

<b>Product Class</b>	<b>Motor protection Sensor, B59100M1*, B59151U1*, B591xxU1*</b>
<b>Date</b>	<b>14.10.2019</b>
IMDS ID if available	
<b>Version</b>	<b>5.12</b>

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>	Ceramic	3B	for types Tref ≤ 130°C ***): Ba-titanates	80	12047-27-7	0,24	
			Sr-titanates	10	12060-59-2		
			Ca-titanates	9	12049-50-2		
			others*)	1			
			for types Tref ≥ 140°C: Ba-titanates	69	12047-27-7		
			Pb-titanates	15	12060-00-3		
			Sr-titanates	10	12060-59-2		
			Ca-titanates	5	12049-50-2		
			others*)	1			
<b>Termination</b>	Noble Metal	1D7	Ag	100	7440-22-4	0,08	
	Heavy Metal	1C14	Ni	100	7440-02-0	0,07	
	Heavy Metal	1C2	Cr	100	7440-47-3	0,01	
<b>Solder</b>	Heavy Metal	1C15	Pb +)	92	7439-92-1	1,9	
			Sn	5	7440-31-5		
			Ag	3	7440-22-4		
<b>Cable</b>	Thermoplastic	2A	PTFE insulation	100		50,6	
	Heavy Metal	1C12	Cu	98	7440-50-8	45,1	
			Ag	2	7440-22-4		
<b>Encapsulation</b>	Thermoplastic	2A	Shrinktube PVDF / Teflon a)	100		0,6	
	Organic, solid	4B1	Silicone Lacquer	100		0,5	
<b>Tining on cable</b>	Heavy Metal	1C8	Sn	96,5	7440-31-5	0,9	
			Ag	3,5	7440-22-4		
<b>Sum of total</b>						<b>100</b>	

weight range [ g ]	material numbers	material numbers	material numbers	material numbers	weight range [ g ]	material numbers	
2,8	B59100M1060A070	B59100M1120A070	B59100M1160A070	B59151U1180B 70	1,2	B59100M1100B070	
	B59100M1070A070	B59100M1130A070	B59100M1170A070a)	B59151U1160B 70		B59100M1100B011	
	B59100M1080A070	B59100M1140A070	B59100M1180A070a)	B59151U1140B 70		B59132U1120B 70	
	B59100M1090A070	B59100M1145A070	B59100M1190A070a)	B59151U1130B 70		B59124U1120B 70	
	B59100M1100A070	B59100M1150A070		B59151U1110B 70		B59133U1110B 70	
	B59100M1110A070	B59100M1155A070				B59100M1130B012	
						0,315	
						0,1	
<b>Not part of a Product Class</b>							

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<b>Contact</b>	Ronner Christoph	<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. 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
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*) others: not declarable or prohibited substances acc. GADSL **) typical mass percentage of substance ***) for types Tref ≤ 130°C no exemption 7 (c)-I used *) listed in the Candidate list of Substances of Very High Concern acc. to Regulation 1907/2006/EC		

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. piezoelectric 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 .....