responsibility of the applicant.

ASSESSMENT DETAILS

1. APPLICANT AND NOTIFICATION DETAILS

Applicants

Covestro Pty Ltd (ABN: 18 086 237 765)
Level 1, 700 Springvale Road
MULGRAVE VIC 3170

DuPont (Australia) Pty Ltd (ABN 59 000 716 469)
7 Eden Park Drive
MACQUARIE PARK NSW 2113

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, spectral data, purity, polymer constituents, residual monomers/impurities, use details and import volume.

2. IDENTITY OF POLYMER

Marketing Name(s)

Polymer in Impranil DLV/1

Molecular Weight

Number Average Molecular Weight (Mn) is > 1,000 g/mol

3. PLC CRITERIA JUSTIFICATION

| <i>Criterion</i> | <i>Criterion met</i> |
|--|----------------------|
| 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 | Milky dispersion |
| Melting Point/Glass Transition Temperature | Not determined |
| Density | 1,100 kg/m ³ at 20 °C |
| Water Solubility | Soluble at 20 °C |
| Dissociation Constant | Not determined |
| 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 | 5 – 30 | 5 – 30 | 5 – 30 | 5 – 30 | 5 – 30 |

Use

The notified polymer will be used as a component of textile pre-treatment solution. The notified polymer will not be manufactured in Australia. It will be imported in an aqueous solution (at < 60% concentration) for reformulation into end-use products (containing the notified polymer at < 20% concentration), or imported in end-use products (at < 20% concentration). Products containing the notified polymer will be for industrial use only and not available to the public. End-use products (containing the notified polymer at < 20% concentration) will be applied to textiles using manual or automatic (closed) processes. After application, the textiles will be dried under heat prior to printing.

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.

Although not considered in this risk assessment, NICNAS notes that the notified polymer contains residual monomers that are classified as hazardous according to the *Globally Harmonised System of Classification and Labelling of Chemicals (GHS)*, as adopted for industrial chemicals in Australia.

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 end-use textile pre-treatment solution, or as a component of an aqueous solution for local reformulation into the end-use product. Any waste generated during the reformulation will be recycled or disposed of, in accordance with local government regulations. The pre-treatment solution will be applied to textiles either by hand sprayers or purpose designed pre-treatment machines. As stated by the notifier, the overspray is expected to be minimal (0.5% of the import volume) as this procedure is done on a small and targeted area of the textile and almost all of the spray is collected onto the textile. Accidental spills of the product containing the notified polymer during import, reformulation, transport, storage or use are expected to be adsorbed onto a suitable material, and collected for disposal in accordance with local government regulations. Empty containers containing residual notified polymer will be sent to approved waste management facilities for reclamation. After application, the textile will be dried under heat prior to printing.

Following its application, the notified polymer is expected to share the fate of the textile to which it has been applied. A small proportion of textiles are recycled to form lower grade textiles, but ultimately all are expected to be disposed of to landfill at the end of their useful lives. In landfill, the notified polymer will be present in dried form and bound to textiles and will be neither bioavailable nor mobile. The notified polymer is not expected to bioaccumulate due to its high molecular weight. The notified polymer in landfill is expected to eventually degrade via biotic and abiotic processes to form water and oxides of carbon and nitrogen.

Therefore, based on its assumed low hazard and the assessed use pattern as a component of textile pre-treatment solution, the notified polymer is not considered to pose an unreasonable risk to the environment.