ANNEX II

Overview of Common Non Plastics Materials Used in Baby bottles and Children's Tableware

Materials	Uses	General Properties [a]	Major migrant(s) of concern	Adverse Health Effects	Relevant Regulations [b]
Glass and Ceramic	Baby bottles, tableware, microwaveable ware	Good heat and chemical resistance, low impact resistance, withstand temperature up to ~400^{o}C	Lead (contaminant from glaze or colour decoration)	Chronic exposure caused developmental neurotoxic effects in humans.[12] IARC (2006) classified inorganic lead compounds in Group 2A agent (probably carcinogenic to humans). [2]	-Directive 84/500/EEC 2005/31/EC - USFDA CPG Sec. 545.450 - USFDA CPG Sec.545.400 - GB 13121-91 -GB 9685-2008
			Cadmium (contaminant from glaze colour decoration)	Chronic exposure affected affect kidney in humans.[13] IARC (in prep) classified cadmium and cadmium compounds in Group 1.[2]	

Materials	Uses	General Properties [a]	Major migrant(s) of concern	Adverse Health Effects	Relevant Regulations [b]
Stainless steels	Baby bottles, tableware, thermoflasks	High heat and chemical resistance, high impact resistance, durable, melt at ~1300^{o}C	Nickel (component)	Not poisonous in small quantities but can provoke a reaction in people allergic to nickel.[14] IARC (in prep) classified nickel compounds in Group 1 agents and in 1990 classified metallic nickel in Group 2B.[2]	-GB 9684-2011 -GB 9685-2008
			Chromium (component)	Chronic excessive exposure to chromium (VI) caused development toxicity in experimental animals. Some people are allergic to chromium (VI) and (III).[15] IARC (in prep) and classified chromium (VI) in Group 1 and in 1990 classified metallic chromium and chromium (III) compounds in Group 3.[2]	
Aluminium	Drinking bottles	High impact and heat resistance, durable, melt at ~660^{o}C	Aluminium (component)	Chronic exposure affected the reproductive system and developing nervous system in experimental animals.[16]	-GB11333-1989 -GB 9685-2008

Materials	Uses	General Properties [a]	Major migrant(s) of concern	Adverse Health Effects	Relevant Regulations [b]
Rubbers	Feeding teats and soothers	Flexible, withstands temperature up to ~100^{o}C	Nitrosamines	Associated with increase cancer risk in humans.[17] IARC classified some nitrosamines compounds in Group 2A or 2B.[2]	-Directive 93/11/EEC, -21CFR177.2600 -GB 4806.2-1994 -GB 9685-2008
Silicone	Baby bottles, feeding teats and soothers, tableware, straws	Flexible, high heat resistance, withstand temperature up to ~200^{o}C	Volatile organic compounds (VOC), e.g. Silioxanes (monomers)	Chronic exposure to high doses affected liver in experimental animals.[18]	-21CFR177.2600
Wood and bamboo	Chopsticks and other tableware	High impact and heat resistance, burn at ~300^{o}C	Formaldehyde (contaminant from lacquer and binder)	Animal studies showed that long-term exposure of high dose in drinking-water might lead to pathological changes in the stomach and increase in kidney weights.[19] The IARC (in prep) classified formaldehyde by inhalation in Group 1.[2]	-GB 19790.1-2005 -GB 19790.2-2005 -GB 9685-2008

Notes: [a] Based on information from British Stainless Steel Association, the American Ceramic Society, the Aluminum Association and specifications of food contact articles provided by manufacturers. Properties of food contact articles made of each material may vary due to differences in raw materials, formula, processing methods, technologies, etc. [b] Refer to regulations or standards stipulated by the European Commission, USFDA, and Ministry of Health of the People's Republic of China.

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