File No PLC/1274

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

POLYMER OF LOW CONCERN PUBLIC REPORT

Polymer in TiRES 0440-S-55 and TiRES 0440-60X

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.

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

June 2015

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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/1274	Nuplex Industries (Aust) Pty Ltd	Polymer in TiRES 0440-S-55 and TiRES 0440-60X	No	≤ 60 tonnes per annum	Component of paints

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 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 paints, or is likely to change significantly;
- the amount of notified polymer being introduced has increased, or is likely to increase, significantly;
- the method of manufacture of the notified polymer in Australia has changed, or is likely to change, in a way that may result in an increased risk of an adverse effect of the notified polymer on occupational health and safety, public health, or the environment;
- 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)SDSs of the products containing the notified polymer were 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
Nuplex Industries (Aust) Pty Ltd (ABN: 25 000 045 572)
49-61 Stephen Road
BOTANY NSW 2019

Exempt Information (Section 75 of the Act)
Data items and details claimed exempt from publication: chemical name, CAS number, molecular and structural formulae, molecular weight, spectral data, use details, polymer constituents, residual monomers/impurities and manufacture/import volume.

2. IDENTITY OF POLYMER

Marketing Names
TiRES 0440-60X (containing < 70% notified polymer)
TiRES 0440-S-55 (containing < 70%% notified polymer)

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	Liquid*
Melting Point/Glass Transition Temp	Not determined. The notified polymer is not isolated from manufacturing solution under normal conditions.
Density	980 kg/m^3 at 20°C*
Water Solubility	Not determined. Based on its high molecular weight and predominantly hydrophobic structure, the notified polymer is expected to have low water solubility.
Dissociation Constant	Not determined. The notified polymer does not contain any functional groups that are expected to be ionised in the environmental pH range (4 - 9).
Reactivity	Stable under normal environmental conditions
Degradation Products	None under normal conditions of use

* For the notified polymer at < 70% concentration in solvent solution

5. INTRODUCTION AND USE INFORMATION

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

Year	*1*	*2*	*3*	*4*	*5*
Tonnes	30-40	30-40	40-50	40-50	50-60

Use
The notified polymer will be imported or manufactured at the notifier's facility as a dispersion in solvent at < 70% concentration. The manufactured or imported product will then be dispatched to paint manufacturers and used in the formulation of paints. The finished paints containing the notified polymer at < 30% concentration will be for industrial use only.

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.

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 manufactured and reformulated in Australia as a component of paint formulations for general and marine use. During manufacture and reformulation processes, it is estimated that up to 1% of the total import volume of the notified polymer will be present in washings from cleaning of pump lines and reaction vessels. The washings will undergo a process of flocculation and collected solids are expected to be disposed of to landfill. The generated wastewater is expected to be collected by a registered trade waste facility. Residues in empty containers are expected to be directly sent to landfill with the containers.

Products containing the notified polymer will be used by professional painters. DIY use is not expected. During use, paints and coatings are expected to be applied by brush, roller and spray techniques. It is expected that approximately 20-60% of the coating product will be in the form of overspray during spraying operations and will typically entail landfill disposal, after being collected. Residues containing the notified polymer on brushes and rollers are expected to be rinsed into containers and then allowed to cure along with the container residues before disposal, as solid wastes, to landfill. It is expected that up to 5% of the notified polymer may be disposed of to the sewer, drains or ground from waste and washing of application equipment. Assuming the releases occurs nationwide and over the entire year, this is unlikely to lead to ecotoxicologically relevant concentrations of the notified polymer in the aquatic environment.

The fate of the coating cured on the substrate will be shared with the fate of the coated article, which ultimately is expected to be sent to landfill. In landfill, the notified polymer will be present as cured solids which will be neither bioavailable nor mobile. Furthermore, the notified polymer is not expected to bioaccumulate due to its high molecular weight. It is expected to eventually degrade in the environment to form oxides of carbon and water vapour.

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