File No PLC/1532

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

POLYMER OF LOW CONCERN PUBLIC REPORT

Polymer in TPSiV 3011-70A Natural Thermoplastic Elastomer

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

May 2019

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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/1532	Dow Performance Materials (Australia) Pty Ltd Dow Chemical (Australia) Pty Ltd TULP Operations Australia Pty Ltd Polymers International Australia Pty Ltd APN Plastics Pty Ltd Carst & Walker (Australia) Pty Ltd	Polymer in TPSiV 3011-70A Natural Thermoplastic Elastomer	No	< 30 tonnes per annum	Electrical industry and electronics construction materials additive

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.

- 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 electrical industry and electronics construction materials additive, 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
Dow Performance Materials (Australia) Pty Ltd (ABN: 29 004 513 188)
Level 17, 8 Exhibition Street
MELBOURNE VIC 3000

Dow Chemical (Australia) Pty Ltd (ABN: 72 000 264 979)
Level 17, 8 Exhibition Street
MELBOURNE VIC 3000

TULP Operations Australia Pty Ltd (ABN: 67 615 093 822)
Level 5, 20 Rodborough Road
FRENCHS FOREST NSW 2086

Polymers International Australia Pty Ltd (ABN: 92 069 883 825)
17 - 19 Endeavour Way
BRAESIDE VIC 3195

APN Plastics Pty Ltd (ABN: 13 590 070 228)
44-46 Marni Street
DANDENONG VIC 3175

Carst & Walker (Australia) Pty Ltd (ABN: 28 085 896 822)
1/5 Iron Street
MALAGA WA 6090

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

2. IDENTITY OF POLYMER

Marketing Name(s)
TPSiV 3011-70A Natural Thermoplastic Elastomer

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

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	White to off white thermoplastic pellet*
Melting Point/Glass Transition Temperature	Not determined
Density	1196.4 kg/m^3 at 25 °C*
Water Solubility	Not determined, expected to have low water solubility due to high molecular weight and predominantly hydrophobic structure
Particle Size	Introduced as pellets*
Reactivity	Stable under normal environmental conditions
Degradation Products	None under normal conditions of use

*Imported product containing the notified polymer

5. INTRODUCTION AND USE INFORMATION

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

Year	*1*	*2*	*3*	*4*	*5*
Tonnes	1-3	3-6	6-10	10-30	10-30

Use
The notified polymer will not be manufactured in Australia. It will be imported into Australia as a component of a thermoplastic pellet product for use in electrical, electronic and construction materials.

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 as a component of a thermoplastic pellet product for use in electrical, electronic and construction materials. Accidental spills of the product containing the notified polymer during import, transport and storage are expected to be collected for re-use if practicable or disposal, in accordance with local government regulations. The liquid waste from equipment washing will be collected by approved waste contractors for recycling. Residual notified polymer in empty containers is expected to be disposed of to landfill, in accordance with local government regulations.

Most of the notified polymer is expected to share the fate of the articles in which it has been incorporated and be disposed of to landfill at the end of their useful lives, thus release of the notified polymer to the aquatic environment is expected to be limited. In landfill, the notified polymer will be present as cured solids and will be neither bioavailable nor mobile. The notified polymer is not expected to bioaccumulate due to its high molecular weight. In landfill, the notified polymer is expected to eventually degrade via biotic and abiotic processes to form water and oxides of carbon and silicon.

Therefore, based on its assumed low hazard and the assessed use pattern, the notified polymer is not considered to pose an unreasonable risk to the environment.