File No PLC/931

October 2010

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

FULL PUBLIC REPORT

Polymer in ACLUBE PAS-V176P

This Assessment has been compiled 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) is administered by the Department of Health and Ageing, and conducts the risk assessment for public health and occupational health and safety. The assessment of environmental risk is conducted by the Department of Sustainability, Environment, Water, Population and Communities.

For the purposes of subsection 78(1) of the Act, this Full Public Report may be inspected at our NICNAS office by appointment only at Level 7, 260 Elizabeth Street, Surry Hills NSW 2010.

This Full 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

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1. APPLICANT AND NOTIFICATION DETAILS

APPLICANT(S)
Toyota Tsusho (Australasia) Pty Ltd (ABN 24 056 847 315)
231-233 Boundary Road
Laverton North VIC 3026

NOTIFICATION CATEGORY
Polymer of Low Concern

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, Residual Monomers/Impurities, Use Details and Import Volume.

VARIATION OF DATA REQUIREMENTS (SECTION 24 OF THE ACT)
No variation to the schedule of data requirements is claimed.

PREVIOUS NOTIFICATION IN AUSTRALIA BY APPLICANT(S)
None

NOTIFICATION IN OTHER COUNTRIES
Canada, Japan and China

2. IDENTITY OF CHEMICAL

MARKETING NAME(S)
Polymer in ACLUBE PAS-V176P (contains the notified polymer at 60-70%)

MOLECULAR WEIGHT (MW)
Number Average Molecular Weight (Mn) > 10,000 Da

REACTIVE FUNCTIONAL GROUPS
The notified polymer contains only low concern functional groups.

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	Yellow-brown solid
Melting Point/Glass Transition Temp	Not determined, introduced in solution
Density	930 kg/m^3
Water Solubility	< 1 × 10^{-3} g/L at 20°C. Determined by dissolved organic carbon (DOC) analyses of water samples shaken for 24 h with notified polymer (10 g/L) at pH 2, 7 and 9.
Dissociation Constant	Not determined. The notified polymer has no dissociable functions.
Reactivity	Stable under normal environmental conditions. The notified polymer is expected to be hydrolytically stable in the environmental pH range (4-9) at ambient temperature.
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	10-50	10-50	10-50	10-50	10-50

Use
The notified polymer will be used as a component of motor oil for gasoline and diesel engines at concentrations of < 3%.
The notified polymer will not be manufactured within Australia. The notified polymer will be reformulated at facilities across Australia using predominantly closed systems.

Mode of Introduction and Disposal
The notified polymer will be introduced in finished motor oil at concentrations of < 3% and in the product ACLUBE PAS-V176P which contains the notified polymer at concentrations of 60-70%.

6. HUMAN HEALTH IMPLICATIONS

Hazard Characterisation
No toxicological data were submitted. The notified polymer meets the PLC criteria and can therefore be considered to be of low hazard.

Occupational Health and Safety Risk Assessment
Dermal and ocular exposure to the notified polymer (60-70%) may potentially occur during processes such as connection and disconnection of hoses to blending vessels and filling product containers during reformulation. However, engineering controls and personal protective equipment (PPE) worn by workers are expected to minimise exposure.

The potential for dermal and ocular exposure also exists during the draining and filling of lubricant products containing the notified polymer (≤ 3%) in mechanical workshops. Exposure of the hands is the most likely, and may be minimised by wearing gloves.

Workers may experience accidental and dermal exposure to the notified polymer at concentrations of 60-70% during reformulation. However, the polymer is assumed to be of low hazard, therefore this exposure is not expected to be unacceptable.

Public Health Risk Assessment
Do-it-yourself (DIY) users may experience dermal and ocular exposure to the notified polymer at ≤ 3% in lubricant products similar to that described above for use in mechanical workshops when adding lubricant products to automobiles and other machinery. However, DIY users are expected to use lubricant products less frequently than workers in mechanical workshops and therefore exposure is expected to be less frequent. The overall risk to public health is not expected to be unacceptable given the assumed low hazard of the notified polymer and the infrequent use of products containing the notified polymer by consumers.

7. ENVIRONMENTAL IMPLICATIONS

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

Environmental Risk Assessment
The notified polymer has limited potential for release to the aquatic environment based on its use as an additive in engine oils. The majority of the imported quantity of notified polymer will be thermally decomposed to water and oxides of carbon during use or as a result of waste oil re-use or recycling. A fraction of the notified polymer may be released to soil from engine leaks where it is expected to adsorb to soil particles based on its hydrophobicity. A proportion of the notified polymer may enter the aquatic environment through transport of soil particles contaminated with engine oil or through inappropriate disposal of waste oil. The notified polymer will be associated with the sediment compartment where it is unlikely to be either bioavailable or bioaccumulative.

The limited potential for aquatic exposure and the assumed low ecotoxicological hazard indicates that the notified polymer does not present a significant risk to the environment when it is appropriately used and disposed.

8. CONCLUSIONS AND RECOMMENDATIONS

Human health risk assessment
Under the conditions of the occupational settings described, the notified polymer is not considered to pose an unacceptable risk to the health of workers.

When used in the proposed manner, the notified polymer is not considered to pose an unacceptable risk to public health.

Environmental risk assessment
Based on the reported use pattern, the notified polymer is not expected to pose a risk to the environment.

Recommendations

CONTROL MEASURES
Occupational Health and Safety

- 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 MSDS should be easily accessible to employees.

- If products and mixtures containing the notified polymer are classified as hazardous to health in accordance with the *Approved Criteria for Classifying Hazardous Substances* [NOHSC:1008(2004)], workplace practices and control procedures consistent with provisions of State and Territory hazardous substances legislation must be in operation.

Disposal

- The notified polymer should be disposed of to landfill.

Emergency procedures

- Spills or accidental release of the notified polymer should be handled by physical containment, collection and subsequent safe disposal.

Regulatory Obligations

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 motor oil, 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 chemical 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 MSDS of a product containing the notified polymer provided by the notifier was reviewed by NICNAS. The accuracy of the information on the MSDS remains the responsibility of the applicant.