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24 June 1992

NATIONAL INDUSTRIAL CHEMICALS
NOTIFICATION AND ASSESSMENT SCHEME

FULL PUBLIC REPORT

C# 1723

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Director
Chemicals Notification and Assessment

FULL PUBLIC REPORT**C# 1723****1. APPLICANT**

Kodak Australasia Pty Ltd of 173 Elizabeth St., Coburg, Victoria.

2. IDENTITY OF THE CHEMICAL**Trade Name(s) :**

CIN# 10057570

C# 1723

CAT# 8101735

Product 14

Molecular Weight: 663.07

Based on the data provided, C# 1723, is considered to be non-hazardous. Therefore, its chemical name, CAS No., spectral data, empirical formula and structural formula have been granted exemption from publication in the Full Public Report and Summary Report.

3. PHYSICAL AND CHEMICAL PROPERTIES

At 20°C and atmospheric pressure (101.3 kPa), the notified chemical is a lavender powder with no discernible odour. Its melting point was determined as 350°C. Other physical and chemical data were not provided, which is acceptable given the quantity to be imported. But the notifier informs that the notified chemical is expected to have a low solubility in water. Materials containing similar functional groups have been shown to decompose at elevated temperatures and decomposition products may include chlorine fumes and oxides of nitrogen and osmium.

4. METHOD OF DETECTION AND DETERMINATION

X-Ray Diffraction may be used for detecting the notified chemical.

5. PURITY OF THE CHEMICAL

Degree of purity: 100%

6. INDUSTRIAL USES

The notified chemical will be used in the manufacture of photographic film/paper at the company site. Quantities of <1 kg/year, of the notified chemical will be imported in the first five years.

7. OCCUPATIONAL EXPOSURE

The notified chemical will be imported and used in the manufacture of an article. Two workers will be involved in weighing the notified chemical and four workers in "mix vessel loading" operations where the notified chemical will be added to the mix vessel containing water and other chemicals. The mixture will be mechanically stirred and transferred to the manufacturing equipment through an automated closed system during the manufacture of the article.

The notifier states that the notified chemical will be used only at one plant site in Victoria and occupational exposure will be very minimal as very small quantities of the notified chemical will be used.

8. PUBLIC EXPOSURE

The potential for public exposure to the notified chemical appears to be negligible. The compound is to be imported by the notifier and is totally consumed within the industrial setting in the manufacture of photographic film/paper. Once incorporated into the articles, the compound will be overcoated.

9. EVALUATION OF TOXICOLOGICAL DATA

9.1 Acute Toxicity

The acute toxicity studies have been conducted with the notified chemical in the powder form.

Table 1 Summary of acute toxicity of C# 1723

Test	Species	Dose	Outcome	Reference
Oral	Rat	5000mg/kg	LD ₅₀ :>5000 mg/kg	1
Skin Irritation	Rabbit	0.5 g	non-irritant	2

9.1.1 Oral Toxicity

This limit test was performed according to the OECD Guidelines for Testing Chemicals, Section 4: Health Effects, No. 401.

The notified chemical was added to the vehicle, 0.5% aqueous suspension of guar gum and was administered as a 25% suspension in the vehicle. A single 5000 mg/kg dose of C# 1723 was administered by gavage to five male and five female rats. The animals were observed for 14 days. No deaths occurred during the study. Clinical symptoms observed in the animals included slight weakness in all the rats four hours after administration of the dose. In addition, brown discoloured urine was also noted from

all the animals on the day of dosing subsequent to administration and on the following day. No other abnormal clinical observations were noted during the study. The body weight gain of the animals was not affected by the test article treatment throughout the entire study period. Necropsy revealed no gross pathological changes.

Results of this study indicate an acute LD₅₀ of >5000 mg/kg in rats of both sexes for the notified chemical (1).

9.1.2 Skin Irritation

This study was carried out in accordance with the OECD Guidelines for Testing Chemicals, Section 4: Health Effects, No. 404.

A single dose of 0.5 g of the notified chemical (moistened with distilled water) was applied to the intact skin of the shaved backs of three rabbits (two males and one female). The application site was covered with a fibre pad and an occlusive wrap. The duration of the treatment was four hours, after which the wrap was removed and the skin was washed with water. The skin reaction was assessed at 1, 24, 48 and 72 hours, and 7 and 14 days after removal of the occlusive wrap. Slight brown staining was noted in all the animals one hour after removal of the wrap. At the 48-hour observation period, no staining was evident. No signs of erythema or oedema were observed.

The results of this study indicate that the notified chemical was not a skin irritant in rabbits at the concentration tested (2).

9.2 Overall Assessment of Toxicological Data

C# 1723 has a low acute oral toxicity (Oral LD₅₀ in rats: >5000 mg/kg). Tests in rabbits reveal that it was non irritating to the skin.

10. ASSESSMENT OF ENVIRONMENTAL FATE

Information necessary for the determination of environmental fate has not been provided. However this is acceptable as it is likely that only minute quantities of the substance will be discarded at a licenced landfill. The low solubility suggests that the notified chemical is likely to remain soil-bound.

11. ASSESSMENT OF ENVIRONMENTAL EFFECTS

No ecotoxicological data were provided, which is acceptable for small volume (<1 tonne/year) new chemicals according to the Act.

12. ASSESSMENT OF ENVIRONMENTAL HAZARD

Only a small volume (<1 kg) of the notified chemical will be imported, and no environmental release is anticipated. Small quantities that may enter licenced disposal sites (landfill) should not constitute an environmental hazard.

13. ASSESSMENT OF PUBLIC AND OCCUPATIONAL HEALTH AND SAFETY

The notified chemical exhibited low acute oral toxicity (LD₅₀ >5000mg/kg) and was not a skin irritant in animal studies. Potential occupational exposure is expected to be minimal because of in-plant use of the notified chemical and the small quantities (< 1kg/annum) involved.

Therefore, due to low public and occupational exposure and low toxicity, it is unlikely that C# 1723 will pose a significant health and safety hazard to the public and workers when

engineering controls, appropriate personal protective clothing and good personal hygiene are observed.

14. **RECOMMENDATIONS FOR THE CONTROL OF PUBLIC AND WORKER EXPOSURE**

To minimise public and worker exposure to C# 1723 the following guidelines and precautions should be observed:

- . Engineering control procedures such as local exhaust ventilation should be employed in areas where the notified chemical will be added to the mix.
- . Personal protection measures should be implemented such as the wearing of safety glasses, impervious elbow length gloves and protective clothing. Personal protection equipment should comply with Australian Standards (AS) such as:
 - . appropriate splash-proof safety goggles (AS 1337) - *Eye Protection for Industrial Applications* (3), during mixing when chemical may contact the eyes;
 - . elbow length impervious nitrile gloves (AS 2161) - *Industrial Safety Gloves and Mittens (excluding Electrical and Medical Gloves)* (4);
 - . appropriate impervious protective clothing (AS 3765) - *Clothing for protection against Hazardous Chemicals* (5).
- . Good work practices should be followed to avoid spillages or splashings.
- . Good housekeeping should be maintained.
- . A copy of the MSDS for the notified chemical should be easily accessible to employees.

15. MATERIAL SAFETY DATA SHEET

The Material Safety Data Sheet (MSDS) for C# 1723 (Attachment 1) was provided in Worksafe format (6). This MSDS was provided by Kodak (Australasia) Pty. Ltd as part of their notification statement. It is reproduced here as a matter of record. The accuracy of this information remains the responsibility of Kodak (Australasia) Pty. Ltd.

16. REQUIREMENTS FOR SECONDARY NOTIFICATION

Under the *Industrial Chemicals (Notification and Assessment) Act 1989* (the Act), secondary notification of C# 1723 shall be required if any of the circumstances stipulated under subsection 64(2) of the Act arise. No other specific conditions are prescribed.

17. REFERENCES

1. C# 1723 Acute oral Toxicity Study in Rat. Eastman Kodak Company - Toxicological Sciences Lab. Project HAEL No. 90-0014, 1990.
2. C# 1723 Primary skin Irritation Study in Rabbit. Eastman Kodak Company - Toxicological Sciences Lab. Project HAEL No. 90-0014, 1990.
3. Australian Standard 1337 - 1984 *Eye protectors for Industrial Applications*, Standards Association of Australia Publ., Sydney (1984).
4. Australian Standard 2161 - 1978 *Industrial Safety Gloves and Mittens (excluding Electrical and Medical Gloves)*, Standards Association of Australia Publ., Sydney (1984).
5. Australian Standard 3765-1990 *Clothing for Protection Against Hazardous Chemicals*, Standards Association of Australia Publ., Sydney (1990).
6. National Occupational Health and Safety Commission, *Guidance Note for the Completion of a Material Safety Data Sheet*, 2nd. Edition, AGPS, Canberra, 1991.