

## ASTM D-4236 EVALUATION FOR *MARKER PEN*

Intertek Job Number: SZHH01255789

**Company:** Shenzhen Kaihongyu Stationery Co., Ltd  
F/3, Building 1, Nangang First Industrial Park, Songbai Road  
Xili, Nanshan District, Shenzhen  
Guangdong

**Date:** May 22, 2018

**Details of Product:** Description: Marker Pen  
Age grading on package, years: 3+  
Physical form: Liquid  
Mass or volume: 1.2 g

**Ingredients and %w/w composition are listed in the appendix (subject to valid request).**

The above-named product, and the ingredients in the product formulation, were assessed for the following chronic hazards, and evaluated for compliance with the labeling requirements designated in the U.S. Consumer Product Safety Commission (CPSC) Regulations (16 CFR §1500.14; 57 FR 46626) and ASTM D-4236 (LHAMA Certification):

- Carcinogenicity
- Neurotoxicity
- Reproductive and developmental toxicity
- Sensitization
- General organ and tissue toxicities

Searches of medical and toxicological scientific databases were conducted to determine if any of the ingredients in the product, at the levels used, or as components of the final formulated product, are known to cause chronic adverse health effects to consumers when used as intended or under conditions of reasonable foreseeable misuse.

**Conclusions:** Based on the scientific literature available and the information provided to date, the *Marker Pen* would not be expected to pose any significant chronic adverse health effects to humans under normal use or reasonable foreseeable misuse. This assessment assumes that the writing instrument or cartridge is of such construction that the ink will, under any reasonable foreseeable condition of manipulation and use, emerge only from the writing tip. However, if this is not the case, *Marker Pen* has the potential to cause eye irritation due to the presence of 2,2-dibromo-2-cyanoacetamide at the indicated concentration.

The *Marker Pen* must bear the following statement: "Conforms to ASTM D-4236." Other requirements of 16 CFR § 1500.14 pertaining to proper labeling of the product including format and placement of statements and additional precautionary statements must also be adhered to in accordance with the Consumer Product Safety Commission's Regulations as mandated by the Labeling of Hazardous Art Materials Act (LHAMA).

Additional considerations to be aware of concerning *Marker Pen*:

- The possibility exists that one or more ingredients, marked with an (\*) in the appendix, could cause idiosyncratic responses, such as eczema-type allergic reactions.



The following conditions apply to this assessment:

- This product was not evaluated for heavy metal or lead content, which can affect the ability of manufacturers to label their products in compliance with ASTM D-4236.
- This product was not assessed for compliance with regulations, other than as described above.
- This product was not assessed for compliance with the California EPA, Proposition 65.
- This product has not been evaluated for potential physical injury such as choking hazard, aspiration risk, or mechanical irritation.
- It was assumed that the formulation given is accurate, all ingredients are disclosed and concentrations are correct, as listed in the appendix table, subject to valid request.
- It was assumed that neither this product, nor the ingredients used in the product, contained any impurities/contaminants that would cause toxicity in a consumer.

This evaluation is relevant solely to the conditions described herein. Any substitution of ingredients, increase in concentrations of use, or change of use pattern will necessitate a new evaluation. Should occurrences of significant adverse reactions amongst consumers (e.g. high number of undesirable effects) be reported for *Marker Pen*, the board- certified toxicologist herein shall be informed and the necessity for a new evaluation will be determined.

***This evaluation applies only to the formulation that has been provided in the corresponding confidential appendix to this report. This appendix is held on file at the Shenzhen Intertek Office.***

**Signature of Board Certified Toxicologist:**

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Barry Lynch:  
Diplomate, American Board of Toxicology  
Intertek Scientific & Regulatory Consultancy

**END OF MAIN REPORT**