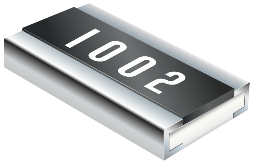
MATERIAL DECLARATION SHEET

BOURNS®

Material Number	CWM1225Q Series			
Product Line	Thick film automotive wide terminal chip resistors			
Compliance Date	4/27/2025			
RoHS Compliant	Yes (Lead Exemption)	MSL	**1**	

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	Ceramic	34.7435	Aluminum Oxide	1344-28-1	96	83.687	87.174
				Silicon Dioxide	14808-60-7	2	1.7435	
				Magnesium Oxide	1309-48-4	2	1.7435	
2	Top Conductor Layer	Silver	0.6157	Silver	7440-22-4	100	1.545	1.545
3	Back Conductor Layer	Silver	0.3152	Silver	7440-22-4	100	0.791	0.791
4	Resistive Element	Resistance paste	0.3821	Silver	7440-22-4	40	0.383	0.959
				Ruthenium Dioxide	12036-10-1	20	0.192	
				Palladium	7440-05-3	15	0.144	
				None-lead Glass	65997-18-4	14.9	0.143	
				Lead	7439-92-1	10.1	0.097	

CASRN: CAS Registry Number® is a Registered Trademark of the American Chemical Society

5	First encapsulating	Glass	0.3685	None-lead Glass	65997-18-4	74	0.685	0.925
				Silica	14808-60-7	12	0.111	
				Aluminum	1344-28-1	6	0.055	
				Chromic 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	1.737	2.043
				Resin	9003-36-5	15	0.306	
8	Ni Plating	Ni	0.6872	Nickel	7440-02-0	100	1.724	1.724
9	Plating (Outer)	Sn	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 dioxide	1317-80-2	30	0.040	
		Total weight	39.8551					

This Document was updated on: 10/27/2023

Important remarks:

1. It is the responsibility of the user to verify they are accessing the latest version.
    a. "Compliance Date" is not the date supplier submits the MDS, but when the product was first compliant with RoHS.
    b. "This Document was updated on:" is where we indicate when supplier submits the MDS. All previous MDS must be archived for traceability in the future.

c. Material weights for components less than 100mg (most Semiconductor products) should be listed in milligrams. This avoids all those zeros and round off issues.

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.