| **Safety guidance on concentrations of particular chemicals in certain consumer goods** | | | | | |
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| **Type of consumer good** | **Indicative concentrations (under which there are not current safety concerns)** | **Chemical name and Chemicals Abstract Service (CAS) number** | **Potential health effects** | **References** | **Examples of types of consumer goods** |
| Clothing, textiles and leather articles in direct and prolonged contact with the human skin or oral cavity. | 30 mg/kg (or 0.003 % by weight) for each of the 22 listed aromatic amines. | 1. 4-Aminodiphenyl (CAS 92-67-1) 2. Benzidine (CAS 92-87-5) 3. 4-Chloro-o-Toluidine (CAS 95-69-2) 4. 2-Naphthylamine (CAS 91-59-8) 5. o-Aminoazotoluene (CAS 97-56-3) 6. 2-Amino-4-Nitrotoluene (CAS 99-55-8) 7. p-Chloroaniline (CAS 106-47-8) 8. 2,4-Diaminoanisole (CAS 615-05-4) 9. 4,4'-Diaminodiphenylmethane (CAS 101-77-9) 10. 3,3'-Dichlorobenzidine (CAS 91-94-1) 11. 3,3'-Dimethoxybenzidine (CAS 119-90-4) 12. 3,3'-Dimethylbenzidine (CAS 119-93-7) 13. 3,3'-Dimethyl-4,4'diaminodiphenylmethane (CAS 838-88-0) 14. p-Cresidine (CAS 120-71-8) 15. 4,4'-Methylene-Bis(2-Chloroaniline) (CAS 101-14-4) 16. 4,4'-Oxydianiline (CAS 101-80-4) 17. 4,4'-Thiodianiline (CAS 139-65-1) 18. o-Toluidine (CAS 95-53-4) 19. 2,4-Toluylenediamine (CAS 95-80-7) 20. 2,4,5-Trimethylaniline (CAS 137-17-7) 21. o-Anisidine (CAS 90-04-0) 22. p-Aminoazobenzene (CAS 60-09-3) | The aromatic amines listed are classified as either known or suspected human carcinogens.  The critical health effects for risk characterisation include systemic long-term effects including carcinogenicity, reproductive toxicity and developmental toxicity. | NICNAS assessment of benzidine-based dyes health effect carcinogenicity - supply of articles likely to come into direct and prolonged contact with the human skin that may plausibly result in exposure to benzidine- based dyes at unacceptable concentrations be restricted: <http://www.nicnas.gov.au/chemical-information/imap-assessments/imap-group-assessment-report?assessment_id=513>  IARC classifications **Group 1** – carcinogenic to humans; and  **2B** – possibly carcinogenic to humans  Monograph is available at: <http://monographs.iarc.fr/ENG/Monographs/vol99/mono99.pdf>  HSIS  classifications - **Carc. Cat. 2; R45** and **Repr. Cat. 3; R63**.See: <http://hsis.safeworkaustralia.gov.au/HazardousSubstance/Details?hazardousSubstanceID=16> | * Clothing such as shirts, singlets, pants, jeans, shorts underwear, socks, gloves; * Bedding, such as sheets, pillow cases doona covers sleeping bags; and * Yarn and fabrics supplied to consumers where the finished article is likely to be in direct and prolonged contact with the skin. |
| Clothing and textiles and clothing finishes | 30 mg/kg (or 0.003 % by weight) for **infants’ clothing** and **clothing specifically marked for individuals with sensitive skin**  100 mg/kg (or 0.01 % by weight) for **garments which contact the skin**  300 mg/kg (or 0.03 % by weight) for **other garments or fabrics** | Formaldehyde (50-00-0) | The critical health effects for characterising public health risk from exposure to formaldehyde are sensory irritation and skin sensitisation.  There is also an increased risk of rare cancers in situations where people have prolonged, high level exposure to formaldehyde. | NICNAS assessment recommended that in addition to more restrictions under the Poisons Standard, cut-off values for formaldehyde content of consumer products should be considered: <http://www.nicnas.gov.au/__data/assets/pdf_file/0006/4389/PEC_28_Formaldehyde_Full_Report_PDF.pdf>  IARC classification **Group 1** – carcinogenic to humans.  Monograph is available at: <http://monographs.iarc.fr/ENG/Monographs/vol100F/mono100F-29.pdf>  HSIS classification is **Xi; R41 R43**. See: <http://hsis.safeworkaustralia.gov.au/HazardousSubstance/Details?hazardousSubstanceID=6814>. | * Infant clothing such as singlets, jumpsuits, t-shirts, pants, socks; * children’s and adults clothing such as nightwear, shirts, trousers; * bedding, such as sheets, blankets, pillow cases, doona covers; and * fabrics which crease easily. |
| Leather and textiles articles, including clothing in direct contact with the human skin. | 0.1 mg/kg | 2-Butenedioic acid, (E)-, dimethyl ester (624-49-7)  Synonyms:  Dimethyl fumarate (DMF)  Fumaric acid, dimethyl ester  Fumaderm  Methyl fumarate | The critical health effects for characterising public health risk from exposure to this substance is skin sensitisation. | NICNAS assessment recommended considering mechanisms to control in consumer articles to below 0.1mg/kg.  <http://www.nicnas.gov.au/chemical-information/imap-assessments/imap-assessment-details?assessment_id=1629> | * skin contact surfaces of leather sofas and couches * footwear * textile products including clothing where there is direct contact with the skin |