File No PLC/1088

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

POLYMER OF LOW CONCERN PUBLIC REPORT

Polymer in BYK-415

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:

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Director
NICNAS

November 2012

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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/1088	Akzo Nobel Car Refinishes Australia Pty Ltd Nuplex Industries (Aust) Pty Ltd	Polymer in BYK-415	No	≤ 25 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.

- A copy of the MSDS should be easily accessible to employees.

- Spray application should be carried out in accordance with the Safe Work Australia *National Guidance Material for Spray Painting* [NOHSC (1999)].

- If products and mixtures containing the notified polymer are classified as hazardous to health in accordance with the *Approved Criteria for Classifying Hazardous Substances* [NOHSC:1008(2004)], workplace practices and control procedures consistent with provisions of State and Territory hazardous substances legislation must 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.

Emergency Procedures

- Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.
- 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 coatings, 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 MSDS of the product containing the notified polymer was provided by the applicant. The accuracy of the information on the MSDS remains the responsibility of the applicant.

ASSESSMENT DETAILS

1. APPLICANT AND NOTIFICATION DETAILS

Applicants
Akzo Nobel Car Refinishes Australia Pty Ltd (ABN 087 571 882)
269 Williamstown Road, Port Melbourne, VIC 3207

Nuplex Industries (Aust) Pty Ltd (ABN 25 00 045 572)
49-61 Stephens Road, Botany, NSW 2019

Exempt Information (Section 75 of the Act)
Data items and details claimed exempt from publication: chemical name, other names, 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 BYK-415

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	Light yellow solid
Melting Point/Glass Transition Temp	> 100 °C
Density	1,110 kg/m^3 at 20 °C
Water Solubility	Not determined. The notified polymer is expected to have limited solubility in water based on its predominantly hydrophobic structure, use pattern and high molecular weight.
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	≤ 20	≤ 25	≤ 25	≤ 25	≤ 25

Use
The notified polymer will be imported in solution into Australia at a concentration of < 40% and will be reformulated into product.

It will be used as an additive for solvent-borne paint systems including automotive refinish, original equipment manufacture, and industrial coatings at a concentration of < 2%. In industrial settings, formulations containing the notified polymer will be applied using automated coating systems or manually, by spray, roller or brush. A small proportion of these formulations (< 2% notified polymer) may also be applied by the public, by brush or roller.

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 is anticipated to be used in industrial settings when used in solvent-borne paint systems including automotive refinish, original equipment manufacture and industrial coatings. Most of the notified polymer will share the fate of the end use articles and be disposed of to landfill or recycled for metals reclamation. During metal reclamation, the notified polymer will thermally decompose to form oxides of carbon and nitrogen, and water vapour. In landfill, the notified polymer will be present as a cured solid film and is not expected to be either bioavailable or mobile based on its high molecular weight and limited water solubility. Waste from reformulation, coating application (up to 10% of the total annual import volume) and cleaning (1%) will be either reused or sent to landfill. A small amount of the notified polymer (< 2%) may be released to sewers when formulations containing the notified polymer are used by the public. However, due to its high molecular weight it is not expected to cross biological membrane and therefore unlikely to bioaccummulate. The notified polymer is expected to slowly degrade through biotic and abiotic processes to form water, oxides of carbon and nitrogen in landfill and water. 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.