

File No PLC/912

April 2010

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

FULL PUBLIC REPORT

Polymer in CPS High Opacity Tint

This Assessment has been compiled in accordance with the provisions of the *Industrial Chemicals (Notification and Assessment) Act 1989* (Cwlth) (the Act) and Regulations. This legislation is an Act of the Commonwealth of Australia. The National Industrial Chemicals Notification and Assessment Scheme (NICNAS) is administered by the 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 Department of the Environment, Water, Heritage and the Arts.

For the purposes of subsection 78(1) of the Act, this Full Public Report may be inspected at our NICNAS office by appointment only at 334-336 Illawarra Road, Marrickville NSW 2204.

This Full 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:

Street Address:	334 - 336 Illawarra Road MARRICKVILLE NSW 2204, 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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FULL PUBLIC REPORT**Polymer in CPS High Opacity Tint****1. APPLICANT AND NOTIFICATION DETAILS**

APPLICANT(S)

The Valspar (Australia) Corporation Pty Ltd (ABN 82 000 039 396)
203 Power Street
GLENDENNING NSW 2761

NOTIFICATION CATEGORY

Polymer of Low Concern

EXEMPT INFORMATION (SECTION 75 OF THE ACT)

Data items and details claimed exempt from publication:

Chemical Name, Other Names, Molecular Formula, Structural Formula, Polymer Constituents, Weight % of Residual Monomers/Impurities, Molecular Weight Data, Import Volume, and Use Details.

VARIATION OF DATA REQUIREMENTS (SECTION 24 OF THE ACT)

No variation to the schedule of data requirements is claimed.

PREVIOUS NOTIFICATION IN AUSTRALIA BY APPLICANT(S)

Nil

NOTIFICATION IN OTHER COUNTRIES

USA, Canada

2. IDENTITY OF CHEMICAL

MARKETING NAME(S)

SQ1038P (product containing the notified polymer at > 90% concentration).
CPS High Opacity Tint (product containing the notified polymer at 15-40% concentration).

MOLECULAR WEIGHT (MW)

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

REACTIVE FUNCTIONAL GROUPS

The notified polymer contains reactive functional groups but the functional group equivalent weight (FGEW) is > 5000 Da.

3. PLC CRITERIA JUSTIFICATION*Criterion*

Molecular Weight Requirements
Functional Group Equivalent Weight (FGEW) Requirements
Low Charge Density
Approved Elements Only
Stable Under Normal Conditions of Use
Not Water Absorbing
Not a Hazard Substance or Dangerous Good

Criterion met

Yes
Yes
Yes
Yes
Yes
Yes
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 Temp	25°C
Density	1100 kg/m ³ at 23°C
Water Solubility	Expected to be insoluble based on molecular structure.
Dissociation Constant	Not measured. The notified polymer will not ionise over the environmental pH range (4-9).
Reactivity	Stable under normal environmental conditions. The notified polymer contains hydrolysable functional groups, but hydrolysis is expected to be slow in the environmental pH range (4-9).
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	1-3	1-3	3-10	3-10	3-10

Use

The notified polymer will be used in automotive paint products.

The notified polymer will be imported in tinter solutions at concentrations < 40%. The tinter solutions will be added to a mixing tank where it will be mixed with other ingredients such as pigments and fillers. After sampling for quality control, the automotive paint product will be filled through automated processes into containers ranging in size from 0.5-2 L. At the customer site, the automotive paint containing the notified polymer may be mixed with other coatings before application to the vehicle by spray.

Mode of Introduction and Disposal

The notified polymer will be not be manufactured in Australia and will be imported in tinter solutions at concentrations < 40%.

6. HUMAN HEALTH IMPLICATIONS

Hazard Characterisation

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

Occupational Health and Safety Risk Assessment

Workers may be exposed to the notified polymer at up to 40% concentration during the following processes involved with reformulation: weighing, transfer into mixing tanks, mixing with the other components, filling of product containers, cleaning of reformulation equipment, and testing for quality control. Appropriate engineering controls such as local exhaust ventilation during reformulation are expected to be in place to minimise inhalation exposure. Workers are also expected to wear personal protective equipment (PPE) such as overalls, safety glasses, and gloves to further lower exposure via dermal and ocular routes.

Workers may also be exposed by the dermal, ocular and inhalation routes during application of coatings products containing the notified polymer at < 10% concentration. The majority of applications are expected to occur in a spray booth. The potential for exposure exists while mixing, connecting and disconnecting paint lines to spray equipment, and during cleaning and maintenance of equipment. However, exposure is expected to be minimised by the use of a ventilated spray booth, coveralls, eye protection, impermeable gloves and respiratory protection if necessary.

Overall, the OHS risk presented by the notified polymer is not expected to be unacceptable, based on the minimal exposure to workers and the anticipated low hazard of the polymer.

Public Health Risk Assessment

The notified polymer is intended for use as a component of automotive paints by professionals in workshops

and will not be available to the public. Members of the public may make dermal contact with vehicle surfaces coated with products containing the notified polymer. However, considering that the notified polymer is considered to be of low hazard, will become trapped within an inert matrix following application and is not expected to be bioavailable, the risk to the public is not considered to be unacceptable.

7. ENVIRONMENTAL IMPLICATIONS

Hazard Characterisation

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

Environmental Risk Assessment

A maximum of 3% of the imported quantity of notified polymer will be released as container and equipment washings during use, which will be sent to a licensed hazardous waste facility for disposal in accordance with state/territory hazardous waste standards. The main release (approximately 30% as overspray during use) will typically entail landfill disposal, after interception by spray booth filters. Discarded end use articles containing the notified polymer within the cured paint film will be disposed to landfill, or recycled for metals reclamation which will entail thermal decomposition of the paint to form oxides of carbon, nitrogen and water vapour. In landfill, the notified polymer will be present as a cured solid film and will not be bioavailable nor mobile. Therefore, the notified polymer is not expected to pose a risk to the environment when it is used as proposed.

8. CONCLUSIONS AND RECOMMENDATIONS

Human health risk assessment

Under the conditions of the occupational settings described, the notified polymer is not considered to pose an unacceptable risk to the health of workers.

When used in the proposed manner, the notified polymer is not considered to pose an unacceptable risk to public health.

Environmental risk assessment

Based on the reported use pattern, the notified polymer is not considered to pose a risk to the environment.

Recommendations

CONTROL MEASURES

Occupational Health and Safety

- 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 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.
- Spray application should be carried out in accordance with the Safe Work Australia *National Guidance Material for Spray Painting* [NOHSC (1999)].

Disposal

- The notified polymer should be disposed of to landfill.

Emergency procedures

- Spills and/or accidental release of the notified polymer should be handled by physical containment, collection and subsequent safe disposal.

Regulatory Obligations

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 paint products, 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 chemical 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 products containing the notified polymer provided by the notifier were reviewed by NICNAS. The accuracy of the information on the MSDS remains the responsibility of the applicant.