

# Aluminium Electrolytic Capacitor

# Material Data Sheet

Product Class:	Single-ended capacitors	
Date	06.10.2011	
IMDS ID if available		
Version:	05	

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	41	
	Acids, Bases, Salts	6F	Ethylene glycol or Gamma-butyrolactone	80	107-21-1 96-48-0	14,5	
	Acids, Bases, Salts	6F	Others*)	20			
	Paper, Cardboard	5C	Cellulose	100	9004-34-6	5	
Encapsulation	Light Metals	1B1	Aluminium	100	7429-90-5	21	
	Elastomer	2B	EPDM Rubber or Butyl Rubber	100	25038-36-2 9010-85-9	12,5	
	Thermoplastics	2A	Polyvinyl chloride or Polyethylene terephthalate	100	9002-86-2 25038-59-9	4,0	
Termination	Iron and Steel	1A	Iron	100	7439-89-6	1,8	Carbon, Tin
	Heavy Metals	1C12	Copper	100	7440-50-8	0,2	
<b>Sum in total:</b>						<b>100</b>	

sizes D x L [mm]	weight [g]	sizes D x L [mm]	weight [g]	sizes D x L [mm]	weight [g]	Part numbers:
4 x 5	0,18	12,5 x 35	6,50	18 x 40	15,60	B41820 B41866 B43326
5 x 11	0,44	12,5 x 40	7,30	20 x 20	10,95	B41821 B41867 B43821
6,3 x 11	0,60	16 x 15	4,40	20 x 25	13,00	B41825 B41868 B43835
8 x 11,5	1,10	16 x 20	6,50	20 x 30	14,80	B41826 B41886 B43851
10 x 12,5	1,60	16 x 25	7,50	20 x 35	19,00	B41835 B41888 B43854
10 x 16	2,00	16 x 31,5	7,80	20 x 40	19,50	B41851 B41889 B43855
10 x 20	2,60	18 x 20	7,80	22 x 25	15,00	B41852 B41890 B43857
12,5 x 20	3,70	18 x 25	9,40	22 x 35	22,50	B41853 B41896 B43858
12,5 x 25	4,50	18 x 31,5	10,50	22 x 40	24,00	B41854 B42822 B43859
12,5 x 30	5,40	18 x 35,5	13,50	25 x 40	30,00	B41856 B42823 B43866
						B41857 B42824 B43867
						B41858 B42825 B43888
						B41859 B42851 B43890
						B41863 B42852 B43896

<b>Not part of a Product Class</b>		<b>Important remarks:</b> 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		
<b>The products set forth herein are "RoHS-compatible".</b> 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 <sup>th</sup> , 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 .....