

To whom it may concern
August 2024

RoHS

RoHS – Restriction of the use of certain hazardous substances in electrical and electronic equipment.

The RoHS Directive aims to reduce the risks to human health and the environment by replacing and restricting hazardous chemical substances in electric and electronic equipment. The Directive also aims to improve the prospects of cost-effective and sustainable recycling of material waste from electronic and electronic equipment.

The RoHS Directive, 2002/95/EC is a regulation from the European Community, entered into force 2006-07-01. Replaced by updated RoHS directive 2011/65/EU (RoHS 2), entered into force 2011-07-21.

Commission Delegated Directive (EU) 2015/863 of 31 March 2015 amending Annex II to Directive 2011/65/EU with 4 more substances (DEHP, BBP, DBP and DIBP), entered into force on 2019-07-22 (except for Category 8/9, enter into force 2021-07-22).

PCBs supplied by NCAB complies with the latest ROHS directive, except for PCBs with surface finish leaded HASL (by customer specification), which may contain a concentration of lead >0.1% weight by weight (w/w).

The RoHS directive restricts the maximum concentration values tolerated by weight in homogeneous materials to:

Lead (0.1%)
Mercury (0.1%)
Cadmium (0.01%)
Hexavalent chromium (0.1%)
Polybrominated biphenyls (PBB) (0.1%)
Polybrominated diphenyl ethers (PBDE) (0.1%)
Bis(2-ethylhexyl) phthalate (DEHP) (0.1%)
Butyl benzyl phthalate (BBP) (0.1%)
Dibutyl phthalate (DBP) (0.1%)
Diisobutyl phthalate (DIBP) (0,1 %)

PBB and *PBDE* are brominated flame retardants. These are not used in PCBs. The brominated flame retardant used in PCBs is *TBBP-A* (Tetrabromobisphenol-A). This is not restricted by RoHS.

TBBP-A is a reactive flame retardant (in FR4) which means in practical that the risk for leakage to the environment is very low.

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