

## CLAL-MSX SICLANIC S® TD3 Quenched Copper Alloy, 1/2 Hard

Category : Metal , Nonferrous Metal , Copper Alloy

### Material Notes:

SICLANIC S® is particularly recommended for the production of conductive contact blades. SICLANIC S® offers :electrical conductivity greatly superior to that of bronzes, brasses and nickel silvermechanicals properties on a par with those of copper cobalt- beryllium and of bronzeexcellent fatigue strengthvery competitive cost compared with copper-cobalt-beryllium.Information provided by CLAL-MSX

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_CLAL-MSX-SICLANIC-S-TD3-Quenched-Copper-Alloy-12-Hard.php](http://www.lookpolymers.com/polymer_CLAL-MSX-SICLANIC-S-TD3-Quenched-Copper-Alloy-12-Hard.php)

Physical Properties	Metric	English	Comments
Density	8.90 g/cc	0.322 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Vickers	105 - 125	105 - 125	
	194	194	
	@Time 3600 sec	@Time 1.00 hour	
	200	200	
	@Time 7200 sec	@Time 2.00 hour	
	200	200	
	@Time 18000 sec	@Time 5.00 hour	
Tensile Strength, Ultimate	320 - 400 MPa	46400 - 58000 psi	
	290 - 380 MPa	42100 - 55100 psi	
	@Strain 0.200 %	@Strain 0.200 %	
Tensile Strength, Yield	10 - 20 %	10 - 20 %	
Elongation at Break	10 - 20 %	10 - 20 %	
Fatigue Strength	245 MPa	35500 psi	
	@# of Cycles 1.00e+7	@# of Cycles 1.00e+7	

Thermal Properties	Metric	English	Comments
	19.0 µm/m-°C	10.6 µin/in-°F	

CTE linear Thermal Properties	Metric @ Temperature 20.0 - 300 °C	English @ Temperature 68.0 - 572 °F	Comments
Specific Heat Capacity	0.370 J/g-°C	0.0884 BTU/lb-°F	
Thermal Conductivity	84.0 W/m-K	583 BTU-in/hr-ft <sup>2</sup> -°F	solid solution (or quenched) state
	188.4 W/m-K	1307 BTU-in/hr-ft <sup>2</sup> -°F	quenched state
Melting Point	1040 - 1060 °C	1900 - 1940 °F	
Solidus	1040 °C	1900 °F	
Liquidus	1060 °C	1940 °F	

Component Elements Properties	Metric	English	Comments
Copper, Cu	96.9 %	96.9 %	
Nickel, Ni	2.5 %	2.5 %	
Silicon, Si	0.60 %	0.60 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	<= 0.00000400 ohm-cm	<= 0.00000400 ohm-cm	precipitation hardened
	0.00000420 ohm-cm	0.00000420 ohm-cm	precipitation hardened (2 hr)
	0.00000420 ohm-cm	0.00000420 ohm-cm	precipitation hardened (3 hr)
	0.00000420 ohm-cm	0.00000420 ohm-cm	precipitation hardened (4 hr)
	0.00000430 ohm-cm	0.00000430 ohm-cm	precipitation hardened (5 hr)
	0.00000430 ohm-cm	0.00000430 ohm-cm	precipitation hardened (1 hr)
	0.00000780 ohm-cm	0.00000780 ohm-cm	quenched

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China