File No PLC/1152

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

POLYMER OF LOW CONCERN PUBLIC REPORT

Polymer in Durasol 835

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 2013

Table of Contents

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/1152	Momentive Specialty Chemicals Pty Ltd	Polymer in Durasol 835 Alternative name: Polymer in Durasol GEP2/100	No	≤ 20 tonnes per annum	Sealant for building and construction materials

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 (M)SDS should be easily accessible to employees.

- Spray applications should be carried out in accordance with the Safe Work Australia Code of Practice for *Spray Painting and Powder Coating* (Safe Work Australia, 2012) or relevant State or Territory Code of Practice.

- 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 sealant for building and construction materials, 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 products 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
Momentive Speciality Chemicals Pty Ltd (ABN32 004 0271 0827)
Gate 3, 765 Ballarat Road
DEER PARK VIC 3023

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 and manufacture/import volume.

2. IDENTITY OF POLYMER

Marketing Name(s)

Durasol 835, Durasol GEP2/100

Molecular Weight
Number Average Molecular Weight (Mn) is > 10,000 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 colourless viscous liquid
Melting Point/Glass Transition Temp	29 °C
Density	930 kg/m^3 at 20 °C
Water Solubility	The notified polymer is not expected to be water soluble based on its predominantly hydrophobic structure and its use in non-aqueous solvent
Reactivity	Stable under normal environmental conditions
Degradation Products	None under normal conditions of use

* For the product Durasol 835 (contains the notified polymer at a concentration of 20-40%).

5. INTRODUCTION AND USE INFORMATION

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

Year	*1*	*2*	*3*	*4*	*5*
Tonnes	20	20	20	20	20

Use
The notified polymer will not be manufactured in Australia. The notified polymer will be imported into Australia as a component of the finished product Durasol 835. Durasol 835 contains the notified polymer at a concentration of 20-40% in naphtha solvents. Durasol 835 will be used as a sealant for building and construction materials. Durasol 835 will be applied by spray in industrial applications only.

6. HUMAN HEALTH RISK ASSESSMENT

The notified polymer will be imported as a solution in naphtha solvents at a concentration of 20-40%, contained in 185 kg steel drums, and will be used without further modification. Transport and warehouse workers may come into dermal and ocular contact with the notified polymer at a concentration of 20-40% through accidental leakage and spillage of containers.

The notified polymer will be transferred from the steel drum, via an affixed tap, into a vessel where the notified polymer will be heated to 45 °C using a flameproof heater. The notified polymer will then be piped to an application spray booth positioned over the production line and applied by an air assisted airless spray system to tiles. During these processes workers may manually handle the notified polymer and may come into dermal, inhalation and ocular contact with the notified polymer at 20-40% concentration. Workers will use personal protective equipment and ventilation will be used to reduce the risk of exposure.

Once applied to tiles and set, the notified polymer should not present a risk to workers or the general public as the notified polymer will be bound to the cement matrix of the tile.

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 *Approved Criteria for Classifying Hazardous Substances* [NOHSC: 1008 (2004)]. These are not present in the notified polymer as introduced above the cut off concentrations for classification.

7. ENVIRONMENTAL RISK ASSESSMENT

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

The notified polymer will be imported into Australia as a component of the finished product. Products containing the notified polymer will be used as a sealant for building and construction material. Release of the notified polymer into the environment may occur as the result of accidental spills or leaks during shipping, transport and warehousing. The release from these activities is expected to be minimal as the products are expected to be transported and handled in accordance with International Dangerous Good Transport Practices. It is estimated by the notifier that up to 0.1% of total import volume of the notified chemical may be lost during mixing of chemicals, cleaning of plant equipment and as residues in empty containers. Solvent washing from the cleaning of equipment is expected to be reused in subsequent batches or be disposed of by a licensed waste facility. Products containing the notified polymer will be applied onto substrates by spray in an application spray booth at industrial settings. The overspray is expected to be collected and returned to the tank and be reused. Discarded end use coated articles containing the notified polymer are expected to be disposed of to landfill. The notified polymer coated onto solid cement matrix will not be mobile or bioavailable. The notified polymer is expected to be hydrolytically stable and not readily biodegradable, but bioaccumulation is unlikely based on its high molecular weight and limited bioavailability. In landfill, the notified polymer will eventually degrade by abiotic and biotic processes into water and oxides of carbon.

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