File No PLC/1500

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

POLYMER OF LOW CONCERN PUBLIC REPORT

Polymer in Aquaflex Roof Plus

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

December2018

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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/1500	Dow Chemical (Australia) Pty Ltd Dow Performance Materials (Australia) Pty Ltd Mapei Australia Pty Ltd	Polymer in Aquaflex Roof Plus	No	≤ 60 tonnes per annum	A component of water based waterproofing membrane

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 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 water based waterproofing membrane, 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 product 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
Dow Chemical Australia Pty Ltd (ABN: 72 000 264 979)
Level 17, 8 Exhibition Street
MELBOURNE VIC 3000

Dow Performance Materials (Australia) Pty Ltd (ABN 29 004 513 188)
Level 17, 8 Exhibition Street
Melbourne VIC 3000

Mapei Australia Pty Ltd (ABN: 34 059 838 765)
180 Viking Drive
WACOL QLD 4076

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 and import volume.

2. IDENTITY OF POLYMER

Marketing Name(s)
Aquaflex Roof Plus (containing the notified polymer at approximately 3% concentration)

Molecular Weight
Number Average Molecular Weight (Mn) is > 10,000 g/mol

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	Grey, viscous liquid (product)
Melting Point/Glass Transition Temperature	Not determined. The polymer is not isolated from the solution.
Density	1,200-1,400 kg/m^3 at 25 °C
Water Solubility	Expected low water solubility
Dissociation Constant	Not determined. Contains potentially dissociable functionalities but dissociation is expected to be limited under environmental conditions (pH 4 – 9) due to the expected low water solubility.

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	10-30	30-60	30-60	30-60	30-60

Use
The notified polymer will be imported in a product at approximately 3% concentration. It will be used as a component of water based waterproofing membrane in the construction industry. The imported product will be applied as it is by brush or roller. It is estimated that approximately 90% of the imported product will be used by contractors and 10% by do-it-yourself, DIY users.

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 for the notified polymer. The notified polymer contains potentially cationic functionalities, but overall has a low charge density. Polymers with a low cationic charge density (FGEW > 5000) are generally of low concern to the environment.

The notified polymer will be imported into Australia as a component of finished waterproofing membrane used in the construction industry. The water proofing membrane will primarily (90%) be used by contractors and, to a less extent (10%) by DIY users. It will be applied by brush or roller to construction materials. Once dried, the product containing the notified polymer will form a water insoluble polymer matrix on the construction materials and not expected to be bioavailable or mobile. As the worst case scenario, it is assumed that up to 5% of the notified polymer used by DIY users, or equivalent to 0.5% of the total annual import volume of notified polymer, may be incorrectly disposed of to the sewer, drains, or ground from waste and washing of application equipment. Assuming the releases occur nationwide over the entire year and there is no removal of the notified polymer during wastewater treatment, the predicted environmental concentration (PEC) is estimated to be 0.17 µg/L [0.005 × 60,000 kg/year ÷ 365 days/year ÷ (24.386 million persons × 200 L/person/day)]. Thus, the notified polymer is not expected to be released to aquatic environment at ecotoxicologically significant concentrations. Accidental spills of the notified polymer during import, transport, storage or use are expected to be adsorbed onto a suitable material and collected for disposal, in accordance with local government regulations. The notifier estimates that < 2% of the product containing the notified polymer will remain as residues in empty containers. These residues are expected to be cured in the containers prior to disposal of to landfill along with the containers, in accordance with local government regulations.

Therefore, based on its assumed low hazard, maximum import volume of 60 tonnes per annum and assessed use pattern as a component of finished waterproofing membrane in the construction industry, the notified polymer is not considered to pose an unreasonable risk to the environment.