

CLAL-MSX NICLAFOR® 1000 TF Quenched/Precipitation Heat Treated, Rolled Copper Alloy

Category : Metal , Nonferrous Metal , Copper Alloy

Material Notes:

Finished parts can be produced with: reduction in sections, high mechanical properties even at high temperature, high spring properties, high conductivity, good resistance to corrosion, low permeability, good formability, long life duration. Meets environmental concern by not containing Beryllium, Cadmium nor Titanium. Applications: Electrotechnic, Electromechanic, Electronic, Connective, Automotive, Domestic appliances, Spectacle industry, Turned parts. Information provided by CLAL-MSX

Order this product through the following link:

http://www.lookpolymers.com/polymer_CLAL-MSX-NICLAFOR-1000-TF-QuenchedPrecipitation-Heat-Treated-Rolled-Copper-Alloy.php

| Physical Properties | Metric | English | Comments |
|---------------------|-----------|--------------------------|----------|
| Density | 8.90 g/cc | 0.322 lb/in ³ | |

| Mechanical Properties | Metric | English | Comments |
|----------------------------|---------------------------------|-----------------------------------|--|
| Hardness, Vickers | 230 - 270 | 230 - 270 | |
| Tensile Strength, Ultimate | 740 - 860 MPa | 107000 - 125000 psi | |
| Tensile Strength, Yield | >= 510 MPa @Strain 0.200 % | >= 74000 psi @Strain 0.200 % | |
| Elongation at Break | >= 10 % | >= 10 % | A_{50 mm} |
| Modulus of Elasticity | 120 GPa | 17400 ksi | |
| Modulus of Rigidity | 50.0 GPa | 7250 ksi | Torsion |
| Flexural Strength | 566 MPa | 82100 psi | Rigidty. Elastic bending fatigue, Longitudinal |
| | 634 MPa | 92000 psi | Rigidty. Elastic bending fatigue, Transverse |
| Fatigue Strength | 450 MPa @# of Cycles 1.00e+7 | 65300 psi @# of Cycles 1.00e+7 | |

| Thermal Properties | Metric | English | Comments |
|----------------------|---|---|----------|
| CTE, linear | 17.25 µm/m-°C @Temperature 20.0 - 200 °C | 9.583 µin/in-°F @Temperature 68.0 - 392 °F | |
| Thermal Conductivity | 53.6 W/m-K | 372 BTU-in/hr-ft ² -°F | |
| Melting Point | 968 - 1078 °C | 1770 - 1972 °F | |

| Thermal Properties | Metric | English | Comments |
|--------------------|---------|---------|----------|
| Liquidus | 1078 °C | 1972 °F | |

| Component Elements Properties | Metric | English | Comments |
|-------------------------------|-----------------|-----------------|----------|
| Copper, Cu | 82.65 - 85.95 % | 82.65 - 85.95 % | |
| Iron, Fe | <= 0.50 % | <= 0.50 % | |
| Lead, Pb | <= 0.030 % | <= 0.030 % | |
| Manganese, Mn | 0.050 - 0.30 % | 0.050 - 0.30 % | |
| Nickel, Ni | 8.5 - 9.5 % | 8.5 - 9.5 % | |
| Phosphorous, P | <= 0.020 % | <= 0.020 % | |
| Tin, Sn | 5.5 - 6.5 % | 5.5 - 6.5 % | |
| Zinc, Zn | <= 0.50 % | <= 0.50 % | |

| Electrical Properties | Metric | English | Comments |
|------------------------|----------------------|----------------------|-----------------------------|
| Electrical Resistivity | <= 0.00001433 ohm-cm | <= 0.00001433 ohm-cm | precipitation hardened (3h) |
| | <= 0.00001911 ohm-cm | <= 0.00001911 ohm-cm | quenched |

| Descriptive Properties | Value | Comments |
|------------------------|-------|---|
| Bending | 0.5 | 90° bending across and in the rolling direction, longitudinal |
| | 0.5 | 90° bending across and in the rolling direction, transverse |

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

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