


# Aluminium Electrolytic Capacitor

# Material Data Sheet

<b>Product Class</b>	<b>Snap-in capacitors</b>	
<b>Date</b>	<b>2019.09.12</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 2015-19. 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	44	
	Acids, Bases, Salts	6F	Ethylene glycol	80	107-21-1	25	
	Acids, Bases, Salts	6F	Others*)	20	-		
	Thermoplastics	2A	Polypropylene	100	9003-07-0	0.1	
	Paper, cardboard	5C	Cellulose	100	9004-34-6	11.9	
<b>Encapsulation</b>	Light Metals	1B	Aluminium	100	7429-90-5	11	
	Paper, Cardboard	5C	Cellulose	56	9004-34-6	2.6	
	Duromer	2D	Phenolic plastic	44	-		
	Elastomer	2B	EPDM rubber	41.5	25038-36-2	1.2	
	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***) or Polypropylene***)	100	9002-84-0 9003-07-0	0.2	
	Thermoplastics	2A	Polyvinyl chloride or Polyethylene terephthalate or without insulation	90	9002-86-2 25038-59-9	3.0	
-	-	Others*)	10	-			
<b>Termination</b>	Iron and Steel	1A	Iron	100	7439-89-6	1	
	Heavy Metals	1C	Copper	100	7440-50-8	<0.1	
	Heavy Metals	1C	Tin	100	7440-31-5	<0.1	
<b>Sum in total:</b>						<b>100</b>	

sizes [.....]	weight range [..]	size [.....]	weight range [..]	sizes [.....]	weight range [..]	sizes [.....]	weight range [..]	part numbers
22x20	8.6	25.4x20	12.5	30x20	15.3	35x20	22.3	B41231 B43231 B43232 B43258
22x25	10.4	25.4x25	15.6	30x25	18.9	35x25	27.5	B41252 B43252 B43254 B43256
22x30	12.8	25.4x30	18.9	30x30	23.2	35x30	33.2	B41848 B43255 B43260 B43261
22x35	15.2	25.4x35	22.6	30x35	27.5	35x35	39.5	B43268
22x40	17.8	25.4x40	26.1	30x40	31.6	35x40	45.9	
22x45	20.4	25.4x45	29.5	30x45	35.0	35x45	53.4	
22x50	25.4	25.4x50	32.7	30x50	41.0	35x50	59.9	
22x55	30.5	25.4x90	57.5	30x60	48.1	35x55	67.2	

**Not Part of a Product Class**

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*) others: (not declarable or prohibited substances acc. GADSL)		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. TDK ELECTRONICS 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.
**) typical mass percentage of substance		
***) not all capacitor contains PTFE or PP on the cover disc as coating		

**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 .....