

## NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

### POLYMER OF LOW CONCERN PUBLIC REPORT

#### **Polymer in 568-M 135 HS 2K CV Mixing Clear, 68 T 144 Yellow Tinter, and 68 T 230 Pure Orange**

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.

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**

July 2016

### Table of Contents

SUMMARY .....	2
CONCLUSIONS AND REGULATORY OBLIGATIONS.....	2
ASSESSMENT DETAILS.....	4
1. APPLICANT AND NOTIFICATION DETAILS.....	4
2. IDENTITY OF POLYMER .....	4
3. PLC CRITERIA JUSTIFICATION .....	4
4. PHYSICAL AND CHEMICAL PROPERTIES.....	4
5. INTRODUCTION AND USE INFORMATION .....	5
6. HUMAN HEALTH RISK ASSESSMENT.....	5
7. ENVIRONMENTAL RISK ASSESSMENT .....	5
BIBLIOGRAPHY .....	6

## 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/1345	BASF Australia Ltd	Polymer in 568-M 135 HS 2K CV Mixing Clear, 68 T 144 Yellow Tinter, and 68 T 230 Pure Orange	No	≤ 20 tonnes per annum	A 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 (M)SDS should be easily accessible to employees.
- Spray applications should be carried out in accordance with the Safe Work Australia Code of Practice for *Spray Painting and Powder Coating* (Safe Work Australia, 2015) or relevant State or Territory Code of Practice.
- 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.

**(Material) Safety Data Sheet**

The (M)SDS of the products containing the notified polymer were 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

#### 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 claimed exempt from publication: chemical name, other names, CAS number, molecular and structural formulae, molecular weight, polymer constituents, residual monomers/impurities, and import volume.

### 2. IDENTITY OF POLYMER

#### Marketing Name(s)

568-M 135 HS 2K CV Mixing Clear (containing notified polymer at < 10% concentration)  
68 T 144 Yellow Tinter (containing notified polymer at < 10% concentration)  
68 T 230 Pure Orange (containing notified polymer at < 10% concentration)

#### Molecular Weight

Number Average Molecular Weight (Mn) is > 1,000 Da

### 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 and not flowing (neat polymer) or Colourless viscous liquid (product containing the notified polymer at < 10%)
Melting Point/Glass Transition Temp	Not determined (not expected to exhibit a melting point based on its non-crystallinity and DSC test on an analogue)
Density	1045 kg/m <sup>3</sup> at 20 °C (75% notified polymer in butyl acetate)
Water Solubility	Not determined. Expected to be low based on the predominantly hydrophobic structure and high molecular weight of the notified polymer
Dissociation Constant	Not determined. The notified polymer does not contain any functional groups that are expected to dissociate in water
Reactivity	Stable under normal environmental conditions
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	< 20	< 20	< 20	< 20	< 20

#### Use

The notified polymer will be imported as a component in solvent based top-coats (at < 10% concentration) for use in automotive OEM (Original Equipment Manufacturer) and refinish applications. There will be no reformulation or repackaging of the imported product containing the notified polymer in Australia.

## 6. HUMAN HEALTH RISK ASSESSMENT

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

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. These are not present in the notified polymer as introduced above the cut off concentrations for classification.

Overall, 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

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

The notified polymer will not be manufactured or reformulated in Australia. Therefore, no release of the notified polymer to the environment is expected from these activities. The notified polymer is expected to be used in industrial sites and automotive refinish shops by professional spray painters. Do-It-Yourself (DIY) use is not expected. Therefore, the notified polymer is not expected to have significant release to the aquatic environment. A maximum of 6% of the notified polymer is expected to be released to landfill as a result of the disposal of containers with residual polymer and wastes from cleaning of equipment used in mixing.

The paints containing the notified polymer are expected to be used as automotive refinishing and industrial coatings, with application carried out mainly by spray. The main release (up to 30-60% as overspray during use) will typically entail landfill disposal, after interception by spray booth filters. Wastes from container residues and mixing are expected to be collected and reduced to an insoluble polymer mass for disposal to landfill. There will be minimal release to the aquatic environment from cleaning of spraying equipment and spray booth scrubber water as most of the notified polymer will be removed as cured paint. The notified polymer will share the fate of the articles onto which it is incorporated. It is expected to be disposed of to landfill or recycled. The notified polymer is expected to eventually degrade in landfill, or by thermal decomposition during metal reclamation, to form water and oxides of carbon. The notified polymer is expected to be immobile in landfill and degrade slowly by abiotic and biotic processes. Bioaccumulation is not likely based on the high molecular weight of the notified polymer.

Therefore based on the low assumed hazard to aquatic organisms and low potential for aquatic exposure, the notified polymer is not expected to pose an unreasonable risk to the environment when used as proposed.

### **BIBLIOGRAPHY**

Safe Work Australia (2015) Code of Practice: Spray Painting and Powder Coating, Safe Work Australia, <http://www.safeworkaustralia.gov.au/sites/swa/about/publications/pages/spray-painting-and-powder-coating>.