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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)
Canon Australia Pty. Ltd. (ABN: 66 005 002 951)
1 Thomas Holt Drive
North Ryde NSW 2113

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)
None.

NOTIFICATION IN OTHER COUNTRIES
None.

2. IDENTITY OF CHEMICAL

MARKETING NAME(S)
NT-27

METHODS OF DETECTION AND DETERMINATION

ANALYTICAL METHOD	Infrared 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 a toner for electrophotocopying machines or electrophotographic 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
The notified chemical will be used as an ingredient at 0.005 to 2% of toner for electrophotocopying machines or electrophotographic 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 and 2500 g 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% with particle size less than 10 μm). However, exposure is expected to be controlled through the design of the toner cartridge or bottle 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 toner 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

Since the notified chemical will be imported in a ready to use containers and will not be manufactured or reformulated locally, there will be no environmental exposure associated with this process in Australia. Environmental release of the notified chemical from cartridges during importation, transportation and storage is unlikely.

RELEASE OF CHEMICAL FROM USE

The toner cartridges/bottles are designed to prevent leakage and will not be opened during transport, use, installation or replacement. Therefore, release of toner, containing the notified chemical to the environment is not expected under normal conditions of use.

In the event of accidental leakage individual container capacity and container and packaging specifications would limit the extent of release and the majority of the spill would be collected and placed in a suitable container to be disposed of to landfill with the general office garbage. No direct release to water occurs during normal use but a small amount of the chemical is expected to be lost to air during the printing process.

The empty toner cartridges will be either collected for recycling by a recycling company or disposed of to landfill in the normal office garbage. The size of the bottle/cartridge and the residual amount remaining in the bottle/cartridge varies on the types of copying machines or printers. Up to 12.5% of the annually imported notified chemical will remain in the empty cartridges/bottles.

Most of the notified chemical that is released from the containers (>99%) will be bound to printed paper, which will be disposed of to landfill, recycled or incinerated. During the recycling process the paper will be repulped in water, cleansed of contaminants, deinked with alkali, washed, cooked, bleached, screened and then used in the normal process as for other pulp materials. The alkali mixture resulting from the deinking stage is most likely recycled or neutralised and disposed of to wastewater treatment plants by a licensed waste contractor. It is expected that the notified chemical contained in the toner removed from the paper will mostly move to the sludge formed due to its low water solubility. The sludge containing the notified chemical is usually disposed of to landfill or, possibly, incinerated as waste.

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% with a particle size 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 20ºC 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 $<5.2 \times 10^{-9}$ kPa at 25°C

METHOD OECD TG 104 Vapour Pressure.
EC Directive 92/69/EEC A.4 Vapour Pressure.
Remarks Using a vapour pressure balance, measurements were made at several temperatures between 240 and 250°C and linear regression analysis was used to calculate the vapour pressure at 25°C. The result indicates that the notified chemical is slightly volatile (Mensink, 1996).
TEST FACILITY Safepharm Laboratories (2003b)

Water Solubility $<9.28 \times 10^{-3}$ 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.
TEST FACILITY Safepharm Laboratories (2003a)

Hydrolysis as a Function of pH

Remarks Due to the low solubility of the notified chemical, it was not possible to determine the hydrolysis as a function of pH. However, 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 then carried out using the HPLC method. Testing was performed at approximately neutral pH with 6 reference substances. The partition coefficient of the test substance was determined to be 7.61×10^5 as it eluted after triphenylamine and before DDT.
TEST FACILITY Safepharm Laboratories (2003a)

Adsorption/Desorption $\log K_{oc} > 5.63$ 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 with 10 reference substances. The adsorption coefficient Koc of the test material was determined to be $>4.27 \times 10^5$ as it eluted beyond DDT.
TEST FACILITY Safepharm Laboratories (2003a)

Dissociation Constant

Remarks Due to the low solubility of the notified chemical, it was not possible to determine

its dissociation constant. However, based on the chemical structure, it is expected that in an 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 Particle size in the range <100 μm was determined using a sieve and in the range <10 μm using a cascade impactor.
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 a Bunsen burner flame was applied.
TEST FACILITY Safepharm Laboratories (2003b)

Autoignition Temperature >400°C

METHOD 92/69/EEC A.16 Relative Self-Ignition Temperature for Solids.
Remarks No relative self-ignition temperature below 400°C was observed.
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. Fine powder can form explosive dust-air mixtures.
TEST FACILITY Safepharm Laboratories (2003b)

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 - Buehler Test	no evidence of sensitisation.
Genotoxicity - bacterial reverse mutation	non mutagenic

7.1. Acute toxicity – oral

TEST SUBSTANCE Notified chemical.

METHOD
Species/Strain: OECD TG 423 Acute Oral Toxicity – Acute Toxic Class Method
Vehicle: Rat/Sprague Dawley
Remarks - Method: Arachis Oil BP
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: None.

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

TEST FACILITY: Safepharm Laboratories (2003c)

7.2. Irritation – skin

TEST SUBSTANCE: Notified chemical.

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 was 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: Notified chemical.

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 Notified chemical.

METHOD OECD TG 406 Skin Sensitisation – Buehler Test
EC Directive 96/54/EC B.6 Skin Sensitisation - Buehler Test

Species/Strain	Guinea pig
VEHICLE	PEG 300
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%
Signs of Irritation	Due to the grey blue discoloration produced by the test item (also see remarks - method), 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%	0	0	NA	NA

Control Group	75%	0	0	NA	NA

Remarks - Results: None.

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: Notified chemical.

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-Benzoflavone 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 µg/plate (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 in 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. Negative controls were within acceptable limits and positive controls demonstrated the sensitivity of the assay.

CONCLUSION: The notified chemical was not mutagenic to bacteria under the conditions of the test.

TEST FACILITY: Canon (2003)

7.6. IUCLID dataset for analogue

A IUCLID dataset was available for a very close analogue of the notified chemical. Results of studies in the dataset indicated that the analogue was of low acute oral toxicity, was not irritating to skin or eyes, and was not a skin sensitiser. In a 28-day oral 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 molecular weight and low water solubility of the notified chemical suggests that it is likely 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

Environmental exposure of the toner containing the notified chemical will result from the disposal of printed paper and discarded cartridges and from any accidental leakage of the cartridges during use. In landfill, the chemical will eventually be released due to deterioration of the cartridge but can be expected to be immobile due to its low water solubility and estimated high log K_{oc}.

Some of the printed paper will eventually 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.

During paper recycling, it is expected that the remaining printed paper will undergo recycling with the notified chemical ultimately becoming part of the resultant sludge due to its low water solubility. The sludge will be disposed of to landfill or possibly incinerated.

Due to its low water solubility and high adsorption coefficient, the notified chemical entering soils via landfill (fixed to paper, adsorbed to sludge, or released from ruptured cartridges) is not expected to be mobile or to enter the aquatic compartment. The notified chemical is expected to eventually become associated with soil and sediment and undergo slow degradation by biotic and abiotic processes.

The low water solubility and molecular weight of the notified chemical indicate a potential for bioaccumulation, however this is expected to be offset by the low aquatic exposure.

The very limited exposure to the aquatic compartment makes it very difficult to calculate a meaningful predicted environmental concentration (PEC).

9.1.2. Environment – effects assessment

No ecotoxicological data were provided. Therefore, it was not possible to calculate a predicted no effect concentration (PNEC).

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. Although the chemical has the potential to bioaccumulate, due to the diffuse nature of use and limited release to water, it is unlikely that the chemical would exist at levels which could pose a threat of bioaccumulation.

Based on the low import volume of <1 tonne per year 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 in the toner. Exposure will be minimised by placing photocopiers and printers in areas of adequate ventilation and the use of disposable gloves by service personnel.

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

9.2.2. 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 in the toner. 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

The notified chemical is of low acute oral toxicity in rat, showed no evidence of sensitisation effects in guinea-pigs, and is non-irritating to skin and eyes, although the powder may cause mechanical irritation to the eyes, and to the respiratory tract if inhaled. A repeat-dose study on a close analogue indicates that there would be no significant adverse effects from chronic oral exposure. The notified chemical was negative in a bacterial mutagenicity test and similar results were observed in a range of in vitro studies with a close analogue. Based on the available information, the hazard presented by the notified chemical is expected to be low.

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. For 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 in accordance with 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, 2003). 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, 1994). 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 in a toner in pre-packed bottles or cartridges for electrophotocopying 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

- The notified polymer should be disposed of to landfill or by incineration.

- 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 subject to federal, state and local laws.

Emergency procedures

- No toner spillage should occur in normal conditions of handling. If it should occur, avoid inhalation of the dust. Sweep toner 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(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).