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NATIONAL INDUSTRIAL CHEMICALS NOTIFICATION AND ASSESSMENT SCHEME (NICNAS)

FULL PUBLIC REPORT

NT-27

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Director
Chemicals Notification and Assessment

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1. APPLICANT AND NOTIFICATION DETAILS

APPLICANT(S)
Hewlett-Packard Australia Pty Ltd of 31-41 Joseph St, Blackburn, Victoria, 3130

NOTIFICATION CATEGORY
Limited-small volume: Chemical other than polymer, (1 tonne or less per year).

EXEMPT INFORMATION (SECTION 75 OF THE ACT)
Data items and details claimed exempt from publication:
Chemical Identity
Purity

VARIATION OF DATA REQUIREMENTS (SECTION 24 OF THE ACT)
Variation to the schedule of data requirements is claimed as follows:

Hydrolysis as a function of pH
Dissociation Constant
Flash Point
Explosive Properties

PREVIOUS NOTIFICATION IN AUSTRALIA BY APPLICANT(S)
No

NOTIFICATION IN OTHER COUNTRIES
USA: Existing Chemical Substance on TSCA Inventory
Canada: Existing Chemical Substance on DSL Inventory
EU: Existing Chemical Substance on EINECS Inventory

2. IDENTITY OF CHEMICAL

MARKETING NAME(S)
NT-27

METHODS OF DETECTION AND DETERMINATION

ANALYTICAL METHOD	IR Spectroscopy, Atomic Absorption Spectroscopy and Mass Spectroscopy
Remarks	Spectra obtained were consistent with the expected structure for the notified chemical.

3. COMPOSITION

DEGREE OF PURITY
High

HAZARDOUS IMPURITIES/RESIDUAL MONOMERS
None

NON HAZARDOUS IMPURITIES/RESIDUAL MONOMERS (> 1% by weight)
None

ADDITIVES/ADJUVANTS
None

4. INTRODUCTION AND USE INFORMATION

MODE OF INTRODUCTION OF NOTIFIED CHEMICAL (100%) OVER NEXT 5 YEARS
The notified chemical will be imported as a component of toner for electrophoto-copying machines or electrophoto-graphic printers. There is no intention to import the notified chemical by itself or to manufacture the notified chemical or toner in Australia.

MAXIMUM INTRODUCTION VOLUME OF NOTIFIED CHEMICAL (100%) OVER NEXT 5 YEARS

Year	*1*	*2*	*3*	*4*	*5*
Tonnes	<1	<1	<1	<1	<1

USE **Non-Confidential**
The notified chemical will be used as an ingredient at 0.005 to 2% of toner for electrophoto-copying machines or electrophoto-graphic printers.

5. PROCESS AND RELEASE INFORMATION

5.1. Distribution, Transport and Storage

PORT OF ENTRY
Not specified

TRANSPORTATION AND PACKAGING
The toner containing 0.005 to 2% notified chemical will be imported, distributed and supplied to consumers in 0.2 to 4 L sealed cartridges or plastic bottles containing between 80 to 2500g of toner.

5.2. Operation description
The toner is mainly used in offices for copying and printing. To refill the toner, the toner bottle is firmly fitted into the copying machine and the shutter opened. To change the cartridge, the seal tape is removed and the cartridge is placed into the copying machine or printer. The toner bottle and cartridge are designed not to release the toner until the shutter is opened or seal tape is removed.

During the copying or printing operation, the toner will be transferred on to the paper and firmly fixed by heat.

5.3. Occupational exposure
Exposure Details
Office workers and printer maintenance workers may be intermittently exposed to the notified chemical when replacing the spent cartridge or bottle, and during maintenance and cleaning of printers or photocopiers. Maintenance workers may potentially come in contact with the notified chemical more often than office workers. Exposure would be principally by skin contamination, however, inhalation exposure could also occur, particularly if spillage occurs. The notified chemical consists of a small proportion of respirable particles (1.41% less than 10μm). However, exposure is expected to be controlled through the design of the toner cartridge or bottles and the printing and photocopier machines. Printer and photocopier maintenance personnel often wear cotton disposable gloves. Toner cartridges and bottles are sealed and worker exposure to the toner is minimised by the use of the replacement procedures recommended by the manufacturer.

Waterside, warehouse and transport workers are unlikely to be exposed to the notified chemical unless the packaging is breached.

Contact with paper printed with toners containing the notified chemical is unlikely to result in dermal exposure, as it will be bound in the structure of the paper.

5.4. Release

RELEASE OF CHEMICAL AT SITE
The notified chemical is not intended to be manufactured or reformulated in Australia.

RELEASE OF CHEMICAL FROM USE

The toner bottle/cartridge containing the notified chemical is installed inside the machine or printer and designed to prevent access to or leakage of toner. Therefore, no environmental release is expected when the toner bottle/cartridge is replaced.

The paper printed with the toner is deinked during the paper recycling process. The fibre material is refined and used for recycled paper. The toner including the notified chemical is collected as water insoluble sludge during the deinking process. The sludge containing the notified chemical is usually disposed of to landfill or incinerated as waste. The size of the bottle/cartridge and the residual amount remaining in the bottle/cartridge varies on the types of copying machines or printers. A 0.2-4 L cartridge/bottle would have <12.5% residual toner left in the bottle/cartridge. Therefore, the amount of notified chemical remaining corresponds to < 0.25% (<2% x 0.125). Spent bottles/cartridges collected by the recovery system are recycled or reused along with all residual toner in the recycling process. Spent bottles/cartridges that are not recycled are likely to be sent to landfill.

5.5. Disposal

The majority of the notified chemical will either be disposed of to landfill or by incineration.

5.6. Public exposure

The public may be intermittently exposed to the notified chemical when replacing the spent cartridge or bottle, and during maintenance and cleaning of home printers or photocopiers. Exposure would be principally by skin contamination, however, inhalation exposure could also occur, particularly if spillage occurs. The notified chemical consists of a small proportion of respirable particles (1.41% less than 10μm). However, exposure is expected to be controlled through the design of the toner cartridge or bottles and the printing and photocopier machines. Toner cartridges and bottles are sealed and public exposure to the toner is minimised by the use of the replacement procedures recommended by the manufacturer.

Contact with paper printed with toners containing the notified chemical is unlikely to result in dermal exposure, as it will be bound in the structure of the paper.

6. PHYSICAL AND CHEMICAL PROPERTIES

Appearance at 20°C and 101.3 kPa Purple/red shiny powder

Melting Point/Freezing Point >360°C

METHOD	OECD TG 102 Melting Point/Melting Range. EC Directive 92/69/EEC A.1 Melting/Freezing Temperature.
Remarks	Differential Scanning Calorimetry (DSC) method.
TEST FACILITY	Safepharm Laboratories (2003a)

Density 1590 kg/m^3 at 20.5°C

METHOD	OECD TG 109 Density of Liquids and Solids. EC Directive 92/69/EEC A.3 Relative Density.
Remarks	Gas comparison pycnometer method
TEST FACILITY	Safepharm Laboratories (2003a)

Vapour Pressure <5.2 x 10^{-6} kPa at 25°C

METHOD	OECD TG 104 Vapour Pressure. EC Directive 92/69/EEC A.4 Vapour Pressure.
Remarks	Effusion method. Vapour Pressure balance. Measurements were made at several temperatures and linear regression analysis was used to calculate the vapour pressure at 25°C.
TEST FACILITY	Safepharm Laboratories (2003b)

Water Solubility <9.28 x 10^{-3} mg/L at 20°C

METHOD OECD TG 105 Water Solubility.
EC Directive 92/69/EEC A.6 Water Solubility.

Remarks The determination was conducted using column elution method with a recirculating pump. The test material was dissolved in tetrahydrofuran and the solvent removed by rotatory evaporator. Aliquots of sample solutions were taken from column and centrifuged for 10 min. The concentration of the test material in the sample solutions was determined spectrophotometrically. The procedure was performed in duplicate.

TEST FACILITY Safepharm Laboratories (2003a)

Hydrolysis as a Function of pH

Remarks Based on the chemical structure, the notified chemical does not contain any functional groups that are expected to be readily hydrolysable.

Partition Coefficient (n-octanol/water) log Pow = 5.88 at 20°C

METHOD OECD TG 117 Partition Coefficient (n-octanol/water).
EC Directive 92/69/EEC A.8 Partition Coefficient.

Remarks A preliminary assessment of the partition coefficient was made based on the approximate solubilities of the test material in n-octanol and water, using visual assessment. The definitive determination was carried out using the HPLC method. Testing was performed at approximately neutral pH. The partition coefficient of the test substance was determined to be 7.61 x 10^5 as it eluted before DDT.

TEST FACILITY Safepharm Laboratories (2003a)

Adsorption/Desorption – screening test log K_{oc} > 5.63 at 40°C

METHOD OECD TG 121 Adsorption - Desorption Using an HPLC Method.

Remarks The determination was performed using an HPLC screening method. The retention time, capacity factors and $\log_{10}$ Koc values were determined for the sample. Testing was performed at pH 5.7. The adsorption coefficient Koc of the test material was determined to be >4.27 x 10^5 as it eluted beyond DDT.

TEST FACILITY Safepharm Laboratories (2003a)

Dissociation Constant

Remarks No determination of the dissociation constant was carried out as the notified chemical was found to be insufficiently soluble in aqueous media. Based on the structure of the chemical, it was considered that in aqueous solution at environmentally relevant pH, the chemical would be in the neutral state.

Particle Size

METHOD OECD TG 110 Particle Size Distribution/Fibre Length and Diameter Distributions.

Range (µm)	*Mass (%)*
<100 µm	99
<10 µm	1.41

Remarks

TEST FACILITY Safepharm Laboratories (2003a)

Flash Point Not applicable for a solid

Flammability Not highly flammable

METHOD	EC Directive 92/69/EEC A.10 Flammability (Solids).
Remarks	Failed to ignite during the two minutes that the Bunsen flame was applied.
TEST FACILITY	Safepharm Laboratories (2003b)

Autoignition Temperature >400ºC

METHOD	92/69/EEC A.16 Relative Self-Ignition Temperature for Solids.
Remarks	No significant difference in sample and oven temperature
TEST FACILITY	Safepharm Laboratories (2003b)

Explosive Properties Not predicted to be explosive.

METHOD	EC Directive 92/69/EEC A.14 Explosive Properties.
Remarks	The test report concluded that there are no chemical groups that would imply explosive properties, therefore the result has been predicted negative.' However, based on its structure the explosive stability is considered to be uncertain. However, the notified chemical and a closely related analogue are listed in EINECS but are not classified in the Annex I of Directive 67/548/EEC. A IUCLID Datasheet for the closely related analogue classifies it as non explosive (EC,2000) Fine powder can form explosive dust-air mixtures.
TEST FACILITY	Safepharm Laboratories (2003b)

ADDITIONAL TESTS

Oxidizing Properties Non-oxidising

METHOD	EC Directive 92/69/EEC A.17 Oxidizing Properties (Solids).
Remarks	Negative result predicted from the structure of the notified chemical; no chemical groups that would imply oxidising properties are present.
TEST FACILITY	Safepharm Laboratories (2003b)

7. TOXICOLOGICAL INVESTIGATIONS

Endpoint and Result	*Assessment Conclusion*
Rat, acute oral	low toxicity, LD50 >2500 mg/kg bw
Rabbit, skin irritation	non-irritating
Rabbit, eye irritation	non-irritating
Guinea pig, skin sensitisation - Bühler Test	no evidence of sensitisation.
Genotoxicity - bacterial reverse mutation	non mutagenic

7.1. Acute toxicity – oral

TEST SUBSTANCE NT-27

METHOD OECD TG 423 Acute Oral Toxicity – Acute Toxic Class Method
- Species/Strain: Rat/Sprague Dawley
- Vehicle: Arachis Oil BP
- Remarks - Method: No significant protocol deviations.
  LD50 estimated using flow chart in Annex 2d in OECD TG 423.

RESULTS

Group	*Number and Sex of Animals*	*Dose mg/kg bw*	*Mortality*
I	3/female	2000	0
II	3/female	2000	0

- LD50: >2500 mg/kg bw
- Signs of Toxicity: No signs of toxicity observed. Bodyweight gain was normal.
- Effects in Organs: No abnormalities noted.
- Remarks - Results

CONCLUSION The notified chemical is of low toxicity via the oral route.

TEST FACILITY Safepharm Laboratories (2003c)

7.2. Irritation – skin

TEST SUBSTANCE NT-27

METHOD OECD TG 404 Acute Dermal Irritation/Corrosion.
EC Directive 92/69/EEC B.4 Acute Toxicity (Skin Irritation).
- Species/Strain: Rabbit/New Zealand White
- Number of Animals: 3
- Vehicle: None
- Observation Period: 72 hours
- Type of Dressing: Semi-occlusive.
- Remarks - Method: No significant protocol deviations

RESULTS

Lesion	*Mean Score* Animal No.*			*Maximum Value*	*Maximum Duration of Any Effect*	*Maximum Value at End of Observation Period*
	1	2	3			
Erythema/Eschar	0	0	0	0	NA	0
Oedema	0	0	0	0	NA	0

*Calculated on the basis of the scores at 24, 48, and 72 hours for EACH animal.

Remarks - Results	Light blue-coloured staining as observed in all animals and persisted to 72 hours.
CONCLUSION	The notified chemical is non-irritating to skin.
TEST FACILITY	Safepharm Laboratories (2003d)

7.3. Irritation - eye

TEST SUBSTANCE	NT-27
METHOD	OECD TG 405 Acute Eye Irritation/Corrosion. EC Directive 92/69/EEC B.5 Acute Toxicity (Eye Irritation).
Species/Strain	Rabbit/New Zealand White
Number of Animals	3
Observation Period	72 hours
Remarks - Method	No significant protocol deviations

RESULTS

Lesion	*Mean Score* Animal No.*			*Maximum Value*	*Maximum Duration of Any Effect*	*Maximum Value at End of Observation Period*
	1	2	3			
Conjunctiva: redness	0	0	0	0	NA	0
Conjunctiva: chemosis	0	0	0	0	NA	0
Conjunctiva: discharge	0	0	0	0	NA	0
Corneal opacity	0	0	0	0	NA	0
Iridial inflammation	0	0	0	0	NA	0

*Calculated on the basis of the scores at 24, 48, and 72 hours for EACH animal.

Remarks - Results	Purple-coloured staining of fur was noted around all treated eyes during the study. However, there was no report of staining of the eye itself.
CONCLUSION	The notified chemical is non-irritating to the eye.
TEST FACILITY	Safepharm Laboratories (2003e)

7.4. Skin sensitisation

TEST SUBSTANCE	NT-27
METHOD	OECD TG 406 Skin Sensitisation – Bühler Test EC Directive 96/54/EC B.6 Skin Sensitisation - Bühler Test
Species/Strain	Guinea pig
PRELIMINARY STUDY	Maximum Non-irritating Concentration: topical: 75% in PEG 300
MAIN STUDY	
Number of Animals	Test Group: 20 Control Group: 10
INDUCTION PHASE	Induction Concentration: topical: 75% in PEG 300
Signs of Irritation	Due to the grey blue discoloration produced by the test item (plus see remarks), a possible erythema reaction could not be determined during the three weeks of induction. No Oedema was observed.
CHALLENGE PHASE	
1st challenge	topical: 75% in PEG 300.
Remarks - Method	During the induction stage the test sites were not depilated to facilitate the

observation of signs of irritation. The depilation was omitted to avoid repeated mechanical irritation.

RESULTS

Animal	*Challenge Concentration*	*Number of Animals Showing Skin Reactions after:*			
		1st challenge		*2nd challenge*	
		24 h	*48 h*	*24 h*	*48 h*
Test Group	75% in PEG 300	0	0	NA	NA
Control Group	75% in PEG 300	0	0	NA	NA

Remarks - Results

CONCLUSION There was no evidence of reactions indicative of skin sensitisation to the notified chemical under the conditions of the test.

TEST FACILITY RCC Ltd (2003)

7.5. Genotoxicity - bacteria

TEST SUBSTANCE NT-27

METHOD In house - Pre incubation procedure

Species/Strain *S. typhimurium*: TA100, TA1535, TA98, TA1537
E. coli: WP2 uvrA (pKM101).

Metabolic Activation System S9 fraction from Phenobarbital/5,6-Benzoflavon induced rat liver

Concentration Range in Main Test a) With metabolic activation: 0-5000 µg/plate (all strains).
b) Without metabolic activation: 0-312.5 µg/plate (TA100, TA1535, TA1537) 0-5000 µg/plate (WP2 uvrA (pKM101)) 0-78.125 (TA98)

Vehicle Dimethylsulfoxide

Remarks - Method No significant deviations from OECD TG 471 Bacterial Reverse Mutation Test.

RESULTS

Metabolic Activation	*Test Substance Concentration (µg/plate) Resulting in:*			
	Cytotoxicity in Preliminary Test	*Cytotoxicity in Main Test*	*Precipitation*	*Genotoxic Effect*
Absent	78.125 (TA100, TA1535, TA1537), 19.53 (TA98)			
Test 1		39.06 (TA1535), 19.53 (TA100, TA98), 9.76 (TA1537)	78.125	None
Present	>5000			
Test 1		>5000	312.5	None

Remarks - Results No substantial increases in revertant colony numbers of any of the tester strains were observed following treatment with the notified chemical at any dose level, in the presence or absence of S-9 mix

CONCLUSION	The notified chemical was not mutagenic to bacteria under the conditions of the test.
TEST FACILITY	Canon (2003)

7.6. IUCLID data sheet for analogue

A IUCLID dataset was available for a very close analogue of the notified chemical (EC, 2000). Results of studies in the dataset indicated that the analogue was of low acute toxicity, was not an irritant and not a skin sensitiser. In a 28-day gavage study in Wistar rats, clinical chemistry changes and increased organ weights (lung, spleen, adrenal, salivary gland) were observed at the top dose 1000 mg/kg/day, however, no histopathological changes were evident. No signs of genotoxicty were observed in a range of in vitro studies. Only basic study information and results were provided in the IUCLID datasheet. These studies have not been reviewed by NICNAS.

8. ENVIRONMENT

8.1. Environmental fate

No environmental fate data were submitted..

8.1.1. Bioaccumulation

Data regarding the bioaccumulation potential of the notified chemical were not provided for this notification. The notified chemical's high molecular weight and low water solubility suggests that it is unlikely to cross biological membranes and bioaccumulate (Connell 1990).

8.2. Ecotoxicological investigations

No ecotoxicity data were submitted.

9. RISK ASSESSMENT

9.1. Environment

9.1.1. Environment – exposure assessment

Release of the toner containing the notified chemical to the environment is not expected under normal use as the cartridge is designed to prevent leakage of or access to toner. No environmental release of toner when the toner bottle/cartridge is replaced. Environmental exposure will result from the disposal of printed paper and discarded cartridges. Toner residues contained in the empty cartridges are expected to remain within these containers, although release could occur from deterioration of the cartridge. The total import volume of the notified chemical will ultimately either be disposed of in landfill or incinerated or recycled with paper.

Waste paper may be disposed of directly to landfill with the notified chemical strongly bound to the paper. It is anticipated that prolonged residence in an active landfill environment would eventually degrade the compound. Incineration of waste paper will destroy the compound with the generation of water vapour and oxides of carbon and nitrogen plus metal salts.

In addition to landfill, some of the toner printed on paper will enter the paper recycling process. During such processes, waste paper is repulped using a variety of alkaline, dispersing and wetting agents, water emulsifiable organic solvents and bleaches. These agents enhance fibre separation, ink detachment from the fibres, pulp brightness and the whiteness of paper. De-inking wastes are expected to go to trade waste sewers. Due to its very low water solubility, the toner containing the notified chemical during the deinking process is collected as water insoluble sludge which is usually disposed of to landfill or incinerated as waste.

The substance is not expected to bioaccumulate due to high molecular weight (Connell 1989). Abiotic or slow biotic processes are expected to be largely responsible for the degradation of the notified chemical. As a consequence of its high Koc value of >5.63, the notified chemical is likely to be immobilised through adsorption onto soil particles and sediments.

9.1.2. Environment – effects assessment

No ecotoxicological data were provided.

9.1.3. Environment – risk characterisation

The notified chemical will enter environmental compartments indirectly by disposal of waste paper (for recycling, to landfill or for incineration) and by direct release from discarded bottles/ cartridges at landfill sites. Based on the low import volume of <1 tonne and the widespread and diffuse use of the notified chemical, release to the environment is expected to be low and is unlikely to pose an environmental risk.

9.2. Human health

9.2.1. Occupational health and safety – exposure assessment

Office workers and printer maintenance workers may be intermittently exposed to the notified chemical when replacing the spent cartridge or bottle, and during maintenance and cleaning of printers or photocopiers. Service personnel are anticipated to have the greatest level of exposure. Exposure would be principally by skin contamination, however, inhalation exposure could also occur, particularly if spillage occurs. Exposure to the notified chemical is expected to be low due to the design of the toner bottles/cartridges and the low concentration of the notified chemical. Exposure will be minimised by placing photocopiers and printers in areas of adequate ventilation and the use of disposable gloves by service personnel.

9.2.2. Public health – exposure assessment

The public may be intermittently exposed to the notified chemical when replacing the spent cartridge or bottle, and during maintenance and cleaning of home printers or photocopiers. Exposure would be principally by skin contamination, however, inhalation exposure could also occur, particularly if spillage occurs. Exposure to the notified chemical is expected to be low due to the design of the toner bottles/cartridges and the low concentration of the notified chemical. Exposure will be minimised by the use of the replacement procedures recommended

by the manufacturer and placing photocopiers and printers in areas of adequate ventilation.

Exposure to the notified chemical in printed paper is expected to be negligible, as it will be bound in the structure of the paper.

9.2.3. Human health - effects assessment

Acute toxicity.
The notified chemical has low acute oral toxicity in rat. In the literature, this class of compound is reported to be of low acute toxicity.

Irritation and Sensitisation.
The notified chemical is considered to be non irritating to skin and eyes and was negative in a Bühler skin sensitisation test in guinea-pigs. Results for the close analogue were similar.

The powder may cause mechanical irritation to the eyes, and to the respiratory tract if inhaled.

Repeated Dose Toxicity
No repeated-dose studies were reported. However, no significant adverse effects were noted in a 28-day gavage study in rats using the close analogue.

Mutagenicity.
The notified chemical was negative result in a bacterial mutagenicity test. Similar results were observed in a range of in vitro studies with the close analogue.

Hazard classification for health effects.
Based on the available data the notified chemical is not classified as hazardous under the NOHSC *Approved Criteria for Classifying Hazardous Substances* (NOHSC, 1999).

9.2.4. Occupational health and safety – risk characterisation

The OHS risk presented by the notified chemical is expected to be low due to its expected low toxicity, low concentration in toner and low potential for exposure. Nevertheless, due to the particulate nature of the toner, skin, eye and respiratory exposure should be avoided. Individuals where the potential for prolonged exposure exists i.e. service personnel should wear cotton or disposable gloves. Photocopiers and printers should be located in well-ventilated areas. The NOHSC exposure standard for atmospheric dust is 10 mg/m^3 (TWA).

9.2.5. Public health – risk characterisation

The risk to public health presented by the notified chemical is expected to be low due to its expected low toxicity, low concentration in toner and low potential for exposure. Nevertheless, due to the particulate nature of the toner, skin eye and respiratory exposure should be avoided. Photocopiers and printers should be located in well-ventilated areas

10. CONCLUSIONS – ASSESSMENT LEVEL OF CONCERN FOR THE ENVIRONMENT AND HUMANS

10.1. Hazard classification

Based on the available data the notified chemical is not classified as hazardous under the NOHSC *Approved Criteria for Classifying Hazardous Substances.*

10.2. Environmental risk assessment

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

10.3. Human health risk assessment

10.3.1. Occupational health and safety

There is Low Concern to occupational health and safety under the conditions of the occupational settings described.

10.3.2. Public health

There is No Significant Concern to public health when used in the proposed manner.

11. MATERIAL SAFETY DATA SHEET

11.1. Material Safety Data Sheet

The MSDS of the product containing the notified chemical provided by the notifier was in accordance with the NOHSC *National Code of Practice for the Preparation of Material Safety Data Sheets* (NOHSC, 1994a). It is published here as a matter of public record. The accuracy of the information on the MSDS remains the responsibility of the applicant.

11.2. Label

The label for the product containing the notified chemical provided by the notifier was in accordance with the NOHSC *National Code of Practice for the Labelling of Workplace Substances* (NOHSC, 1994b). The accuracy of the information on the label remains the responsibility of the applicant.

12. RECOMMENDATIONS

CONTROL MEASURES

Occupational Health and Safety

No special precautions are required for the notified chemical when used at low quantities as a toner in pre-packed bottles or cartridges for electrophoto-copying machines or electrophotographic printers. However, in the interests of good occupational health and safety, the following guidelines and precautions should be observed for use of toners containing the notified chemical:

- Avoid contact with skin and eyes.
- Avoid breathing dust
- Avoid generation of dust. Photocopiers and printers should be located in well ventilated areas. The NOHSC Exposure Standard of 10 mg/m^3 TWA should be maintained in the workplace.
- Service personnel should wear cotton or disposable gloves when replenishing toner and servicing copying machines and printers.

  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.

Disposal

- DO NOT put toner or toner container or cartridge into fire; heated toner may cause severe burns. DO NOT shred a toner container holding remaining toner or toner cartridge, unless dust-explosion preventing measures are taken. Finely dispersed particles form explosive mixtures in air. Disposal should be to subject to federal, state and local laws.

Emergency procedures

- No toner spillage occurs in normal operations of handling. If it should occur, avoid inhalation of the dust. Sweep material onto paper and carefully transfer to a sealable waste container. Clean remainder with wet paper, wet cloth or a vacuum cleaner. If a vacuum cleaner is used, it must rate as a dust explosion-proof type. Fine powder can

form explosive dust-air mixtures.

12.1. Secondary notification

The Director of Chemicals Notification and Assessment 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 importation volume exceeds one tonne per annum notified chemical;

or

(2) Under Section 64(2) of the Act:
- if any of the circumstances listed in the subsection arise.

The Director will then decide whether secondary notification is required.

No additional secondary notification conditions are stipulated.

13. BIBLIOGRAPHY

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SafePharm Laboratories (2003d) ST1012KH: Acute Dermal Irritation in the Rabbit (SPL project number 897/304), SafePharm Laboratories Limited, Derbyshire, UK (Unpublished report submitted by notifier)

SafePharm Laboratories (2003e) ST1012KH: Acute Eye Irritation in the Rabbit (SPL project number 897/305), SafePharm Laboratories Limited, Derbyshire, UK (Unpublished report submitted by notifier)