File No PLC/1416

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

POLYMER OF LOW CONCERN PUBLIC REPORT

Polymer in REVERSOL 7330

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 and Energy.

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

August 2017

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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/1416	Synthomer Australia Pty Ltd	Polymer in REVERSOL 7330	No	≤ 600 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 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, 2015) 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 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 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.

Safety Data Sheet

The SDS of the product containing the notified polymer was provided by the applicant. The accuracy of the information on the SDS remains the responsibility of the applicant.

ASSESSMENT DETAILS

1. APPLICANT AND NOTIFICATION DETAILS

Applicants
Synthomer Australia Pty Ltd (ABN: 37 612 084 910)
C/O Cosec Consulting Pty Ltd
58 Gipps Street
COLLINGWOOD VIC 3066

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, polymer constituents and residual monomers.

2. IDENTITY OF POLYMER

Marketing Name(s)
REVERSOL 7330 (product containing the notified polymer)

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	Clear liquid (product)
Melting Point/Glass Transition Temp	Not provided.
Density	900-999 kg/m^3 (product)
Water Solubility	Water insoluble.
Dissociation Constant	The notifier stated that there are no potentially cationic functionalities in the notified polymer, and therefore the notified polymer is not expected to be ionised in the environmental pH range of 4–9.
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	600	600	600	600	600

Use
The product containing the notified polymer will be imported by sea in intermediate bulk containers or shipping containers, for use in solvent based coatings. The containers will be then transported by road or rail to the customers' warehouses for storage.
At the customers' sites, the product containing the notified polymer at up to 70% will be manually weighed or metered directly from the storage containers into a blending tank to mix it with other ingredients to form the finished surface coating product. Occasionally, the coatings may be reformulated in batch mixers, where addition of the notified polymer is semi-automated.
The notified polymer will be used in surface coatings at <70% concentration for application to a variety of wood and metal coatings, indoor and outdoor applications, as clear coat and opaque paint. The coatings will be applied by brush, roller or spray, and will be used by both workers and the public.

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.

Although not considered in this risk assessment, NICNAS notes that the notified polymer contains residual monomers that are classified as hazardous according to the *Globally Harmonised System of Classification and Labelling of Chemicals (GHS),* as adopted for industrial chemicals in Australia.

7. ENVIRONMENTAL RISK ASSESSMENT

No ecotoxicological data were submitted. Polymers without significant ionic functionality are of low concern to the aquatic environment. The notified polymer will be manufactured overseas and imported as an additive for surface coatings for application to wood and metal. Accidental spills (estimated by the notifier to be 1% of the total annual import volume) of the notified polymer during import, transport, reformulation or storage are expected to be adsorbed onto a suitable material, and collected for disposal in accordance with local regulations. Small amounts of the notified polymer may remain as residues in empty containers (up to 1%), which are expected to be disposed of in accordance with local regulations. Solvent washings (less than 1%) from the reformulation equipment cleaning will be collected by licensed contractors for disposal. Based on its use pattern, most of the notified polymer is expected to share the fate of the coating articles on which it applied to, to be either disposed of to landfill or recycled for metals reclamation. In landfill, the notified polymer will be present as cured solids and will be neither bioavailable nor mobile. The notified polymer is expected to eventually degrade via biotic and abiotic processes to form water and oxides of carbon and nitrogen. During metal reclamation, the notified polymer will thermally decompose to form water vapour and oxides of carbon and nitrogen. The notified polymer is not expected to bioaccumulate due to its high molecular weight. Furthermore, significant release of the notified polymer to the aquatic environment is not expected. 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.

BIBLIOGRAPHY

Safe Work Australia (2015) Code of Practice: Spray Painting and Powder Coating, Safe Work Australia, https://www.safeworkaustralia.gov.au/doc/model-code-practice-spray-painting-and-powder-coating.