

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

### POLYMER OF LOW CONCERN PUBLIC REPORT

#### Griltex V 79-20

This Assessment has been compiled in accordance with the provisions of the *Industrial Chemicals (Notification and Assessment) Act 1989* (Cwlth) (the Act) and Regulations. The National Industrial Chemicals Notification and Assessment Scheme (NICNAS) is administered by the Australian Government 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 Australian Government Department of Sustainability, Environment, Water, Population and Communities.

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

This 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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## 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/1029	The Valspar (Australia) Corporation Pty Limited	Griltex V 79-20	No	≤30 tonnes per annum	Component of coatings for the interior of cans

## 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**

- Water insoluble high molecular weight polymers used in the respirable size range (<10 µm) have the potential to cause lung overloading. Respiratory protection and local exhaust ventilation should be used to prevent inhalation exposure when powders containing the notified polymer are handled.
- 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.

### **Environmental Recommendations**

- No specific control measures are required to minimise release of the notified polymer to the environment.

### **Disposal**

- The notified polymer should be disposed to landfill.

### **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.
- (2) Under Section 64(2) of the Act; if
  - the function or use of the notified polymer has changed from a component of can coatings or is likely to change significantly;
  - the amount of notified polymer being introduced has increased per annum, 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 MSDS of a product containing the notified polymer was provided by the applicant. The accuracy of the information on the MSDS remains the responsibility of the applicant.

### **ASSESSMENT DETAILS**

#### **1. APPLICANT AND NOTIFICATION DETAILS**

##### **Applicant**

The Valspar (Australia) Corporation Pty Limited (ABN: 82 000 039 396)  
13 Webber Parade  
East Keilor, VIC 3033

##### **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.

#### **2. IDENTITY OF POLYMER**

##### **Marketing Name(s)**

Griltex V 79-20

##### **Molecular Weight**

Number Average Molecular Weight (Mn) is >10,000 Da.

##### **Reactive Functional Groups**

The notified polymer contains only low concern functional groups.

### 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	White granules
Melting Point/Glass Transition Temp	110-160 °C
Density	>1000 kg/m <sup>3</sup> at 20 °C
Water Solubility	Not determined. The notified polymer is expected to have very low water solubility based on its high molecular weight, predominately hydrophobic structure and experience in use.
Particle Size	The polymer itself is in granular form. The formulated products containing the notified polymer are in powdered form (particle size range not specified).
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

<i>Year</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
Tonnes	10-30	10-30	10-30	10-30	10-30

#### Use

The notified polymer will not be manufactured in Australia. The notified polymer will be imported into Australia as a component of finished powder coatings at a concentration of up to 80%. The coatings containing the notified polymer (at up to 80% concentration) will be used to coat the internal surfaces of cans. The manufactured cans will have food contact applications.

### 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 formulated product containing the notified polymer at up to 80% concentration is in powder form and may contain respirable particles (<10 µm), although the proportion of particles in this size range is unknown. Given that the notified polymer is of high molecular weight and is insoluble, concern exists for the inhalation of such particles, due to studies in which irreversible lung damage was linked to inhalation of respirable particles such as polymers. This is expected to be a physical effect, i.e., deposition of particles to the deep lung from where they cannot be removed by normal clearance mechanisms. This may lead to lung overloading at higher exposure levels. Normal lung clearance mechanisms are expected to tolerate low exposures to the notified polymer.

**Occupational Health and Safety Risk Assessment**

Dermal, ocular and inhalation exposure of workers to the notified polymer (at up to 80% concentration) may occur during manual transfer activities and during spray application. The primary risk to workers associated with use of products containing the notified polymer will be due to the potential for lung overloading effects following inhalation of the products. Transfer and application processes will occur under exhaust ventilation and it is expected that workers will be wearing appropriate personal protective equipment (including respirators). Therefore, the risk of the notified polymer to occupational health is not considered to be unreasonable given the assumed low hazard and the assessed use pattern.

**Public Health and Safety Risk Assessment**

The public may be exposed to the cans to which the coating has been applied. However, the polymer is not expected to be bioavailable when cured in the polymer matrix, unless leaching or migration occurs. While no migration studies are available, the notifier has advised that the notified polymer is not expected to migrate from the cured can coating, and thus public exposure to the polymer is expected to be low. Therefore, the risk of the notified polymer to public health is not considered to be unreasonable given the assumed low hazard and the expected low exposure.

**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 be imported as component of coatings for the internal surfaces of metal cans. Release of the notified polymer may occur during application processes due to spills (during mixing and transferring) and as residues in empty import containers. The releases are estimated to be up to 2% of the annual import volume of the notified polymer, and are expected to be disposed of to landfill. It is expected that the notified polymer will be transferred to metal substrates with > 90% efficiency and be cured. Up to 10% will form overspray that will be collected by local exhaust and be disposed of by a licensed waste disposal contractor or according to State/Territory regulations.

The cured notified polymer will share the fate of the articles to which it has been applied. At the end of their useful life, the majority of the articles will be sent to landfill and recycling facilities. The cured notified polymer is likely to eventually degrade biotically or abiotically in landfill or by thermal decomposition in recycling facilities; in both cases forming water and oxides of carbon. Bioaccumulation is not likely based on the high molecular weight of the notified polymer and its limited potential for exposure to the aquatic environment when used as proposed. Based on the assessed use pattern and low anticipated hazard, the notified polymer is not expected to pose an unreasonable risk to the aquatic environment.