

Restriction of Toxic Elements in Pencils & Coloured Pencils

A new and a revised GB standards relating to stationery articles were published in the mid of 2007 by the National Standard of the People's Republic of China.

GB 8771:2007 Maximum Limits for Soluble Elements Content of Pencil Coating, published on June 26, 2007 to replace GB 8771:1988, **was come into enforcement beginning January 1, 2008**. The new revision has removed the total lead content requirement for pencil coating in the 1988 edition by substituting with the maximum limits for 8 soluble elements content (see **Table 1**). This standard is applicable to surface coating materials of both pencils and coloured pencils.



The toxic elements content in pencil lead or coloured pencil lead (see **Table 1**) were restricted by another mandatory standard, **GB 21027:2007 Request in Common Use of Security for Student's Articles**, a new standard published on June 7, 2007 which **will come into enforcement beginning April 1, 2008**.

Similar to **China, Canada, Australia, Japan and UK** also have their own requirements (see **Table 1**) restricting the toxic elements in pencil coating and pencil lead.

Recognizing graphic materials as hazardous substances, the Environmental Risk Management Authority (ERMA) of **New Zealand** has released a consultation document in November, 2007 **proposing to issue a new Group Standard for Graphic Materials** and to amend the **Surface Coatings and Colourants Group Standards**. Submission for comments was just closed by December 14, 2007.

Table 1 – Toxic Elements Limits for Pencils or Coloured Pencils

Toxic Element Requirements	Pencil Coating / Coloured Pencil Coating					Pencil Lead / Coloured Pencil Lead		
	Australia	Canada	China	Japan	UK	China	Japan	UK
	Customs (Prohibited Imports) Regulations 1956	Hazardous Products Act, Schedule I, Part I, Item 18	GB 8771:2007	JIS S 6006:2000	The Pencils and Graphic Instruments (Safety) Regulations 1998	GB 21027:2007	JIS S 6006:2000	The Pencils and Graphic Instruments (Safety) Regulations 1998
Soluble Antimony (Sb)	≤ 60 mg/kg	---	≤ 60 mg/kg	≤ 60 mg/kg	≤ 250 mg/kg	≤ 60 mg/kg	≤ 60 mg/kg	≤ 250 mg/kg
Soluble Arsenic (As)	≤ 25 mg/kg	---	≤ 25 mg/kg	≤ 25 mg/kg	≤ 100 mg/kg	≤ 25 mg/kg	≤ 25 mg/kg	≤ 100 mg/kg
Soluble Barium (Ba)	≤ 1000 mg/kg	---	≤ 1000 mg/kg	≤ 1000 mg/kg	≤ 1000 mg/kg	≤ 1000 mg/kg	≤ 1000 mg/kg	≤ 1000 mg/kg
Soluble Cadmium (Cd)	≤ 75 mg/kg	---	≤ 75 mg/kg	≤ 75 mg/kg	≤ 100 mg/kg	≤ 75 mg/kg	≤ 75 mg/kg	≤ 100 mg/kg
Soluble Chromium (Cr)	≤ 60 mg/kg	---	≤ 60 mg/kg	≤ 60 mg/kg	Hexavalent Chromium ≤ 100 mg/kg	≤ 60 mg/kg	≤ 60 mg/kg	Hexavalent Chromium ≤ 100 mg/kg
Total Lead (Pb)	---	≤ 600 mg/kg	---	---	---	---	---	---
Soluble Lead (Pb)	≤ 90 mg/kg	---	≤ 90 mg/kg	≤ 90 mg/kg	≤ 250 mg/kg	≤ 90 mg/kg	≤ 90 mg/kg	≤ 250 mg/kg
Soluble Mercury (Hg)	≤ 60 mg/kg	---	≤ 60 mg/kg	≤ 60 mg/kg	≤ 100 mg/kg	≤ 60 mg/kg	≤ 60 mg/kg	≤ 100 mg/kg
Soluble Selenium (Se)	≤ 500 mg/kg	---	≤ 500 mg/kg	≤ 500 mg/kg	---	≤ 500 mg/kg	≤ 500 mg/kg	---
Test Method	AS/NZS ISO 8124.3:2003	Not specified	GB 6675-2003, Annex C	JIS S 6006:2000, §8.8	BS EN 71-3:1995	GB 6675-2003, Annex C	JIS S 6006:2000, §8.8	BS EN 71-3:1995

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For enquires or other information on toxic elements testing, please contact STR at:

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