

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

### POLYMER OF LOW CONCERN PUBLIC REPORT

#### Polymer in TL 73i

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:

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**

February 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/1382	Tenaru Timber & Finishes Pty Ltd	Polymer in TL 73i	No	< 100 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 notified polymer and product containing the notified polymer were 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

Tenaru Timber & Finishes Pty Ltd (ABN: 25 000 588 358)  
Unit 9 & 10, 350 Edgar Street  
CONDELL PARK NSW 2200

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

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

### 2. IDENTITY OF POLYMER

#### Marketing Name(s)

TL 73i (product containing the notified polymer)

#### CAS Number

Unassigned

#### Molecular Weight

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

### 3. PLC CRITERIA JUSTIFICATION

#### Criterion

Molecular Weight Requirements  
Functional Group Equivalent Weight (FGEW) Requirements  
Low Charge Density  
Approved Elements Only  
Stable Under Normal Conditions of Use  
Not Water Absorbing  
Not a Hazard Substance or Dangerous Good

#### Criterion met

Yes  
Yes  
Yes  
Yes  
Yes  
Yes  
Yes

The notified polymer meets the PLC criteria.

### 4. PHYSICAL AND CHEMICAL PROPERTIES

Appearance at 20 °C and 101.3 kPa	Viscous yellow liquid*
Melting Point/Glass Transition Temp	Not determined
Density	Not determined
Water Solubility	Not determined. Expected to be low based on the high molecular weight and predominantly hydrophobic structure.
Dissociation Constant	Not determined
Reactivity	Stable under normal environmental conditions
Degradation Products	None under normal conditions of use

\*Refers to polymer in solution. The notified polymer is not isolated from the solvent in which it is prepared.

### 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	< 100	< 100	< 100	< 100	< 100

### Use

The notified polymer will be imported into Australia as a component of decorative and protective coatings at < 50% concentration. The products will not be formulated in Australia but may be repackaged into smaller size containers for retail sales. The products containing the notified polymer will be available to professional painters and the public for do-it-yourself (DIY) applications for interior and exterior use. The product may be applied using brush, roller, spray or by aerosol methods.

## 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

No ecotoxicological data were submitted. Polymers without significant ionic functionality are generally of low concern to the environment.

The notified polymer will be imported into Australia as a component of finished coating formulations for wood substrates. The product containing the notified polymer will not be reformulated in Australia, but may be repackaged for retail sale. Release of the notified polymer to the environment during import, repackaging, storage, and transport is expected to be limited to accidental spills or leaks and residue in import packaging. Spills or accidental release of the products containing the notified polymer are expected to be collected with adsorbents, and disposed of to landfill in accordance with local government regulations.

The notified polymer will be used as a solvent borne coating for interior and exterior substrates by professional painters and do-it-yourself (DIY) users. During use, coatings containing the notified polymer are expected to be applied by brush, roller and spray techniques. Therefore, the main release of the notified polymer during use is expected to be in the form of overspray. These will typically entail collection with adsorbents for disposal as solid wastes to landfill, in accordance with local government regulations. During use, the notified polymer may also be released to the environment as accidental spills and container residues. These releases are expected to be collected with adsorbents and disposed of to landfill in accordance with local government regulations. Residues containing the notified polymer on brushes and rollers are expected to be rinsed into containers and then allowed to cure before disposal, as solid wastes, to landfill. Used brushes and rollers are expected to be disposed of to landfill.

As a worst case scenario, it is assumed that up to 5% of the coatings containing the notified polymer used by DIY users may be incorrectly disposed of to the sewer, drains, or ground from waste and washing of application equipment. Assuming these releases occur nationwide and equally over the entire year. Under the worst case scenario the predicted environmental concentration (PEC) is calculated to be 3.03 µg/L which is well below the known EC50 values for algae of the most toxic polymers (EC50 > 1mg/L). Therefore, the accidental release of the notified polymer will not lead to ecotoxicologically significant concentrations in the aquatic environment.

The notified polymer will share the fate of the coated article, which is ultimately expected to be disposed of to landfill. In landfill, the notified polymer will be present as cured solids, which will be neither bioavailable nor mobile. Furthermore, the notified polymer is not expected to cross biological membranes and bioaccumulate due to its high molecular weight. In landfill, the notified polymer is expected to eventually degrade to form water and oxides of carbon via biotic and abiotic processes.

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