

SM7026 (C70260)

CuNi2Si

Alloy characteristics

SM7026 is one important alloy of the CuNiSi (Coroson) family. This alloy is even an α -alloy. Its characteristics are: good fatigue strength, forming and spring properties. Due to the tin content we reach higher matrix strength. The alloy is workable for all pin connectors and for connectors with high tensile strength and good relaxation behavior.

SM7026 alloy is one of the leading Corosons for the development and design of pretinned connectors in the industry in Asia and the USA. It is in compliance to the requirements of the OEKO-TEX Standard 100 in terms of the PB and Cd. The alloy is registered with the U.S. EPA as antimicrobial.

Mechanical properties		Temper condition					
		O HV100-130	H02 HV130-150	H03 HV140-160	H04 HV175-200	H04 ** HV175-200	H05 ** HV190-240
Tensile strength in N/mm ²		360-430	420-480	460-530	580-650	600-670	620-690
0,2% yield strength in N/mm ²		<250	>380	>430	>470	>570	>580
Vickers hardness HV (ref.value)		100-130	130-150	140-160	175-200	180-220	190-220
Elongation A _{L50%}		> 12	> 9	> 7	> 6	> 7	> 10
Electrical conductivity in % IACS		40	40	40	40	48	48
Bendability							
0.10 ≤ s ≤ 0.25mm	Transverse	0 x t	0 x t	0.5 x t	0.5 x t	0.5 x t	1 x t
	Parallel	0 x t	0.5 x t	1 x t	1 x t	1 x t	1.5 x t
0.25 < s ≤ 0.5mm	Transverse	0 x t	0 x t	1 x t	1 x t	-	2 x t
	Parallel	0 x t	0.5 x t	2 x t	2 x t	-	2.5 x t

Physical properties (Typical values in annealed temper at 20 °C)

Thermal expansion coefficient 20 ... 300 °C	17	10 ⁻⁶ /K
Specific heat capacity	0.377	J/(g·K)
Density	8.8	g/cm ³
Thermal conductivity	124	W/(m·K)
Thermal coefficient of electrical resistance (0 ... 100 °C)	1.5	10 ⁻³ /K
Modulus of elasticity (1 GPa = 1 kN/mm ²) cold formed	130 max.	GPa
Electrical conductivity (IACS)	40 (H04,H05: 48)	%

Material designation

DIN EN	CW111C
UNS	C70260

Chemical composition

Cu	Rest %
Ni	1.0 – 3.0%
Si	<0.20-0.70 %
P	<0.01
Others	<0.50%

This information was given with the best knowledge, but cannot guarantee any characteristics we describe listed above. The contract terms of Sofia Med agreed with any individual customer and our general conditions of sales describe the liability of these conditions.

In any case do we reserve the right by technical development or any other reason to modify this sheet according to our needs. This data sheet is part of a technical modification service done case by case.

** solution annealed after summer 2017