File No PLC/1240

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

POLYMER OF LOW CONCERN PUBLIC REPORT

Tego Flow 425

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.

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:

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Director
NICNAS

November 2014

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/1240	Valspar Paint (Aust) Pty Ltd	Tego Flow 425	No	< 1 tonne per annum	Component of coatings and paints

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.

- 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, 2012) 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 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

- 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 and paints, 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.

(Material) Safety Data Sheet
The (M)SDS of the notified polymer was provided by the applicant. The accuracy of the information on the (M)SDS remains the responsibility of the applicant.

ASSESSMENT DETAILS

1. APPLICANT AND NOTIFICATION DETAILS

Applicants
Valspar Paint (Aust) Pty Ltd (40 000 035 914)
Level 4, 2 Burbank Place
Norwest Business Park
BAULKHAM HILLS NSW 2153

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, spectral data, purity, polymer constituents, residual monomers/impurities and import volume.

2. IDENTITY OF POLYMER

Marketing Name(s)
Tego Flow 425

Molecular Weight
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	Liquid
Melting Point/Glass Transition Temp	~ 17 °C
Density	1050 kg/m^3 at 25 °C
Water Solubility	Fully miscible
Dissociation Constant	Not determined
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	< 1	< 1	< 1	< 1	< 1

Use
The notified polymer will be imported as a component of finished coatings and paints at ≤ 5% concentration for automotive and industrial use.

6. HUMAN HEALTH RISK ASSESSMENT

The notified polymer meets the PLC criteria and is therefore assumed to be of low hazard. This is further supported by tests submitted on the following toxicological endpoints.

Endpoint	*Result*	*Effects Observed?*	*Test Guideline*
Rat, acute oral	LD50 > 5000 mg/kg bw	no	FHSA* Protocol No. 001/P203
Rabbit, skin irritation	slightly irritating	yes	FHSA* Protocol No. 002/P201
Rabbit, eye irritation	slightly irritating	yes	FHSA* Protocol No. 003/P202

* Federal Hazardous Substances Control Act

All results were indicative of low hazard.

Occupational Health and Safety Risk Assessment
The notified polymer meets the PLC criteria and is therefore assumed to be of low health hazard. However, based on toxicological studies provided by the notifier, the notified polymer may present as a slight skin or eye irritant.

During application of coatings and paints there is potential for dermal and ocular exposure to the notified polymer at up to 5% concentration. At these low concentrations, skin and eye irritation is not expected. There is also potential for inhalation exposure during spray application, although this is expected to be low given the low concentration (≤ 5%) of the notified polymer in the coatings and paints. Inhalation exposure should be minimised through the notifier recommended use of personal protective equipment including respiratory protection. Furthermore, the notified polymer is water soluble and has a number average molecular weight < 10,000 Da and is therefore, expected to be readily cleared from the lungs and not cause a lung overloading effect.

Overall, 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.

Public Health and Safety Risk Assessment
The notified polymer and products containing the notified polymer will not be sold to the general public. However, the public may come into contact with the notified polymer during use of products that have been coated with coatings and paints containing the notified polymer. As the notified polymer will be bound within a matrix after drying and will not be bioavailable, the risk to general public is not considered to be unreasonable.

7. ENVIRONMENTAL RISK ASSESSMENT

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

Most of the notified polymer will be incorporated and bound within an inert matrix on metal substrates when used as industrial coating or in metal primer coating, and is, therefore, not expected to be bioavailable. Release of the notified polymer to the aquatic environment is not expected to be significant at any stage in the lifecycle of the notified polymer within Australia. Residues from reformulation and end-use equipment washings and from storage containers are expected to be collected and, after solidification, disposed of to landfill. Up to 50% of the notified polymer may be released as overspray during coating operation. The notified polymer from overspray is expected to be collected and disposed of to landfill. The notified polymer will share the fate of the articles into which it is incorporated. It is expected to be disposed of to landfill or recycled. The notified polymer is expected to eventually degrade in landfill, or by thermal decomposition during metal reclamation, to

form water and oxides of carbon and silicon. Due to its high molecular weight, the notified polymer is not expected to cross biological membranes and therefore, a low potential for bioaccumulation is predicted.

Therefore, based on its reported use pattern in industrial settings, the notified polymer is not considered to pose an unreasonable risk to the environment.