File No PLC/966

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

POLYMER OF LOW CONCERN FULL PUBLIC REPORT

Polymer 2 in RK-69376

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 Full Public Report may be inspected at our NICNAS office by appointment only at Level 7, 260 Elizabeth Street, Surry Hills NSW 2010.

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:

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Director
NICNAS

February 2011

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1. APPLICANT AND NOTIFICATION DETAILS

Applicants
DuPont (Australia) 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, polymer constituents, residual monomers/impurities, use details, import volume.

2. IDENTITY OF POLYMER

Marketing Name(s)
RC-00237 (containing the notified polymer at <70%)
RK-69376 (containing the notified polymer at <20%)

Molecular Weight

Number Average Molecular Weight (Mn) is > 1,000 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:	Clear solid
Melting Point/Glass Transition Temp	>100°C
Density	~1100 kg/m^3 at 20°C
Water Solubility	~2.7 mg/L at pH 7, based on results of a test performed according to OECD Guideline 120 on an acrylic polymer analogue.
Reactivity	Stable under ambient conditions. Designed to react with other ingredients in the product upon curing at elevated termperatures.
Degradation Products	None under normal conditions of use. Expected to slowly degrade via biotic and abiotic processes over long periods of time to form water and oxides of carbon.

5. INTRODUCTION AND USE INFORMATION

Maximum Introduction Volume of Notified Chemical (100%) Over Next 5 Years

Year	*1*	*2*	*3*	*4*	*5*
Tonnes	<30	<30	<30	<30	<30

Use
The notified polymer will not be manufactured in Australia. The notified polymer will be imported into Australia at a concentration of <70%. Products containing the notified polymer (at <20%) will subsequently be reformulated in Australia. The notified polymer will also be imported in finished products at concentrations of <20%.

The notified polymer will be used as a component of top coats for use on vehicles at a concentration of <20%.

6. HUMAN HEALTH RISK ASSESSMENT

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

7. ENVIRONMENTAL RISK ASSESSMENT

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

The imported product containing the notified polymer will be reformulated into coatings for use in automotive top coats in original equipment manufacture (applied mainly by spray). Up to 2% of the notified polymer may be released during reformulation as spills, container residues and waste material. These releases will be collected for disposal to landfill. A maximum of 3% will be released as container and equipment washings during use, which will be sent to a licensed hazardous waste facility for disposal in accordance with state/territory hazardous waste standards. The main release (up to 40% as overspray during use) will typically entail landfill disposal, after interception by spray booth filters. Discarded end use articles containing the notified polymer within the inert polymer matrix of the cured paint film will be disposed to landfill, or recycled for metals reclamation, which will entail thermal decomposition of the coating to form oxides of carbon and water vapour. In landfill, the notified polymer is not expected to be mobile or bioavailable and is expected to slowly degrade by abiotic and biotic processes.

The notified polymer is not expected to pose an unacceptable risk to the environment based on its assumed low toxicity to aquatic organisms and the low potential for aquatic exposure resulting from its use as a top coat in the automotive industry.

8. RECOMMENDATIONS

Human Health Risk Assessment
Based on the assumed low hazard and when used in the proposed manner, the notified polymer is not considered to pose an unacceptable risk to the health of workers and the public.

Environmental Risk Assessment
Based on the assumed low hazard and the reported use pattern, the notified polymer is not considered to pose an unacceptable 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 *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 a component of surface coatings, or is likely to change significantly;
- the amount of notified polymer being introduced has increased from 30 tonnes, 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 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.