File No: SAPLC/183

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

POLYMER OF LOW CONCERN PUBLIC REPORT

Polymer in ELOTEX FX5600

This Self Assessment has been compiled by the applicant and adopted by NICNAS in accordance with the provisions of the Industrial Chemicals (Notification and Assessment) Act 1989 (Cwlth) (the Act) and Regulations. This legislation is an Act of the Commonwealth of Australia. The National Industrial Chemicals Notification and Assessment Scheme (NICNAS), administered by the Department of Health and the Department of the Environment, has screened this assessment report. The data supporting this assessment will be subject to audit by NICNAS.

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

March 2016

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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
SAPLC/183	Akzo Nobel Pty Ltd	Polymer in ELOTEX FX5600	No	≤ 7 tonnes per annum	Mortar additive

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.

- 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.

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 mortar additive, 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 the product 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
Akzo Nobel Pty Ltd (ABN: 59 000 119 424)
51 McIntyre Road
SUNSHINE NORTH, VIC 3020

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 and residual monomers/impurities.

2. IDENTITY OF POLYMER

Marketing Name(s)
ELOTEX FX5600 (containing the notified polymer at < 30%)

Molecular Weight
Number Average Molecular Weight (Mn) is > 10,000 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	White powder
Melting Point/Glass Transition Temp	17 °C
Density	Around 1,000 kg/m^3 at 20 °C
Water Solubility	Not Determined. Expected to have low water solubility based on its predominantly hydrophobic chemical structure and high molecular weight.
Dissociation Constant	Not determined. The notified polymer does not contain any functional groups that are expected to dissociate in water.
Particle Size	D(0.5) = 4.03 µm (for the aqueous dispersion)
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	1.4	1.4	2.8	2.8	7

Use

The notified polymer will not be manufactured in Australia and. The notified polymer will be imported in a product at < 30% concentration as a powder and will be used in the formulation of a cement based dry mix mortar product. The final dry mortar mix containing the notified polymer at < 1% will be used in construction and building applications such as ceramic tile adhesives, self-levelling compounds or cementitious plasters. The final product will not be sold to the public.

6. HUMAN HEALTH RISK ASSESSMENT

No toxicological data were available. The notified polymer meets the PLC criteria and can therefore be considered 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.

7. ENVIRONMENTAL RISK ASSESSMENT

7.1. Exposure Assessment

ENVIRONMENTAL RELEASE

The notified polymer will not be manufactured in Australia. The product containing the notified polymer at < 30% concentration will be reformulated by mixing with other ingredients to result in a dry mortar. No significant release is expected from transportation and the reformulation process. Any spills are expected to be collected and disposed of in accordance with all applicable laws.

Construction workers will mix the dry mortar containing the notified polymer with water and use it, for example, as ceramic tile adhesive, self-levelling compound or cementitious plaster. After application the fresh mortar will harden. The notified polymer will be bound within the cured mortar matrix. Therefore, release of the notified polymer to the environment is expected to be low. Water washings from the cleaning of equipment may be reused in subsequent batches of mortar, or disposed of to soil or the sewer. Dried unused cement materials and old cement materials from demolition operations are expected to be disposed of to landfill. Wastes are expected to be hardened and disposed of to landfill.

ENVIRONMENTAL FATE

The notified polymer is not expected to be water soluble and it is not expected to readily biodegrade in the environment. The notified polymer used for cementing will be bound up in the cement matrix, and hence will not be mobile in the environment, making exposure unlikely to occur. Based on its very high molecular weight, the unbound notified polymer is expected to have a reduced mobility in soils and sediments. The notified polymer's high molecular weight will preclude absorption across biological membranes and thus it is unlikely to bioaccumulate. In landfill, leaching of the notified polymer is not expected given it is trapped in the concrete matrix. Ultimately, it will be degraded via abiotic or biotic pathways into water and oxides of carbon.

7.2. Environmental Hazard Characterisation

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

7.3. Environmental Risk Assessment

No significant aquatic release of the notified polymer is expected during its use as cement based dry mix mortar products in building and construction applications. Therefore, based on its assumed low hazard the notified polymer is not considered to pose an unacceptable risk to the environment.