# MSP1

## Chemical Composition

| | Wt.% |
|---|---|
| Copper | 99.0 min |
| Magnesium | 0.4-0.90 |
| Phosphorous | 0.04 max |

## Physical Properties

| | US Customary Unit |
|---|---|
| Electrical Conductivity (Annealed) | 63 (%IACS @ 68 °F) |
| Thermal Conductivity (Annealed) | 151(Btu•ft/ft$^2$•hr• °F) @68 °F |
| Modulus of Elasticity (Tension) | 18,000 ksi |
| Stress Relaxation 150°C for 1,000 hrs | 92% Remaining |

## Adherence of Solder (150°F)

| Alloy | 200 hr | 500 hr | 1000 hr |
|---|---|---|---|
| MSP1 | Non Peeling | Non Peeling | Non Peeling |
| C17510 | Peeling Off | Peeling Off | Peeling Off |
| C51900 | Peeling Off | Peeling Off | Peeling Off |

## Solderability (60/40 solder, 230 ° C)

| Alloy | Seconds to peak value of buoyancy | Seconds to zero surface tension |
|---|---|---|
| MSP1 | .3 | 1 |
| C26000 | .4 | 3.3 |
| C51900 | .7 | 3.6 |
| C17510 | .6 | 1.4 |

## Mechanical Properties

| | Temper | | | | | |
|---|---|---|---|---|---|---|
| | SOXX | H01 | H02 | H04 | H06 | H08 |
| Tensile Strength (ksi) | 56 max | 52-65 | 61-74 | 69-82 | 78-91 | 85 min. |
| Yield Strength (0.2% Offset, ksi) | | 43-59 | 54-70 | 64-80 | 71-90 | 78 min |
| Elongation (%) | 25 min | 15 min | 10 min | 7 min | 5 min | |

## Bend Properties

| | Temper | | | | | |
|---|---|---|---|---|---|---|
| Bends at .690” wide 90 degree | S0XX | H01 | H02 | H04 | H06 | H08 |
| Goodway – (min. R/T) | 0 | 0 | .25 | .5 | 1 | 1.5 |
| Badway – (min. R/T) | 0 | 0 | .8 | 1.2 | 1.7 | 3.0 |

Details released herein are believed to be accurate at the time of issue and are considered for general information only. Use of this information is to be at the consumer’s discretion.