File No SAPLC/187

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

POLYMER OF LOW CONCERN PUBLIC REPORT

Polymer in Cogegum GFR320

This Self Assessment has been compiled by the applicant and adopted by NICNAS in accordance with the provisions of the *Industrial Chemicals (Notification and Assessment) Act 1989* (Cwlth) (the Act) and Regulations. This legislation is an Act of the Commonwealth of Australia. The National Industrial Chemicals Notification and Assessment Scheme (NICNAS), administered by the Department of Health and the Department of the Environment have screened this assessment report. The data supporting this assessment will be subject to audit by NICNAS.

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

March 2016

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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
SAPLC/187	TCL Australia Pty Ltd	Polymer in Cogegum GFR320	No	≤ 20 tonnes per annum	Component of wire and cable insulation

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

- Where reuse of 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.

Storage

- The following precautions should be taken by workers regarding storage of the notified polymer:
  - 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;

or

(2) Under Section 64(2) of the Act; if
- the function or use of the notified polymer has changed from component of wire and cable insulation , 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 product containing 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

Applicant
TCL Australia Pty Ltd (ABN: 39 091 773 330)
150 Woodlands Drive
BRAESIDE VIC 3195

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, use details and import volume.

2. IDENTITY OF POLYMER

Marketing Name
Polymer in Cogegum GFR320

Other name
Polyethylene (co-1-octene) graft polymer

Molecular Weight
Number Average Molecular Weight (Mn) is > 10,000 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	White pellets*
Melting Point/Glass Transition Temp	Not determined. The notified polymer is never isolated from the polymeric compound.
Density	1,340 kg/m^3 at 20 °C*
Water Solubility	Not determined. Expected to have low water solubility based on its predominantly hydrophobic chemical structure and high molecular weight
Dissociation Constant	Not determined. The notified polymer contains no dissociable functionalities.
Particle Size	3-5 mm*
Reactivity	Stable under normal conditions of use
Degradation Products	None under normal conditions of use

***** For the polymeric compound Cogegum GFR320 containing the notified polymer at ≤ 20% w/w. The notified polymer is inseparable in the polymeric compound.

5. INTRODUCTION AND USE INFORMATION

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

Year	*1*	*2*	*3*	*4*	*5*
Tonnes	1-2	2-5	5-7	10-14	15-20

Use
The notified polymer will be imported as a component of a polymeric compound (Cogegum GFR320) in pellet form at ≤ 20% w/w in sealed plastic bags for industrial use. It will not be reformulated or manufactured in Australia. The polymeric compounds containing the notified polymer at ≤ 20% w/w will be processed at customer facilities in extrusion line for thermoplastic materials and then cured. The notified polymer will be used in the production of wire and cable insulation and sheathing articles.

6. HUMAN HEALTH RISK ASSESSMENT

No toxicological data were available. The notified polymer meets the PLC criteria and can therefore be considered 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

7.1. Exposure Assessment

ENVIRONMENTAL RELEASE

The notified polymer will not be manufactured or reformulated in Australia. Therefore, release to the environment is expected to only occur through accidental spills or leaks of the storage containers during shipping, transport, warehousing, and/or use at the construction site. The transformation process of the polymeric compound into finished articles (wire and cable insulation) is expected to be fully automated. Once the polymeric compound containing the notified polymer is extruded and cured, it is expected to be bound within the matrix of the wire and cable insulation articles. In the event of surface release of the notified polymer, spills will be contained and disposed of in accordance with local government regulations.

ENVIRONMENTAL FATE

Once the notified polymer is extruded and cured into wire and cable insulation articles, it is expected to be disposed of to landfill at the end of their useful life. The notified polymer is not expected to be water soluble and it is not expected to readily biodegrade in the environment. The notified polymer's high molecular weight will preclude absorption across biological membranes, and thus it is unlikely to bioaccumulate. In landfill, leaching of the notified polymer is not expected given it is bound within the product matrix of wires and cables. Ultimately, it will be degraded via biotic or abiotic pathways into water and oxides of carbon and silicon.

7.2. Environmental Hazard Characterisation

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

7.3. Environmental Risk Assessment

No significant release of the notified polymer to the aquatic environment is expected. Based on the assessed use pattern, the polymer is not expected to pose an unreasonable risk to the aquatic environment.