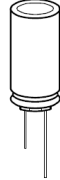


# Aluminium Electrolytic Capacitor

# Material Data Sheet

<b>Product Class</b>	<b>Single-ended Capacitors</b>	
<b>Date</b>	<b>27/08/2013</b>	
<b>IMDS ID if available</b>	-	
<b>Version</b>	<b>09</b>	

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)
<b>Active Part</b>	Light Metals	1B	Aluminium	100	7429-90-5	27	
	Paper, Cardboard	6D	Cellulose	100	9004-34-6	5,6	
	Acids, Bases, Salts	6F	Ethylene glycol or Gamma-butyrolactone	66 (90 if without NMP)	107-21-1 96-48-0	10,5	
	Acids, Bases, Salts	6F	NMP ***)	24	872-50-4		
	Acids, Bases, Salts	6F	Others*)	10	-		
<b>Encapsulation</b>	Light Metals	1B	Aluminium	99,5	7429-90-5	23,7	
	-	-	Others *)	0,5	-		
	Elastomer	2B	EPDM Rubber or Butyl Rubber	40	25038-36-2 9010-85-9	22,5	
	Inorganic, solid	4A	Kaolinite	40	1318-74-7		
	Inorganic, solid	4A	Carbon Black	10	1333-86-4		
	-	-	Others *)	10	-		
	Thermoplastics	2A	PVC or PET	90	9002-86-2 25038-59-9	5,0	
-	-	Others *)	10	-			
<b>Termination</b>	Iron and Steel	1A	Iron	99	7439-89-6	4	
	-	-	Others *)	1	-		
	Heavy Metals	1C12	Copper	100	7440-50-8	1,1	
	Heavy Metals	1C8	Tin	100	7440-31-5	0,6	
<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 range [g]	part numbers
8 x 11,5	1,10	16 x 31,5	7,80	22 x 25	15,00	B41821 B41895
10 x 12,5	1,60	18 x 20	7,80	22 x 35	22,50	B41851 B41896
10 x 16	2,00	18 x 25	9,40	22 x 40	24,00	B41853 B43821
10 x 20	2,60	18 x 31,5	10,50	25 x 40	30,00	B41856 B43851
12,5 x 20	3,70	18 x 35,5	13,50			B41858 B43858
12,5 x 25	4,50	18 x 40	15,60			B41859 B43866
12,5 x 30	5,40	20 x 20	10,95			B41863 B43888
12,5 x 35	6,50	20 x 25	13,00			B41866 B43890
12,5 x 40	7,30	20 x 30	14,80			B41888 B43896
16 x 20	6,50	20 x 35	19,00			B41890
16 x 25	7,50	20 x 40	19,50			

<b>Not Part of a Product Class</b>		<b>Important remarks:</b> 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.					
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*) others: (not declarable or prohibited substances acc. GADSL) **) typical mass percentage of substance ***) Following products present NMP: B41856A8476M, B41856A8476M 8, B41896C8187M, B41896C8476M 2, B41896C8477M, B41896C8477M 9, B41896C8567M, B41896C8687M,							
<table border="1" style="width: 100%;"> <tr> <td>B41858*</td> <td>63V</td> </tr> <tr> <td>B41866*</td> <td>75V</td> </tr> <tr> <td>B41888*</td> <td>63V</td> </tr> </table>		B41858*	63V	B41866*	75V	B41888*	63V
B41858*	63V						
B41866*	75V						
B41888*	63V						

**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<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 .....