

NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

POLYMER OF LOW CONCERN PUBLIC REPORT

Polymer in 923-530 HS Multi Clear G2

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**

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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/1562	BASF Australia Ltd	Polymer in 923-530 HS Multi Clear G2	No	< 40 tonnes per annum	Component of 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

- Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.
- 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 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 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

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

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, spectral data, purity, polymer constituents, residual monomers/impurities and import volume.

2. IDENTITY OF POLYMER

Marketing Name(s)

923-530 HS Multi Clear G2 (containing the notified polymer at < 50%)

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	colourless liquid*
Melting Point/Glass Transition Temperature	Not determined
Density	981 kg/m ³ at 20 °C*
Water Solubility	Not determined. Immiscible
Dissociation Constant	Not determined. Contains potential dissociable functionality but ionisation is expected to be limited due to immiscibility in water.
Particle Size	Imported in organic solvent
Reactivity	Stable under normal environmental conditions
Degradation Products	None under normal conditions of use

*For product containing the notified polymer at < 50%

5. INTRODUCTION AND USE INFORMATION

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

<i>Year</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
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Tonnes	< 40	< 40	< 40	< 40	< 40
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Use

The notified polymer will be imported and used as a component of solvent based top-coats for automotive applications at < 50% concentration. The coatings will be applied by spray in industrial settings. The notified polymer will not be manufactured, reformulated or repackaged in Australia.

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 residual monomers that are 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. The notified polymer contains functional groups with the potential to become anionic under environmental conditions (pH 4-9), however, ionisation is expected to be limited due to its immiscibility in water. Anionic polymers are generally of low toxicity to fish and daphnia, however they are known to be moderately toxic to algae. The mode of toxic action is over-chelation of nutrient elements needed by algae for growth. The highest toxicity is when the acid is on alternating carbons of the polymer backbone. However, this does not apply to the notified polymer and it is therefore not considered to be an over-chelation hazard to algae.

The notified polymer will not be manufactured, reformulated or repackaged in Australia. It will be imported into Australia as a component (< 50 %) of solvent based top-coats for automotive applications, which are packaged in 5 L jerricans. Release of the notified polymer to the environment in the event of accidental spills or leaks during storage and transport is expected to be absorbed on suitable materials and disposed of to landfill in accordance with local government regulations.

The coatings containing the notified polymer will be available to professional applicators in industrial settings (i.e. vehicle repair workshops) and applied by spray techniques. The notifier estimates that approximately 30% of the total annual importation volume (12 tonnes) could be released as overspray generated during use. The overspray in spray booths is expected to be collected using filters and water scrubbers and disposed of to landfill in accordance with local government regulations. The notifier estimates that waste from the cleaning of equipment could account for up to 5% (2 tonnes) of the maximum import volume and is expected to be collected by an approved waste contractor, and disposed of to landfill. Other minor losses could be as result of incidental spillage of spray equipment and is expected to be collected on kraft paper or newspaper in spray booths before disposal to landfill in accordance with local government regulations.

Most of the notified polymer is expected to share the fate of the articles to which it has been applied; either subjected to metal reclamation processes or disposed to landfill at the end of their useful lives. The notifier estimates that up to 0.5% (200 kg) of the notified polymer may remain as residues in empty containers. These residues are expected to be cured and disposed of to landfill along with the containers in accordance with local government regulations. In landfill, the notified polymer will be present as cured solids and will be neither bioavailable nor mobile. The notified polymer in landfill is expected to eventually degrade via biotic and abiotic processes to form water and oxides of carbon. During metal reclamation processes, the notified polymer will thermally decompose to form water vapour and oxides of carbon. Thus, release of the notified polymer from the assessed use pattern is not expected to lead to ecotoxicologically significant concentrations in the aquatic environment. However, if accidentally

released to water, the notified polymer is insoluble in water and is not expected to cross biological membranes due to its high molecular weight and is therefore 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.