File No PLC/1445

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

POLYMER OF LOW CONCERN PUBLIC REPORT

Polymer in Alberdingk PUR MATT 970

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

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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/1445	Scott Chemicals Australia Pty Ltd	Polymer in Alberdingk PUR MATT 970	No	≤ 18 tonnes per annum	Component of furniture 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 furniture 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
Scott Chemicals Australia Pty Ltd (ABN: 51 099 105 941)
Suite 21, 296 Bay Road
CHELTENHAM VIC 3192

Exempt Information (Section 75 of the Act)
Data items and details claimed exempt from publication: chemical name, molecular and structural formulae, molecular weight, polymer constituents, residual monomers/impurities and import volume.

2. IDENTITY OF POLYMER

Marketing Name(s)
Alberdingk PUR MATT 970 (contains the notified polymer at ≤ 35% concentration)

Molecular Weight
Number Average Molecular Weight (Mn) is > 10,000 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	Liquid
Melting Point/Glass Transition Temperature	0 °C
Density	1000-1100 kg/m^3 at 20 °C
Water Solubility	Not provided. Completely miscible.
Dissociation Constant	Not determined. The notified polymer is an anionic salt and is expected to dissociate in the environmental pH range (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	< 5	< 10	< 14	< 14	< 18

Use
The notified polymer will not be manufactured in Australia. The notified polymer (at a concentration of up to 35%) will be imported as a component for use in furniture coatings and will be reformulated and repackaged in Australia. The end use products containing the notified polymer are intended for use by flooring contractors and to a lesser extent the general public. Products containing the notified polymer are expected to be applied by roller, brush, and spray.

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

The notified polymer is not considered to pose an unreasonable risk to the environment, based on its assumed slight to moderate toxicity to aquatic organisms, as well as a low likelihood of exposure.

No eco-toxicological data were submitted for the polymer. Anionic polymers are generally of low toxicity to fish and daphnia, however they can be moderately toxic to algae. The mode of toxic action is over-chelation of nutrient elements needed by algae for growth. However, the notified polymer does not have acids on alternating carbons of the polymer backbone. Therefore, it is not considered to be an over-chelation hazard to algae.

The notified polymer will be formulated overseas and imported, reformulated into end-use high quality furniture coatings (water-based acrylic-polyurethane copolymer coatings). The main release of the notified polymer to the environment is likely from application overspray during use, as well as cleaning of equipment after use. The notifier has not estimated the percent of the total import volume to water, but has reported that minor amounts of notified polymer will be collected as container and equipment washings during use and disposed of at a licensed waste facility in accordance with State/Territory regulations.

Small amounts of notified polymer will collected as equipment washings during reformulation, and sent to a licensed waste facility for disposal in accordance with State/Territory regulations. Accidental spills of the notified polymer during import, transport or storage are expected to be adsorbed onto a suitable material and collected for disposal of in accordance with local regulations. Discarded containers containing traces of the polymer will be disposed of to landfill. The notifier has not estimated the total annual import volume of the notified polymer may remain as residues in empty containers. Discarded end use articles containing the notified polymer within the cured surface coating will be disposed to landfill, or recycled for metals reclamation. Biotic and abiotic degradation will occur during landfill, but the notified polymer is not expected to be bioavailable or mobile. Thermal decomposition of the paint coating will occur during metal reclamation (forming water vapour and oxides of carbon and nitrogen).

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.

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.