

Aluminium Electrolytic Capacitor

Material Data Sheet

Product Class:	Axial-lead capacitors	
Date	06.10.2011	
IMDS ID if available		
Version:	02	

Product Part (IMDS: semi component)	Material Class (IMDS: Material)	Material (Classification) VDA 231	Substance	TMPS**) [wt%]	CAS if applicable	typical mass of material [wt-%]	Traces see 1)
Active Part	Light Metals	1B1	Aluminium	100	7429-90-5	35	
	Paper, Cardboard	5C	Cellulose	100	9004-34-6	7	
	Acids, Bases, Salts	6F	Gamma-butyrolactone	57 or 81 (without NMP)	96-48-0	27	
	Acids, Bases, Salts	6F	NMP (depending on specific type***)	24	872-50-4		
	Acids, Bases, Salts	6F	Others*)	19	-		
Encapsulation	Light Metals	1B1	Aluminium	100	7429-90-5	22	
	Paper, Cardboard	5C	Cellulose	100	9004-34-6	0,7	
	Duromer	2D	Epoxy Based Polymer	100	25928-94-3	2,3	
	Elastomer	2B	EPDM rubber	100	25038-36-2	1	
	Thermoplastics	2A	Polyvinyl chloride or Polyethylene terephthalate	100	9002-86-2 25038-59-9	2	
Termination	Heavy Metals	1C12	Copper	100	7440-50-8	2	Carbon, Tin
	Iron and Steel	1A	Iron	100	7439-89-6	1	
Sum in total:						100	

sizes D x L [mm]	weight [g]	sizes D x L [mm]	weight [g]	sizes D x L [mm]	weight [g]	part numbers:	
12 x 30	5,1	16 x 30	8,9	20 x 29	13,5		
14 x 25	5,7	16 x 39	11,7	21 x 39	20,0	B41682	B43682
14 x 30	6,8	18 x 30	11,1	21 x 49	25,0	B41683	B43683
16 x 25	7,4	18 x 39	14,7			B41684	B43684

Not part of a Product Class		Important remarks: 1) The declaration limit is 0.1% as defined by IEC PAS 61906. Traces are product parts, substances etc. that are below a percentage of 0.1 % by weight, if not otherwise regulated 2) This Material Data Sheet contains typical values of the respective products set forth herein. We expressly point out that all values and statements contained herein are based on our best present knowledge and cannot be regarded as binding statements or binding product specifications, unless otherwise explicitly agreed in writing. EPCOS AG AND ITS AFFILIATES HEREBY EXPRESSLY DISCLAIM ANY REPRESENTATION OR WARRANTY, WHETHER EXPRESS, IMPLIED OR STATUTORY, WITH REGARD TO THE STATEMENTS AND VALUES CONTAINED HEREIN, INCLUDING BUT NOT LIMITED TO ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY OR SUITABILITY FOR ANY PURPOSE.
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*) others: (not declarable or prohibited substances acc. GADSL) **) typical mass percentage of substance ***) Following products present NMP: B41684A7227T B41684A7477T B41684A8687T B41684S 477Q 3 B41684S 477Q 4 B41684S 687Q 1 B41684S7108M 4 B41684S7228T 2 B41684S7228T 2G 1 B41684S7228T 13 B41684S8227T 1 B41684S8227T 2 B41684S8227T 3 B41684S8227T 4 B41684S8477Q 1		

The products set forth herein are "RoHS-compatible". RoHS-compatible means that products are compatible with the requirements according to Art. 4 (substance restrictions) of Directive 2011/65/EU of the European Parliament and of the Council of June 8th, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.



RoHS - Exemptions for the Product Class / Product according to Annex III: (valid not valid)

- no exemptions;
- Exemption 6 (a): Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0,35 % lead by weight;
- Exemption 6 (b): Lead as an alloying element in aluminium containing up to 0,4 % lead by weight;
- Exemption 6 (c): Copper alloy containing up to 4 % lead by weight;
- Exemption 7 (a): Lead in high melting temperature type solder (i.e. lead-based alloys containing 85 % by weight or more lead);
- Exemption 7 (c)-I: Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound;
- Exemption 7 (c)-II: Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher;
- Exemption 7 (c)-III: Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC;
- Exemption 15: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages;
- Other Exemption than above