

MATERIAL DECLARATION SHEET



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|-----------------|--|-----|-----|--|
| Material Number | CHV2512 Series | | | |
| Product Line | Safety Certified Thick-Film Type High-Voltage Chip Resistors | | | |
| Compliance Date | 09/01/2016 | | | |
| RoHS Compliant | Yes | MSL | N/A | |

| No. | Construction Element(subpart) | Homogeneous Material | Material weight [mg] | Homogeneous Material\ Substances | CASRN if applicable | Materials Mass % | Material Mass % of total unit wt. | Subpart mass of total wt. (%) |
|-----|-------------------------------|----------------------|----------------------|----------------------------------|---------------------|------------------|-----------------------------------|-------------------------------|
| 1 | Ceramic | Substrate | 34.7435 | Aluminium oxide | 1344-28-1 | 96 | 83.689 | 87.175 |
| | | | | Silicon dioxide | 14808-60-7 | 2 | 3.486 | |
| | | | | Magnesium Oxide | 1309-48-4 | 2 | | |
| 2 | Top conductor | Silver | 0.6157 | Silver | 7440-22-4 | 100 | 1.545 | 1.545 |
| 3 | Bottom conductor | Silver | 0.3152 | Silver | 7440-22-4 | 100 | 0.791 | 0.791 |
| 4 | Resistor | Ruthenium Oxide | 0.3821 | Glass | 65997-17-3 | 55.7 | 0.534 | 0.959 |
| | | | | Lead | 7439-92-1 | 19.3 | 0.185 | |
| | | | | Ruthenium(IV) oxide | 12036-10-1 | 25 | 0.24 | |
| 5 | First encapsulating | Glass | 0.3685 | Glass | 65997-17-3 | 92 | 0.851 | 0.925 |
| | | | | Chromium(III) oxide | 1308-38-9 | 8 | 0.074 | |
| 6 | Overcoat | Resin | 0.8454 | Resin | 25036-25-3 | 100 | 2.121 | 2.121 |
| 7 | Side conductor | Silver | 0.8142 | Silver | 7440-22-4 | 85 | 1.736 | 2.042 |
| | | | | Resin | 9003-36-5 | 15 | 0.306 | |
| 8 | Plating (Middle) | Nickel | 0.6872 | Nickel | 7440-02-0 | 100 | 1.724 | 1.724 |
| 9 | Plating (Outer) | Tin | 1.0308 | Tin | 7440-31-5 | 100 | 2.586 | 2.586 |
| 10 | Marking | Resin | 0.0525 | Resin | 29690-82-2 | 70 | 0.092 | 0.132 |
| | | | | Titanium(IV) oxide | 1317-80-2 | 30 | 0.04 | |
| | | | Total weight | | | 39.8551 | | |

This Document was updated on: 09/01/2016

Important remarks:

1. It is the responsibility of the user to verify they are accessing the latest version.
2. RoHS exemption: 7(c)-1 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.