

## **Chokes for Power Lines**

| Product Class: Ring Co<br>B827473<br>Date 26.07.20  |  | Friple Choke<br>83N021  |  |  |   |   |  |   |
|---|--|---|--|--|---|---|--|---|
|   |  |   |  |  | aans  |   |  |   |
| IMDS ID if available  |  |   | 1  |  |   |   |  |   |
| Version: 06   |  |   | -  |  |   |   |  |   |
| Product Part<br>(IMDS: semi<br>component)   | Material Class<br>(IMDS: Material)   | Material<br>(Classification)<br>VDA 231   | Substance  |  | TMPS**)<br>[wt%]  | CAS<br>if applicable  | typical mass<br>of material<br>[wt-%]  | Traces<br>see 1)  |
| Active Part   | Ceramic  | 4B  | Manganese-Zino   | c ferrite  | 100   | 12645-49-7  | 62.2   |   |
|   | Polymer  | 2C  | Epoxy (EP)   |  | 100   | 25068-38-6  | 1.3  |   |
|   | Metal  | 1C  | Cu   |  | 100   | 7440-50-8   | 27.9   |   |
|   | Thermoplastic  | 2B  | Polyurethane (P  | UR)  | 100   | 9009-54-5   | 1.1  |   |
| Encapsulation<br>and<br>Mounting  |  | 2A  | Polycarbonate (PC)   |  | 89.8  | 25971-63-5  | - 3.0  |   |
|   | Polymer  |   | Glass fiber  |  | 10  | 65997-17-3  |  |   |
|   |  |   | PFBS   | 0.2 29420-49-3   |   |   |  |   |
|   | Polymer  | 2A  | Polyethylene ter   | ephthalate (PET)   | 100   | 25038-59-9  | 1.2  |   |
|   | Polymer  | 2C  | Acrylic resin  |  | 100   | 37325-11-4  |  | Х   |
|   | Polymer  | 2A  | Polyamide 66 (PA)  |  | 67  | 32131-17-2  | 1.1  |   |
|   |  |   | Red Phosphorous  |  | 8   | 7723-14-0   |  |   |
|   |  |   | Fiberglass   |  | 25  | 65997-17-3  |  |   |
|   | Thermoplastic  | 2B  | Polyurethane (PUR)   |  | 100   | 9009-54-5   | 2.0  |   |
| Termination   | Metal  | 1C  | Sn   |  | 100   | 7440-31-5   | 0.1  |   |
| Label   | Polymer  | 2C  | Polyethylenthere   | ephthalate (PET)   | 100   | 25038-59-9  | 0.1  |   |
|   | Polymer  | 2C  | Acrylic resin  |  | 100   | 37325-11-4  |  | Х   |
|   |  |   | •  |  |   | Sum in total:   | 100.0  |   |
| Division TD   |  | etics Business Grou   | ıp (MAG)   | Important remarks:   | is 0.1% as dofi   | ned by IEC 62474 (I   |  |   |
|   | : +49 89 54020 3030  | mailto:   | ctronics.tdk.com   | <ul> <li>product parts, substa</li> <li>otherwise regulated.</li> <li>This Material Data S</li> </ul>  | ances etc. that a   | pical values of the i   | espective products   | ght, if not<br>set forth  |
| *) others: .(not dec<br>**) typical mass pe   | clarable or prohibited sub-<br>ercentage of substance  | mailto:<br>johann.reindl@tdk-ele<br>stances acc. GADS   | L)   | product parts, subst<br>otherwise regulated.<br>2) This Material Data S<br>herein. We express!<br>based on our best p<br>binding product spec<br>ELECTRONICS AG<br>REPRESENTATION<br>STATUTORY, WITH<br>HEREIN, INCLUDIN<br>WARRANTY OF ME   | ances etc. that a<br>iheet contains ty<br>y point out that .<br>resent knowledg<br>cifications, unles<br>AND ITS AFFIL<br>OR WARRAN<br>I REGARD TO<br>IG BUT NOT LII<br>ERCHANTABILI  | rpical values of the i<br>all values and stater<br>es and cannot be re<br>so otherwise explicit<br>IATES HEREBY EX<br>TY, WHETHER EXF<br>THE STATEMENTS<br>WITED TO ANY REI<br>TY OR SUITABILIT   | espective products<br>nents contained hei<br>garded as binding s<br>y agreed in writing.<br>(PRESSLY DISCL/<br>RESS, IMPLIED O<br>AND VALUES CO<br>PRESENTATION C<br>Y FOR ANY PURP(   | ght, if not<br>set forth<br>rein are<br>tatements<br>TDK<br>AIM ANY<br>R<br>NTAINED<br>R<br>DSE.                            |
| *) others: .(not dec<br>**) typical mass pe<br>The products set<br>Directive 2011/65/EU   | clarable or prohibited sub-<br>ercentage of substance<br>forth herein are "RoHS  | mailto:<br>johann.reindl@tdk-ele<br>stances acc. GADS<br>-compatible". RoH:<br>and of the Council of  | L)<br>S-compatible means t<br>June 8 <sup>th</sup> , 2011 on the   | product parts, subst<br>otherwise regulated.<br>2) This Material Data S<br>herein. We express<br>based on our best p<br>binding product spec<br>ELECTRONICS AG<br>REPRESENTATION<br>STATUTORY, WITH<br>HEREIN, INCLUDIN<br>WARRANTY OF ME<br>that products are compatible v<br>e restriction of the use of certa   | ances etc. that a<br>theet contains by<br>y point out that<br>resent knowledg<br>cifications, unles<br>AND ITS AFFIL<br>I OR WARRAN<br>I REGARD TO<br>I REGARD TO<br>ERCHANTABILI<br>with the requirer                              | vpical values of the i<br>all values and stater<br>je and cannot be re<br>is otherwise explicit<br>LATES HEREBY EX<br>TY, WHETHER EXF<br>THE STATEMENTS<br>WITED TO ANY REI<br>TY OR SUITABILIT<br>ments according to J                                 | espective products<br>nents contained hei<br>garded as binding s<br>y agreed in writing.<br>(PRESSLY DISCL/<br>RESS, IMPLIED O<br>AND VALUES CO<br>PRESENTATION C<br>Y FOR ANY PURP(<br>Art. 4 (substance re                                 | ght, if not<br>set forth<br>rein are<br>tatements<br>TDK<br>AIM ANY<br>R<br>NTAINED<br>R<br>DSE.<br>estrictions)            |
| *) others: .(not dec<br>**) typical mass pe<br>The products set<br>Directive 2011/65/EL<br>RoHS - Exemptio<br>☑ no exemptions;<br>□ Exemption 6 (a): L  | clarable or prohibited sub-<br>ercentage of substance<br>forth herein are "RoHS<br>J of the European Parliament<br>ons for the Product Clas  | mailto:<br>johann.reindl@tdk-ele<br>stances acc. GADS<br>-compatible". RoH<br>and of the Council of<br>s / Product accord<br>el for machining purposes  | L)<br>S-compatible means t<br>June 8 <sup>th</sup> , 2011 on the<br><b>ling to Annex III:</b><br>s and in galvanized steel   | product parts, subst<br>otherwise regulated.<br>2) This Material Data S<br>herein. We express<br>based on our best p<br>binding product spec<br>ELECTRONICS AG<br>REPRESENTATION<br>STATUTORY, WITH<br>HEREIN, INCLUDIN<br>WARRANTY OF ME<br>that products are compatible v<br>e restriction of the use of certa   | ances etc. that a<br>heet contains ty<br>y point out that<br>resent knowledg<br>cifications, unles<br>AND ITS AFFII<br>I OR WARRAN<br>I REGARD TO 0<br>IG BUT NOT LII<br><u>RCHANTABILI</u><br>with the requirer<br>ain hazardous s | vpical values of the i<br>all values and stater<br>je and cannot be re<br>is otherwise explicit<br>LATES HEREBY EX<br>TY, WHETHER EXF<br>THE STATEMENTS<br>WITED TO ANY REI<br>TY OR SUITABILIT<br>ments according to J                                 | espective products<br>nents contained hei<br>garded as binding s<br>y agreed in writing.<br>(PRESSLY DISCL/<br>RESS, IMPLIED O<br>AND VALUES CO<br>PRESENTATION C<br>Y FOR ANY PURP(<br>Art. 4 (substance re                                 | ght, if not<br>set forth<br>rein are<br>tatements<br>TDK<br>AIM ANY<br>R<br>NTAINED<br>R<br>DSE.<br>estrictions)            |
| *) others: .(not dec<br>**) typical mass pe<br>The products set<br>Directive 2011/65/EL<br>RoHS - Exemption<br>I exemption 6 (a): L<br>Exemption 6 (b): L<br>Exemption 6 (c): C<br>Exemption 7 (a): L | Clarable or prohibited sub-<br>ercentage of substance<br>Forth herein are "RoHS<br>J of the European Parliament<br>ons for the Product Clas<br>Lead as an alloying element in ste<br>Lead as an alloying element in alu<br>Copper alloy containing up to 4 %<br>Lead in high melting temperature for | mailto:<br>johann.reindl@tdk-ele<br>stances acc. GADS<br>-compatible". RoH.<br>and of the Council of<br>s / Product accord<br>el for machining purpose<br>minium containing ur pose<br>minium containing ur to C<br>lead by weight;<br>ype solder (i.e. lead-base | L)<br>S-compatible means t<br>June 8 <sup>th</sup> , 2011 on the<br><b>ling to Annex III:</b><br>s and in galvanized steel<br>,4 % lead by weight;<br>d alloys containing 85 % | product parts, subst<br>otherwise regulated.<br>2) This Material Data S<br>herein. We express!<br>based on our best p<br>binding product spec<br>ELECTRONICS AG<br>REPRESENTATION<br>STATUTORY, WITH<br>HEREIN, INCLUDIN<br>WARRANTY OF ME<br>that products are compatible v<br>e restriction of the use of certa<br>( I valid □ not valid )<br>containing up to 0,35 % lead by we | ances etc. that a<br>heet contains ty<br>y point out that<br>resent knowledg<br>ifications, unles<br>AND ITS AFFII<br>I OR WARRAN<br>I REGARD TO I<br>IG BUT NOT LII<br><u>RCHANTABILI</u><br>with the requirer<br>ain hazardous s  | rpical values of the i<br>all values and stater<br>es and cannot be re<br>so otherwise explicit<br>LATES HEREBY EX<br>TY, WHETHER EXF<br>THE STATEMENTS<br>WITED TO ANY REI<br>TY OR SUITABILIT<br>ments according to <i>I</i><br>ubstances in electric | espective products<br>nents contained hei<br>garded as binding s<br>y agreed in writing.<br>(PRESSLY DISCL/<br>RESS, IMPLIED O<br>AND VALUES CO<br>PRESENTATION C<br><u>Y FOR ANY PURP(</u><br>Art. 4 (substance re<br>ral and electronic er | ght, if not<br>set forth<br>ein are<br>tatements<br>TDK<br>NIM ANY<br>R<br>NTAINED<br>R<br>DSE.<br>strictions)<br>quipment. |

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 .......