

**NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME
(NICNAS)**

POLYMER OF LOW CONCERN PUBLIC REPORT

Polymer in Alberdingk® AC 2403

This Assessment has been compiled in accordance with the provisions of the *Industrial Chemicals (Notification and Assessment) Act 1989* (the Act) and Regulations. This notification has been carried out under the signed cooperative arrangement(s) with Canada. 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/1455	Scott Chemicals Australia Pty Ltd	Polymer in Alberdingk® AC 2403	No	≤ 20 tonnes per annum	Component of coatings

CONCLUSIONS AND REGULATORY OBLIGATIONS

Human Health and 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 health of workers and the public or to the environment.

Health and Safety Recommendations

- In the interest of occupational health and safety, the following precautions should be observed for spray application of coatings containing the notified polymer:
 - Coatings to be applied in well ventilated areas.
 - Respiratory protection to be used where significant inhalation exposure may occur.

Guidance in selection of personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.

- 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, 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 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 a 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)
21/296 Bay Road
CHELTENHAM VIC 3192

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.

Notification in Other Countries

Canada (2011)

2. IDENTITY OF POLYMER

Marketing Name(s)

Alberdingk® AC 2403 (contains 47% notified polymer)

Molecular Weight

Number Average Molecular Weight (Mn) is > 10,000 g/mol

3. PLC CRITERIA JUSTIFICATION

<i>Criterion</i>	<i>Criterion met</i>
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. INTRODUCTION AND USE INFORMATION

Maximum Introduction Volume of Notified Chemical (100%) Over Next 5 Years

<i>Year</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Tonnes	2-5	5-10	8-12	10-15	15-20

Use

The notified polymer will not be manufactured in Australia. It will be imported as a component of a water-based dispersion at a 47% concentration that will be used for formulation of high-quality furniture and floor coatings. The dry matter of the finished coatings will contain the notified polymer at approximately 90% by weight. End-use coatings will be applied by roller, brush and spray, and will primarily be used by professionals under controlled conditions and, to a less extent, by do-it-yourself (DIY) users.

5. HAZARD ASSESSMENT

No toxicological or ecotoxicological data were submitted. The notified polymer meets the PLC criteria and can therefore be assumed to be of low hazard.

The notified polymer may be used in spray applications for furniture or floor coating and is a water-dispersible high molecular weight polymer with $M_n > 10,000$ Da. Inhalation of polymers with molecular weights $> 70,000$ Da has been linked with irreversible lung damage due to lung overloading and impaired clearance of particles from the lung, particularly following repeated exposure (US EPA, 2017). There is a data gap for polymers with MW between 10,000 and 70,000 Da, and uncertainty may exist. If the notified polymer is inhaled at low levels and/or infrequently, it is assumed that it will be cleared from the lungs.

Overall, 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.

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, <http://www.safeworkaustralia.gov.au/sites/swa/about/publications/pages/spray-painting-and-powder-coating>.

US EPA (2017) High Molecular Weight Polymers in the New Chemicals Program <https://www.epa.gov/reviewing-new-chemicals-under-toxic-substances-control-act-tsca/high-molecular-weight-polymers-new> (Accessed on 7 August 2017).