

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

POLYMER OF LOW CONCERN PUBLIC REPORT

P92-1433

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:

Street Address:	Level 7, 260 Elizabeth Street, SURRY HILLS NSW 2010, AUSTRALIA.
Postal Address:	GPO Box 58, SYDNEY NSW 2001, AUSTRALIA.
TEL:	+ 61 2 8577 8800
FAX:	+ 61 2 8577 8888
Website:	www.nicnas.gov.au

**Director
NICNAS**

May 2019

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SUMMARY

The following details will be published in the NICNAS *Chemical Gazette*:

ASSESSMENT REFERENCE	APPLICANT	CHEMICAL OR TRADE NAME	HAZARDOUS SUBSTANCE	INTRODUCTION VOLUME	USE
PLC/1526	BASF Australia Ltd	P92-1433	No	≤ 5 tonnes per annum	Component of automotive coatings

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 a component of automotive coatings, 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 products 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

BASF Australia Ltd (ABN: 62 008 437 867)
Level 12, 28 Freshwater Place
SOUTH BANK VIC 3006

Exempt Information (Section 75 of the Act)

Data items and details exempt from publication include: chemical name, CAS number, molecular and structural formulae, molecular weight, polymer constituents, residual monomers/impurities and import volume.

2. IDENTITY OF POLYMER

Marketing Names

49-W420 0,100L Basecoat
49-W408 0,100L Basecoat
49-W448 0,100L Basecoat
49-W436 0,100L Basecoat
49-W441 0,100L Basecoat
*imported products containing the notified polymer at < 37% concentration

Other Names

P92-1433 (notified polymer)

Molecular Weight

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

3. PLC CRITERIA JUSTIFICATION

<i>Criterion</i>	<i>Criterion met</i>
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	Tacky solid
Melting Point/Glass Transition Temperature	Not determined
Density*	1,000-1,280 kg/m ³
Water Solubility	Not determined. Based on the chemical structure the notified polymer is not expected to be soluble
Dissociation Constant	Not determined. Contains terminal anionic functionality with an expected pKa of 4
Reactivity	Stable under normal environmental conditions

Degradation Products

None under normal conditions of use

*For imported products containing the notified polymer at < 37% 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 as a component of finished automotive coatings at < 37% concentration. No further reformulation or repackaging will occur.

The coatings containing the notified polymer at < 37% concentration will be used by professional painters at vehicle repair workshops. The paints will be applied by spray in a spray booth.

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.

Although not considered in this risk assessment, NICNAS notes that the notified polymer contains an impurity that is classified as hazardous according to the *Globally Harmonised System of Classification and Labelling of Chemicals (GHS)*, as adopted for industrial chemicals in Australia

7. ENVIRONMENTAL RISK ASSESSMENT

No ecotoxicological data were submitted. Polymers without significant ionic functionality are generally of low concern to the environment (Boethling & Nabholz, 1997).

The notified polymer will be imported into Australia as a finished product in sealed containers; it will not be reformulated or repackaged in Australia. Exposure during import and transport is not expected, except from any accidental spills of the notified polymer. These will be physically contained, absorbed onto suitable materials and collected for disposal to landfill in accordance with local government regulations.

The notified polymer will be used in vehicle repair workshops only by professional spray painters.

It is assumed that approximately 30% of the notified polymer will be lost from overspray, 5% of the notified polymer will be lost from cleaning equipment after application procedures, and 0.5% of the notified polymer will remain in the containers after use. Losses may be contained in spray booths by engineering controls or absorbed on rags. Based on a maximum annual import volume of 5,000 kg, losses would be 1,775 kg (1500 + 250 + 25 kg). In all three cases, waste of the notified polymer (and any accidental spills) will be collected and disposed of to landfill in accordance with local government regulations. Residues in empty containers may be collected for recycling or disposal to landfill.

The cured notified polymer is expected to share the fate of the articles to which it has been applied, most often being disposed of to landfill or metal recycling. In landfill, the notified polymer will be neither bioavailable nor mobile and is expected to eventually degrade via biotic and abiotic processes to form water and oxides of carbon. During metal recycling the polymer is expected to be completely combusted.

The release of the notified polymer to the aquatic environment in ecologically significant concentrations is not expected. Based on its high molecular weight and water insolubility it is not expected to bioaccumulate.

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

BIBLIOGRAPHY

Boethling, RS & Nabholz VJ (1997) Chapter 10 Environmental Assessment of Polymers under the U.S. Toxic Substances Control Act. In: Hamilton, JD Sutcliffe R ed. Ecological Assessment of Polymers Strategies for Product Stewardship and Regulatory Programs, 1st ed. New York, Van Nostrand Reinhold, pp 187-234.