File No PLC/1394

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

POLYMER OF LOW CONCERN PUBLIC REPORT

Polymer in Synocure 9201 S75

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

January 2017

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/1394	Bostik Australia Pty Ltd Brenntag Australia Pty Ltd Valspar Paint Australia Pty Ltd	Polymer in Synocure 9201 S75	No	< 100 tonnes per annum	A component of surface 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 a component of surface 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
Bostik Australia Pty Ltd (ABN: 79 003 893 838)
51-71 High Street
THOMASTOWN VIC 3074

Brenntag Australia Pty Ltd (ABN: 84 117 996 595)
262 Highett Road
HIGHETT VIC 3190

Valspar Paint (Australia) Pty Ltd (ABN: 40 000 035 914)
Level 4, 2 Burbank Place
BAULKHAM HILLS NSW 2153

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, polymer constituents, residual monomers/impurities and import volume.

2. IDENTITY OF POLYMER

Marketing Name(s)
Synocure 9201 S75 (product containing the notified polymer)

Molecular Weight (MW)
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	Colourless liquid
Melting Point/Glass Transition Temp	Decomposition observed at 280 °C
Density	1.098 kg/m^3 at 23 °C
Water Solubility	Measured at 23 °C: 2.95×10^{-3} g/L at pH 2; 2.00×10^{-3} g/L at pH 7; 2.30×10^{-3} g/L at pH 9.
Dissociation Constant	Not determined. Contains no dissociable functionalities.
Particle Size	Not applicable
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	< 100	< 100	< 100	< 100	< 100

Use
The notified polymer will not be manufactured in Australia. It will be imported as a component of Synocure 9201 S75 at a concentration of 75%.

The notified polymer will be formulated into industrial paints at up to 50% concentration. The final product will be sold in 4 – 20 litre containers and will be applied to the surface via spray application.

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. These are not present in the notified polymer as introduced above the cut off concentrations for classification.

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 imported to Australia as a liquid for reformulation into finished industrial coatings for metal substrates. During the reformulation process the notified polymer and other raw materials will be blended in industrial sites by trained operators. The finished surface coating product will only be available to professional applicator for industrial use (vehicle refinishing). Therefore, no significant release of the notified polymer to the environment is expected from these activities.

The notified polymer is expected to be used in industrial sites and automotive refinish facilities by professional spray painters. Therefore, the notified polymer is not expected to be released to the aquatic environment. The notified polymer has very low water solubility which further minimises the risk towards aquatic environment.

During industrial use (mixing and transferring) it is estimated that a maximum of < 1% of the notified polymer is expected to spill and < 1% may remain as residue in the product container. Wastes from container residues and spillage during operation are expected to be collected and disposed at a licensed waste facility. The overspray from surface coating containing the notified polymer will be disposed of to landfill. Spills or accidental release of the notified polymer is expected to be absorbed in an inert absorbent material and disposed of to landfill.

Once cured, the coatings containing the notified polymer will form an inert polymer matrix, and the irreversibly incorporated notified polymer will not be bio-available. Coated articles will be either sent to landfill or thermally decomposed during the recycling of the metal substrates at the end of their useful lives. In landfill, the notified polymer contained in solid waste or on coated surfaces is expected to be immobile and eventually expected to degrade to form oxides of carbon and water vapour by

abiotic and biotic processes. Based on its high molecular weight and low water solubility the notified polymer in landfill is not expected to cross biological membranes, and is therefore unlikely to bioaccumulate.

Therefore based on the low assumed hazard to aquatic organisms and low potential for aquatic exposure, the notified polymer is not expected to pose an unreasonable risk to the environment when used as proposed.

BIBLIOGRAPHY

Safe Work Australia (2015) Code of Practice: Spray Painting and Powder Coating, Safe Work Australia, http://www.safeworkaustralia.gov.au/sites/swa/about/publications/pages/spray-painting-and-powder-coating.