

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

### POLYMER OF LOW CONCERN PUBLIC REPORT

#### Polymer in AK2022A

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 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.

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:

Street Address:	Level 7, 260 Elizabeth Street, SURRY HILLS NSW 2010, AUSTRALIA.
Postal Address:	GPO Box 58, SYDNEY NSW 2001, AUSTRALIA.
TEL:	+ 61 2 8577 8800
FAX:	+ 61 2 8577 8888
Website:	<a href="http://www.nicnas.gov.au">www.nicnas.gov.au</a>

**Director  
NICNAS**

January 2014

### Table of Contents

SUMMARY .....	2
CONCLUSIONS AND REGULATORY OBLIGATIONS.....	2
ASSESSMENT DETAILS.....	3
1. APPLICANT AND NOTIFICATION DETAILS.....	3
2. IDENTITY OF POLYMER .....	4
3. PLC CRITERIA JUSTIFICATION .....	4
4. PHYSICAL AND CHEMICAL PROPERTIES.....	4
5. INTRODUCTION AND USE INFORMATION .....	4
6. HUMAN HEALTH RISK ASSESSMENT.....	5
7. ENVIRONMENTAL RISK ASSESSMENT .....	5

## 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/1174	Valspar Paint (Australia) Pty Ltd	Polymer in AK2022A	No	≤ 300 tonnes per annum	Component of internal surface coatings for steel food cans

## 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 (M)SDS should be easily accessible to employees.
- If products and mixtures containing the notified polymer are classified as hazardous to health in accordance with the Globally Harmonised System for the 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**

- The notified polymer should be disposed to landfill.

### **Storage**

- The following precautions should be taken by workers regarding storage of the notified polymer:
  - Store in a segregated and approved area.
  - Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (oxidising substances, strong acids, strong bases).

### **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;
  - the notified polymer is intended to be used as a component of internal surface coatings for steel food cans in contact with alcoholic foods;
  - the notified polymer is intended to be used as a component of internal surface coatings for steel food cans for infant formula;

or

- (2) Under Section 64(2) of the Act; if
- the function or use of the notified polymer has changed from a component of internal surface coatings for steel food cans, or is likely to change significantly;
  - the amount of notified polymer being introduced has increased, or is likely to increase, significantly;
  - the method of manufacture of the notified polymer in Australia has changed, or is likely to change, in a way that may result in an increased risk of an adverse effect of the notified polymer on occupational health and safety, public health, or the environment;
  - 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**

**Applicant**

Valspar Paint (Australia) Pty Ltd (ABN: 40 000 035 914)  
13 Webber Parade  
KEILOR EAST VIC 3033

**Exempt Information (Section 75 of the Act)**

Data items and details claimed exempt from publication: chemical name, other names, CAS number, molecular and structural formulae, molecular weight, polymer constituents, residual monomers/impurities, use details and manufacture/import volume.

## 2. IDENTITY OF POLYMER

### Marketing Name

AK2022A (contains the notified polymer at < 60% concentration)

### Molecular Weight

Number Average Molecular Weight (Mn) is > 1,000 Da

## 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. PHYSICAL AND CHEMICAL PROPERTIES

When manufactured, the notified polymer is never isolated from the reaction mixture. The following physical and chemical properties are described in the SDS for the product containing the notified polymer in solvent solution at < 60% concentration.

Appearance at 20 °C and 101.3 kPa	Liquid
Boiling Point	118 °C
Density	980 kg/m <sup>3</sup>
Water Solubility	Based on its high molecular weight and predominantly hydrophobic structure, the notified polymer is expected to have low water solubility.
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

<i>Year</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Tonnes	< 300	100 - 300	100 – 300	100 – 300	100 - 300

### Mode of Introduction

The notified polymer will be imported at < 60% concentration in solvent solution in 200 kg steel drums and will not be further reformulated and repackaged in Australia.

The notified polymer may at some time in the future be manufactured in Australia. The manufacturing processes will occur in closed reaction vessels with automatic feedstocks and effluent lines. The notified polymer will never be isolated from solution.

### Details of Use

The notified polymer will be used as a component of internal surface coatings for steel food cans.

## 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 notified polymer will be used for direct food contact as a component of coatings for steel food cans. Once the coatings are cured and dried, the notified polymer will be bound into the matrix of the coating and is not expected to migrate into the food. Migration tests submitted by the notifier on the finished cured coating containing the notified polymer conducted in accordance with the EU Council Directive of 85/72/EEC (19 December 1985), EU Commission Directive of 97/48/EU (29 July 1997) and USA FDA Regulations (21 CFR 175.300) showed that dry residues of the migrates were below the specified limits, and no specific migration of phenol, formaldehyde and tested starting substances were noted. However, due to the use of one monomer in the manufacture of the notified polymer, the finished coating is restricted in the US from use in direct food contact with alcoholic foods.

A “Food Contact Compliance” statement provided by the notifier for a finished coating product containing the notified polymer states that when properly applied and cured in accordance with the recommendation on the technical datasheet, the product may be used in can coating applications in contact with non-alcoholic foods (except infant formula) under US FDA Regulations. It also states that the finished coating product enables the coated material or article to comply with EC Regulation 1935/2004.

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 for the 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.

Overall, given the assumed low hazard of the notified polymer and provided the coatings are cured within the manufacturer’s specification and not used in direct food contact with alcoholic foods or with infant formula, the notified polymer is not considered to pose an unreasonable risk to workers or the public.

## 7. ENVIRONMENTAL RISK ASSESSMENT

No ecotoxicological data were submitted for the notified polymer. Minor amounts of the notified polymer will be released as container and equipment washings during use, which are expected to be sent to a licensed waste facility for disposal in accordance with State/Territory regulations.

The coating formulation containing the notified polymer will be applied by internal surface coatings for steel food cans in an automated industrial process. No significant releases to the environment are expected from this process as the notified polymer is immobilised on the metal surface. Solid wastes from residues in containers are expected to be collected and disposed of to landfill. The cured coatings, which are part of an inert matrix, may be sent to landfill or thermally decomposed during metal reclamation when coated steel food cans are disposed of at the end of use. The notified polymer is expected to be immobile in landfill. It is likely to degrade in landfill or by thermal decomposition to form water and oxides of carbon and nitrogen. Bioaccumulation is not likely based on the high molecular weight of the notified polymer and its limited potential for exposure to the aquatic environment when used as proposed.

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.