File No PLC/1452

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

POLYMER OF LOW CONCERN PUBLIC REPORT

Polymer in Dodiflow 4700 Raw and Dodiflow 4700-1

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

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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/1452	Clariant (Australia) Pty Ltd	Polymer in Dodiflow 4700 Raw and Dodiflow 4700-1	No	≤ 5 tonnes per annum	Component of diesel fuel

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 component of diesel fuel, 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 a 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
Clariant (Australia) Pty Ltd (ABN: 30 069 435 552)
Level 3, Acacia Place
296-324 Ferntree Gully Road
NOTTING HILL VIC 3168

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, polymer constituents, residual and monomers/impurities.

2. IDENTITY OF POLYMER

Marketing Name
Dodiflow 4700 Raw and Dodiflow 4700-1 (contains the notified polymer at < 80% concentration)

Molecular Weight
Number Average Molecular Weight (Mn) is > 1,000 g/mol

3. PLC CRITERIA JUSTIFICATION

Criterion	*Criterion met*
Molecular Weight Requirements	Yes
Functional Group Equivalent Weight (FGEW) Requirements	Not applicable
Low Charge Density	Not applicable
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	Milky white to yellow waxy solid*
Pour point	Approx. 33 °C*
Density	Approx. 870 kg/m^3 at 40 °C*
Water Solubility	Insoluble
Dissociation Constant	Does not contain dissociable functionality
Reactivity	Stable under normal environmental conditions
Degradation Products	None under normal conditions of use

*For the product containing the notified polymer at < 80% concentration in organic solvent

5. INTRODUCTION AND USE INFORMATION

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

Year	*1*	*2*	*3*	*4*	*5*
Tonnes	5	5	5	5	5

Use
The notified polymer will not be manufactured in Australia. It will be imported mostly (90%) as a component of diesel fuel at < 1% concentration. The remaining 10% of the total import volume will be introduced as a component of a cold flow additive package for diesel fuels (Dodiflow 4700-1/Dodiflow Raw) at < 80% concentration.

Diesel fuels containing the notified polymer at < 1% concentration will be used by industry, mainly for trucks or ships. These fuels may also be used to a lesser extent in industrial ovens or other similar industrial settings. Diesel fuels containing the notified polymer at < 1% concentration may also be used by the public to refill their vehicles at service stations.

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

The notified polymer will mostly be imported as a component of diesel fuel, and a small proportion will be imported as a component of a cold flow additive package for diesel fuels. Accidental spills of the notified polymer during transport and storage are expected to be collected for disposal in accordance with local government regulations. Empty containers containing residue of the notified polymer are expected to be reused or disposed of by authorised waste management facilities in accordance with local government regulations.

The notified polymer meets the PLC criteria and can therefore be assumed to be of low hazard. This is supported by environmental endpoints observed in testing conducted on the product Dodiflow 4700 Raw containing < 80% of the notified polymer.

Endpoint	*Result**	*Assessment Conclusion*
Fish Toxicity	EC50 > 100 mg/L	Not harmful to fish up to its water solubility limit
Inhibition of Bacterial Respiration	EC50 > 10 g/L	Does not inhibit bacterial activity in STPs

*Full study reports were not provided by the notifier

The ecotoxicological results in the above table were indicative of low hazard. The biodegradability test conducted on the product Dodiflow 4700 Raw indicates that it is not readily biodegradable (< 10% degradation in 28 days in OECD 301B test, full study report not provided by the notifier). The notified polymer is not expected to bioaccumulate based on its high molecular weight.

Diesel fuels containing the notified polymer will be used by industry, mainly for trucks or ships. These fuels may also be used to a lesser extent in industrial ovens or other similar industrial settings. Diesel fuels containing the notified polymer may also be used by the public to refill their vehicles at service stations. Most of the imported notified polymer is expected to be combusted in engines to yield oxides of carbon and water during use. Thus, release of the notified polymer to the aquatic environment in ecologically significant concentrations is not expected.

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