Metal and Ceramic Injection Moulded

Materials with Controlled Thermal Expansion

MIM/CIM Wekstoffe mit thermischen Ausdehnungseigenschaften

Material	Density % theor.	Thermal Expansion 10-6/°C	Thermal Conductivity W/m.K	Curie Point °C
Kovar (F15) (C'met-17)	98-99	11.5*	17.5	435
Kovar - Co23 (C'met-23)	98-99	8.3*	-	510
Kovar - Co20 (C'met-20)	98-99	8.0*	-	480
Fe-Co13Ni30 (C'met-Co13Ni)	98-99	3.6**	-	380
Invar (C'met-36)	97-99	13.8*	10.0	279
Fe-Ni40 (C'met-40)	98-99	4.0**	-	320
Alloy 42 (-F29) (C'met-42)	98-99	12.3*	10.9	380
Alloy 42-6 (C'met-42-6)	98-99	14.6*	12.7	293
Alloy 46 (F30) (C'met-46)	98-99	12.5*	11.6	460
Alloy 48 (C'met-48)	98-99	13.0*	13.1	471
Alloy 52 (-F30) (C'met-52)	98-99	13.3*	14.2	512
Ni80MoFe5 (C'met-Ni80Mo)	98-99	11.2	9.8	-125
Ni80Cr20 (C'met-Ni80Cr)	98-99	13.4**	15.0	-
FeNi20Mn6 (C'met-Ni20Mn)	98-99	21.2*	-	-
W-Cu-X (C'met-WCuX)	99-100	6.5**	270	-
WC-Co12 (C'met-Co12)	98-99	4.8**	95	-
316L/304L (C-met-316)	98-99	8.9**	13.7	-
Cu70Ni30 (C'met-Cu7Ni3)	98-99	16.2**	29.4	-
AlN (C'met-AlN)	97-98	4.6*	190	-
Al2O3 (C'met-Al2O3)	98-99	8.2*	25	-

* in the range 30-900°C ; ** in the range 30-400°C The values indicated are for general guidence only. They may change based on processing conditions.

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CERAMET TECHNOLOGIES