File No PLC/1114

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

POLYMER OF LOW CONCERN PUBLIC REPORT

Polymer in Setal 84

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:

Street Address:	Level 7, 260 Elizabeth Street, SURRY HILLS NSW 2010, AUSTRALIA.
Postal Address:	GPO Box 58, SYDNEY NSW 2001, AUSTRALIA.
TEL:	+ 61 2 8577 8800
FAX:	+ 61 2 8577 8888
Website:	www.nicnas.gov.au

Director
NICNAS

February 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/1114	Nuplex Industries (Aust) Pty Ltd Wurth Australia Pty Ltd	Polymer in Setal 84	No	< 10 tonnes per annum	Component of coatings

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.

- Spray applications should be carried out in accordance with the Safe Work Australia *National Guidance Material for Spray Painting* [NOHSC (1999)] or relevant State and Territory Codes of Practice.

- 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.

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 a component of coatings, 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)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

Nuplex Industries (Aust) Pty Ltd (ABN: 25 000 045 572)
Building I, Suite 15, 22 Powers Road
SEVEN HILLS NSW 2147

Wurth Australia Pty Ltd (ABN: 48 002 487 096)
Unit 2, 1 Healey Road
DANDENONG SOUTH VIC 3175

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)
Setal 84 (containing the notified polymer at < 80%)

Molecular Weight
Number Average Molecular Weight (Mn) is > 1,000 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*	Viscous yellow clear liquid
Melting Point/Glass Transition Temp	Not determined. The notified polymer is manufactured as a dispersion and is not isolated
Density*	1080 kg/m^3
Water Solubility	The notified polymer may be dispersible in water given it is available in a dispersed form in water at 80%.
Dissociation Constant	Not determined. The notified polymer may have terminal functional groups that are expected to be ionised in the environmental pH range (pH 4 –9).
Reactivity	Stable under normal environmental conditions. The notified polymer contains functionalities that may hydrolyse. However, hydrolysis is not expected to occur significantly in the environmental pH range of 4 – 9.
Degradation Products	None under normal conditions of use

*Product containing < 80% notified polymer

5. INTRODUCTION AND USE INFORMATION

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

Year	*1*	*2*	*3*	*4*	*5*
Tonnes	< 10	< 10	< 10	< 10	< 10

Use
The notified polymer will be imported into Australia at a concentration of < 80% (and reformulated into the end use products) or as a component of coatings at < 10% concentration. The notified polymer (at < 80% concentration) may also be manufactured in Australia. The coatings containing the notified

polymer may be used for a variety of applications and may be applied using automated systems or manually using spray, brush or roller. In the event that products are applied by members of the public, spray application is not expected.

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 may be imported or manufactured in Australia, for further formulation into solvent based paint or for direct end-use, in a variety of industrial application areas.

Most of the notified polymer will be irreversibly incorporated within the inert paint matrix after coating application. Up to 2% of the import volume of loss is expected from the cleaning processes during manufacture and reformulation, which is expected to be collected as solid for disposal to landfill. Therefore, release of the notified polymer to the aquatic environment is not expected from manufacture and reformulation. The losses from application are expected to be mainly from overspray and are estimated to vary from 20% to 60% of the used volume, and are expected to be collected for disposal to landfill. Up to 5% of the notified polymer is expected to be released to sewer from washings of application tools and containers. In a sewage treatment plant, the notified polymer is expected to be efficiently removed from the water column due to its high molecular weight and limited water solubility, and is not expected to be released to surface water in ecotoxicologically significant concentrations. The notified polymer associated with substrates after coating is expected to share the fate of the painted articles. This may be to landfill, or to undergo thermal decomposition into water and oxides of carbon oxides during the metal recycling process. When disposed of to landfill, the notified polymer is expected to eventually degrade to form water and oxides of carbon.

The notified polymer is not expected to be readily biodegradable. However, due to its high molecular weight is not expected to cross biological membranes and it is therefore not expected to bioaccumulate.

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