

File No: SAPLC/90

October 2008

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

FULL PUBLIC REPORT

Polymer in WB Engine Bay Converter T510/Envirobase Engine Converter

This Self 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**

Part 2 –PLC Self Assessment

| |
|--|
| Polymer in WB Engine Bay Converter T510/Envirobase Engine Convertor |
|--|

1. APPLICANT AND NOTIFICATION DETAILS

APPLICANT

PPG Industries Australia Pty Ltd (ABN 055 500 939)

Mc Naughton Rd,

Clayton VIC 3168

NOTIFICATION CATEGORY

Self Assessment: Polymer of Low Concern

EXEMPT INFORMATION (SECTION 75 OF THE ACT)

Data items and details claimed exempt from publication:

Chemical Name, Molecular and Structural Formulae, Molecular Weight, Polymer Constituents, Residual Monomers

PREVIOUS NOTIFICATION IN AUSTRALIA BY APPLICANT(S)

Nil

NOTIFICATION IN OTHER COUNTRIES

Notified in Canada-April 2008.

2. IDENTITY OF CHEMICAL

MARKETING NAME(S)

WB Engine Bay Converter T510 (product containing the notified polymer)

Envirobase Engine Convertor (product containing the notified polymer)

OTHER NAME

WC 95-4597 (product containing the notified polymer)

CAS NUMBER

Not assigned

MOLECULAR WEIGHT (MW)

Number Average Molecular Weight (NAMW) >1000

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 | N/A |
| 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 | Liquid (based on product) |
| Melting Point/Glass Transition Temp | Not applicable as a solution |
| Density | 1002 kg/m ³ at 25°C (based on product) |
| Water Solubility | Refer to comments section |
| Dissociation Constant | Refer to comments section |
| Reactivity | Stable under normal environmental conditions |
| Degradation Products | Small amounts of monomers and oxides of carbon produced on combustion. |

Comments

The polymer is thinned in water and is water soluble. The polymer however possesses no functional groups that are expected to become cationic in the aquatic environment. A cationic reactant is present only as a counter-ion to groups on the polymer backbone.

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> |
|---------------|----------|----------|----------|----------|----------|
| <i>Tonnes</i> | 0.10 | 0.15 | 0.20 | 0.30 | 0.35 |

USE AND MODE OF INTRODUCTION AND DISPOSAL

Mode of Introduction

The notified polymer will be imported as a part of engine bay (under the bonnet) automotive repair coatings in 1L containers. The concentration of the notified polymer in spray coatings is 21%. The coatings containing the notified polymer are initially stored at the notifier's warehouse before being transported by truck to the application sites.

Reformulation/manufacture processes

Immediately prior to the application, the component containing the notified polymer is manually weighed and mixed with a body colour component and a hardener component and applied to vehicles using a spray gun in a spray booth.

Use

The notified polymer will be used as a component of water based engine bay (under the bonnet) automotive repair coatings. The final concentration of the notified polymer in the repair coatings will be 6.6%. The coatings will be applied using a spray gun and will be used by smash repair companies only. The polymer forms the binder in the coating.

6. HUMAN HEALTH IMPLICATIONS

6.1. Exposure Assessment

OCCUPATIONAL EXPOSURE

Transport and warehousing workers may come into dermal and ocular contact with the notified polymer through accidental leaks and spillages of the containers.

During reformulation and use, spray painters may come into contact with the notified polymer through dermal, inhalation and ocular routes. The risk of exposure, however, will be minimal as the spray paint is made up and applied in a ventilated spray booth by workers using protective equipment.

After application, the paint containing the notified polymer is cured into an inert matrix and the polymer is hence unavailable for exposure.

PUBLIC EXPOSURE

The notified polymer will not be sold to the public. The public may come into contact with the finished dried product on refinished automobiles, however in this form the notified polymer will be bound in an inert matrix and as such, will not be biologically active and available for exposure.

6.2. Toxicological Hazard Characterisation

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

6.3. Human Health Risk Assessment**OCCUPATIONAL HEALTH AND SAFETY**

The OHS risk presented by the notified polymer is expected to be low, based on low hazard and low exposure as well as the engineering controls and personal protective equipment used by workers.

PUBLIC HEALTH

The notified polymer is intended for use by professional spray painters in auto repair workshops only and will not be sold to the public. Following application, the notified polymer will be cured and trapped within a coating and will not be bioavailable. Therefore, the risk to public health from exposure to the notified polymer is considered low.

7. ENVIRONMENTAL IMPLICATIONS**7.1. Exposure Assessment****ENVIRONMENTAL RELEASE**

Release to the environment during shipping, transport and warehousing will only occur through accidental spills or leaks of the containers. When spills occur, they will be contained by bunding, collected with absorbent material and sent to a licensed off site waste disposal centre.

Under normal use procedures, losses of the notified polymer through overspray, mixing of components and cleaning of equipment as well as losses from residues in containers have been estimated to be a maximum of 70% which equates to a maximum of 0.24 tonnes per annum. Waste from application will be hardened and disposed of to landfill.

The remainder of the notified polymer will be bound in the paint matrix and not be available for direct release to the environment. Disposal of the automobile may be through landfill or recycling, and the fate of the paint will be related to that of the automobile.

ENVIRONMENTAL FATE

The waste remaining in the empty canisters and that generated in overspray and cleaning equipment and spills will ultimately be disposed of to landfill. The polymer is potentially hydrolysable, however this is unlikely under standard environmental conditions. It is expected that the notified polymer will be immobile in landfill and slowly degrade to water vapour and oxides of carbon and nitrogen. During automobile recycling, the polymer will be destroyed.

7.2. Environmental Hazard Characterisation

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

7.3. Environmental Risk Assessment

No aquatic exposure is anticipated during end use of the notified polymer. It is expected that practically all of the waste generated from end users (70% as overspray) will be disposed of in approved landfills as inert solid waste. In landfill, the solid wastes will not be mobile and will degrade slowly and not pose a significant risk to the environment.

8. CONCLUSIONS

8.1. Human health risk assessment

Under the conditions of the occupational settings described and when used in the proposed manner, the notified polymer is not expected to pose an unreasonable risk to workers and the public.

8.2. Environmental risk assessment

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

9. 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.

- Use of spray paints containing the notified chemical should be carried out in accordance with the ASCC *National Guidance Material for Spray Painting* [NOHSC (1999b)] or relevant State and Territory Codes of Practice.
- 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 NOHSC *Approved Criteria for Classifying Hazardous Substances*, workplace practices and control procedures consistent with provisions of State and Territory hazardous substances legislation must be in operation.

Environment

- The following control measures should be implemented by customers to minimise environmental exposure during use of the notified polymer:
 - Bunding
 - Exhaust ventilation with filter

Disposal

- The notified polymer should be disposed of to landfill.
- Empty containers should be sent to local recycling or waste disposal facilities.

Storage

- The following precautions should be taken by the notifiers regarding storage of the notified polymer:
 - Bunding

Emergency procedures

- Spills/release of the notified polymer should be handled by absorbing with sand and put into suitable containers for disposal. Contaminated containers can be reused after cleaning.
- Do not flush the product containing the notified polymer into surface water or sewer system.

10. 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 as a component of engine bay automotive repair coatings, or is likely to change significantly;
 - the amount of notified polymer being introduced has increased from 0.35 tonnes per annum, or is likely to increase, significantly;
 - if 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 notifier has provided MSDS of the product containing the notified polymer. The accuracy of the information on the MSDS remains the responsibility of the applicant.