

Flammability

These notes are intended to clarify the “*flammability concept*” that is concerning most of Aluminium Electrolytic Capacitors users

Considering fire and possible fire hazard, the design engineer should know that: *UL detail specification concerning DC Aluminium Electrolytic Capacitors doesn't exist*

UL specifications cover fire hazard and test on not flammable material.

The test that can be used to control outside material used in Aluminium Electrolytic Capacitors European is covered by the specifications (IEC 60695-2-2)

The tests done on finished capacitors are to be considered useful only for comparison as it strongly depend on material dimensions and also by other materials that can be in contact: external material itself are UL approved as VO or HB rated

Under standard applications (when soldering heat is not in excess, if the beading is not damaged, if an abnormal use conditions are not applied, if there has been an incorrect polarity application etc.) there is no leakage of the liquid that impregnates the rolled section (“the capacitor’s body”): if that happens and if there is a possible fire source around the unit the ignition of the rolled section can start and will continue until the fire (or the flame or whatsoever is the possible ignition reason) stays in contact with the inside part of the capacitor.

As soon as the fire source is removed the rolled section stops to burn generally in less than 15 seconds.

It is of great importance to underline that the fire stops as soon as the source is removed ; if source of fire is newly applied the fire can restart.

Materials

To the best of Itelcond knowledge Aluminium Electrolytic capacitors manufactured in his plant complies to :

Directive 2002/95/EC -January 2003

Amendment of Directive 2002/95/EC -August 2005

Directive 2003/11/EC -February 2003

Directive 2006/122/EC -December 2006

Itelcond certifies that during designing and/or manufacturing of aluminium electrolytic capacitors no

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|-------------------------------------|--|
| • Asbestos, | • Polychlorinated Triphenyl (PCT), |
| • Lead (Pb) | • Polybrominated Biphenyl (PBB), |
| • Mercury (Hg), | • Polybrominated Diphenyl (PBD), |
| • Chromium VI (Cr ^{VI}), | • Polybrominated Diphenyl Ethers(PBDE) |
| • Dimethylacetamide (DMAC) | • PentaBDE / OctaBDE / DecaBDE |
| • Dimethylformamide (DMF) | • Materials currently listed as |
| • Polychlorinated Biphenyl (PCB), | carcinogenic/mutagenic/teratogenic |

are not intentionally added or used

Itelcond received also written assurance from suppliers that they don't use the above chemicals or substances in the manufacture of products Itelcond is currently buying to produce its own components.