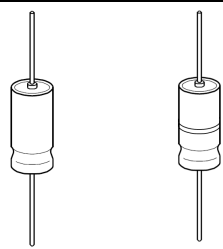


Aluminium Electrolytic Capacitor

Material Data Sheet

Product Class	Axial-lead Capacitors	
Date	27/08/2014	
IMDS ID if available	-	
Version	07	

Remark: This material datasheet is valid for the part numbers contained in the Data Book 2015. In case of special (B4****S****) or obsolete capacitors please contact our sales department.

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	
	Acids, Bases, Salts	6F	Ethylene glycol or Gamma-butyrolactone	65 or (90 if without NMP)	107-21-1 96-48-0	25	
	Acids, Bases, Salts	6F	1-methyl-2-pyrrolidinone (NMP) ***)	25	872-50-4		
	-	-	Others *)	10	-		
	Paper, Cardboard	5C	Cellulose	100	9004-34-6	9	
Encapsulation	Light Metals	1B1	Aluminium	99,5	7429-90-5	19	
	-	-	Others *)	0,5	-		
	Paper, Cardboard	5C	Cellulose	99,6	9004-34-6	1,5	
	-	-	Others *)	0,4	-		
	Duromer	2D	Phenolic resin	100	9003-35-4	2,8	
	Elastomer	2B	EPDM rubber	41,5	25038-36-2	2,4	
	Inorganic, solid	4A	Silicon dioxide	13	7631-86-9		
	Inorganic, solid	4A	Kaolinite	28,5	1318-74-7		
	Lubricant	6B	Paraffin	10,5	8012-95-1		
	-	-	Others *)	6,5	-		
	Thermoplastics	2A	PTFE	100	9002-84-0	0,1	
	Thermoplastics	2A	PET	90	25038-59-9	2	
	-	-	Others *)	10	-		
Termination	Iron and Steel	1A	Iron	99	7439-89-6	1	
	-	-	Others *)	1	-		
	Heavy Metals	1C12	Copper	100	7440-50-8	2	
	Heavy Metals	1C8	Tin	100	7440-31-5	0,2	

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 35	10,4	20 x 29	13,5	B41689
14 x 25	5,7	16 x 39	11,7	21 x 39	20,0	B41690
14 x 30	6,8	18 x 25	9,3	21 x 49	25,0	B41691
16 x 25	7,9	18 x 30	11,1			B41692
16 x 30	8,9	18 x 39	14,7			B41693
						B41695
						B41696
						B43693

Not RoHS exceptions from these series see in U_Spec_EPCOS_Elko_Axial_B41689-696_B43693_Leaded.pdf

Not Part of a Product Class	
Contact	Perosa, Eduardo
Division	GTI ALU
Address	Bernardo Joaquim Ferreira, 624 – Gravataí, RS, Brazil
	Tel: +55 51 3484 7380 mailto: eduardo.perosa@epcos.com
*) others: (not declarable or prohibited substances acc. GADSL) **) typical mass percentage of substance ***) Following products present NMP:	
B41689*	63V
B41690*	63V
B41691*	all voltages
B41692*	all voltages
B41693*	25V , 40V and 63V
B41695*	all voltages
Important remarks: 1) The declaration limit is 0.1% as defined by IEC 62474 (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.	
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 8 th , 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: (<input checked="" type="checkbox"/> valid <input type="checkbox"/> not valid)	
<input checked="" type="checkbox"/> no exemptions; <input type="checkbox"/> 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; <input type="checkbox"/> Exemption 6 (b): Lead as an alloying element in aluminium containing up to 0,4 % lead by weight; <input type="checkbox"/> Exemption 6 (c): Copper alloy containing up to 4 % lead by weight; <input type="checkbox"/> Exemption 7 (a): Lead in high melting temperature type solder (i.e. lead-based alloys containing 85 % by weight or more lead); <input type="checkbox"/> 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; <input type="checkbox"/> Exemption 7 (c)-II: Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher; <input type="checkbox"/> Exemption 7 (c)-III: Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC; <input type="checkbox"/> Exemption 15: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages; <input type="checkbox"/> Other Exemption than above	