

## Royal Philips Electronics List of Hazardous Substances in Production Processes

Hazardous substances	Remarks <sup>a</sup>
Alkylphenols: octyl and nonylphenol, 2,4,6-tri-t-Butylphenol, nonylphenoethoxylates ( <i>see remark b</i> )	CMR class 3; substance on OSPAR list
Antimony and Antimony compounds	On relevant product list CMR class 3-4
Arsenic and Arsenic compounds	On relevant product list CMR class 1-3
Artificial musks (e.g., Musk Xylene; CAS 81-15-2)	CMR class 3; substance on OSPAR list
Barium and Barium compounds	On relevant product list
Bisphenol-A used in resins; ( <i>see remark b</i> )	CMR class 3
Cobalt and Cobalt compounds	CMR class 3
Cyanides	On relevant product list
Glutaraldehyde	Biocide with potential environmental contamination effects
Isocyanates ( <i>not chemically bound; see remark b</i> )	On relevant product list; substance on OSPAR list
Lead and Lead compounds ( <i>see remark c and d</i> )	
Pentachlorophenol (PCP) and its salts and esters	CMR class 3; on restricted product list
Per fluorinated compounds (PFCs) and Hydrofluorocarbons (HFCs)	High global warming potential value
Radioactive substances ( <i>see remark e</i> )	On relevant product list
Selenium and Selenium compounds	On relevant product list
Specific chlorinated and brominated organic compounds, other than mentioned in the Philips restricted list; incl. HBCD, TBBA ( <i>for TBBA see remark b</i> )	On relevant product list; substance on OSPAR list
Tellurium and Tellurium compounds	On relevant product list
Thallium and Thallium compounds	On relevant product list
Toluene, Xylene, Styrene ( <i>see remark b</i> )	CMR class 3
Triclosan (2,4,4'-trichloro 2'-hydroxy diphenyl ether)	Immunotoxicant
Trimethylphosphate and triphenylphosphine flame retardants	On relevant product list; triphenylphosphine is listed on OSPAR list
4-t-butyl toluene	
4-(dimethylbutylamino)diphenylamine	
Hexamethyldisiloxane	
Some aliphatic hydrocarbons: 1,5,9 cyclododecatriene, cyclododecane	Substances on OSPAR list

- a. Reporting of the emissions is needed, only when the substances are intentionally used. Simple mass balances are mandatory for these calculations; assumptions for emission calculation are allowed. No reporting of emissions is needed for preparations if concentration is below 0.1% (weight), for use in analysis and laboratory applications and for use in Research and Development applications. Threshold for emission reporting is 5 kg per substance per reporting unit per year. For Lighting also reporting of use is necessary.  
Abbreviations: **CMR**: carcinogenic, mutagenic or reproductive toxin; **OSPAR**: The 1992 OSPAR Convention is the current instrument guiding international cooperation on the protection of the marine environment of the North-East Atlantic. A Priority List of Chemicals has been made.
- b. Monitoring of use and emissions are only needed if the concentration of these substances in preparations exceeds 10% (weight). Reaction products of epichlorohydrin and bisphenol-A are exempted from monitoring
- c. Because these substances are not legally restricted for use in Medical Equipment and are exempted in specific applications by legislation (e.g., lead soldering for automotive products), they have been added to this List for reporting purposes only. Hence, all uses of chemicals that are excluded or exempted by legislation including the European RoHS Directive also need to be reported.
- d. Lead in soldering and ionization shielding applications is exempted for reporting in **Medical Applications**.
- e. Report emission in Megabecquerel (MBq) for each substance (e.g., Iodine 131, Krypton 85), only when exceeding any regulatory level.