File No EX/189 (PLC/1120)

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

FULL PUBLIC REPORT

Polymer in Colours & Chemicals 431-724

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

August 2014

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FULL PUBLIC REPORT

This assessment report is for an extension of original assessment certificate for Polymer in Colours & Chemicals 431-724. Based on the submission of new information by the extension notifier, some sections of the original assessment report for Valspar Paint (Australia) Pty Ltd have been modified. These modifications have been made under the heading *'Extension Application'* in the respective sections.

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
EX/189 (PLC/1120)	Nuplex Industries (Aust) Pty Ltd	Polymer in Colours & Chemicals 431-724	No	≤ 100 tonnes per annum	Component of industrial paints at < 30% concentration

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.

Risk assessment relating to extension applicant
The use and environmental fate described in the extension application are not expected to impact the outcomes of the original human health and environment risk assessment and recommendations.

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.

- If aerosols are formed during the use of the notified polymer, engineering controls and respiratory protection should be used to prevent inhalation exposure.

- 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 to landfill.

Storage

- The following precautions should be taken by workers regarding storage of the notified polymer:
  - Store in a segregated and approved area.
  - Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (oxidising substances, strong acids, strong bases).

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 component of industrial 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)SDS of the notified polymer was provided by the original applicant. The accuracy of the information on the (M)SDS remains the responsibility of the applicant.

Extension Application

The extension applicant has provided an MSDS of a product containing the notified polymer which was reviewed by NICNAS. The accuracy of the information on the MSDS remains the responsibility of the extension applicant.

ASSESSMENT DETAILS

1. APPLICANT AND NOTIFICATION DETAILS

Holder of Original Assessment Certificate (PLC/1120)
Valspar Paint (Australia) Pty Ltd (ABN: 40 000 035 914)
Level 4, 2 Burbank Place
Norwest Business Park
Baulkham Hills NSW 2153

Applicant for Extension of the Original Assessment Certificate
Nuplex Industries (Aust) Pty Ltd (ABN: 25 000 045 572)
Building 1 Suite 15
22 Powers Road
Seven Hills NSW 2147

Notification Category
Polymer of Low Concern

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 import volume.

2. IDENTITY OF POLYMER

Marketing Name(s)
Polymer in Colours & Chemicals 431-724 (product containing the notified polymer at < 70%)

Molecular Weight
Number Average Molecular Weight (Mn) is > 1,000 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	Viscous liquid
Melting Point/Glass Transition Temp	Not determined. Imported in solution.
Density	Not determined. Imported in solution.
Water Solubility	(0.1×10^{-3}) – (1×10^{-3}) g/L at 20 °C, estimated by visual inspection. Expected to have a low water solubility based on

	the predominantly hydrophobic structure of the notified polymer.
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

Original Notifier

Year	*1*	*2*	*3*	*4*	*5*
Tonnes	< 200	< 200	< 200	< 200	< 200

Extension Applicant

Year	*1*	*2*	*3*	*4*	*5*
Tonnes	20	40	60	80	100

Use

Original Notifier

The notified polymer will not be manufactured in Australia.
The notified polymer will be imported into Australia at a concentration of < 70% and reformulated into paint products containing the notified polymer at < 30%.
Finished industrial paint products containing the notified polymer at < 30% concentration will be applied by spray to cranes, harvesters, tractors, truck bodies and other large machinery in ventilated spray booths.

Extension Applicant

The notified polymer will be manufactured in Australia at a concentration of 30-60%.
The reformulation and use of the polymer will not vary from the original notifier.

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.

Original Notifier

During reformulation, spills of the imported notified polymer are expected to be collected and disposed of to landfill. Residues of the notified polymer that remain in the product containers and release from equipment washings are likely to be < 0.5% and 1%, respectively, of the total import volume of the notified polymer. These wastes are anticipated to be collected and disposed of to landfill.
The notified polymer is expected to be used in industrial settings as a component in solvent coatings and is expected to be applied by spray application. The main release during use is expected to be from overspray. These wastes (up to 30% of the total import volume) are anticipated to be intercepted by spray booth filters, and disposed of via a licensed waste disposal contractor. Discarded end-use articles containing the notified polymer in the cured coating film will be disposed of to landfill, or recycled for metal reclamation which will entail thermal decomposition of the coating to form oxides of carbon and water. In landfill, the notified polymer will be present as a cured solid film and will be neither

bioavailable nor mobile. Therefore, the notified polymer is not expected to pose an unreasonable risk to the environment when it is used as proposed.

Extension Applicant

The notified polymer will be manufactured in Australia. Equipment used in manufacturing and reformulation of the notified polymer will be cleaned with organic solvent. Solvent washings for equipment cleaning, containing up to 1.5% of the total annual volume of the notified polymer, are expected to be collected in on-site settling tanks. Notified polymer released to the settling tanks is expected to precipitate as sludge and be collected and disposed of by a registered trade waste facility, which is most likely to landfill. Empty containers will be cleaned and recycled at a registered drum facility. Up to 1 % of the notified polymer is estimated to be washed into sewers from the cleaning of empty containers and equipment used in manufacturing or reformulation. However, this release is not expected to reach ecotoxicologically significant concentrations.

The release of the polymer during use will not vary from the original notifier.