

## IMDS Declaration (Wirewound Resistors)

### W22 (0R1-2R2)

#### Pb free terminations

Component Name	Material	Weight (g)	Constituent	CAS Number	Composition (% by weight)
Ceramic Rod	Steatite	1.610	Silicon dioxide	7631-86-9	57.5
			Magnesium oxide	1309-48-4	29.5
			Aluminium oxide	1344-28-1	4.5
			Other oxides		8.5
End Caps	Iron/Nickel alloy	0.310	Iron	7439-89-6	58.5
			Nickel	7440-02-0	41.0
			Other metals		0.5
Resistive Element	Copper/Nickel alloy	0.080	Copper	7440-50-8	55
			Nickel	7440-02-0	45
Terminations	Steel core	0.181	Iron	7439-89-6	99
			Other metals		1
	Copper cladding	0.063	Copper	7440-50-8	100
	Nickel plating	0.009	Nickel	7440-02-0	100
Tin alloy coating	0.008	Tin	7440-31-5	96	
		Silver	7440-22-4	3.5	
		Copper	7440-50-8	0.5	
Protection	Vitreous enamel	0.389	Silicon dioxide	7631-86-9	30.5
			Zinc oxide	1314-13-2	27.5
			Chromium III oxide	1308-38-9	3.5
			Cobalt oxide	1307-96-6	2.5
			Other oxides		36.0

**Product weight 2.65g**

**IR Feb 2005**

## IMDS Declaration (Wirewound Resistors)

### W22 (values greater than 2R2)

#### Pb free terminations

Component Name	Material	Weight (g)	Constituent	CAS Number	Composition (% by weight)
Ceramic Rod	Steatite	1.610	Silicon dioxide	7631-86-9	57.5
			Magnesium oxide	1309-48-4	29.5
			Aluminium oxide	1344-28-1	4.5
			Other oxides		8.5
End Caps	Iron/Nickel alloy	0.310	Iron	7439-89-6	58.5
			Nickel	7440-02-0	41.0
			Other metals		0.5
Resistive Element	Nickel/ Chromium alloy	0.020	Nickel	7440-02-0	80
			Chromium	7440-47-3	20
Terminations	Steel core	0.181	Iron	7439-89-6	99
			Other metals		1
	Copper cladding	0.063	Copper	7440-50-8	100
	Nickel plating	0.009	Nickel	7440-02-0	100
Tin alloy coating	0.008	Tin	7440-31-5	96	
		Silver	7440-22-4	3.5	
		Copper	7440-50-8	0.5	
Protection	Vitreous enamel	0.399	Silicon dioxide	7631-86-9	30.5
			Zinc oxide	1314-13-2	27.5
			Chromium III oxide	1308-38-9	3.5
			Cobalt oxide	1307-96-6	2.5
			Other oxides		36.0

**Product weight 2.6g**

**February 2005**