

## ALLOY AU80/SN20

### FEATURES

- High Purity
- For Soldering to Gold Surfaces
- Good For High Reliability and High Temperature Applications
- Melting temperature 280°C (536°F)
- Eutectic Alloy

### DESCRIPTION

AIM's Alloy Au80/Sn20 is composed of 80% gold and 20% tin. Au80/Sn20 is a eutectic alloy with a melting point of 280°C (536°F). Typical applications include plating, corrosion protection, and use as a base for soldering to micro-electronics, wave solder, and SMT printed circuit board assemblies. Au80/Sn20 is available in solder paste, solid and cored wire, foil, preform, powder, bar, ingot, and anode forms.

### IMPURITY LEVELS TO IPC-JSTD-006 IN PERCENT

Impurity Levels			
Ag: 0.10	Cu: 0.08	Ni: 0.01	Al: 0.005
Bi: 0.10	Fe: 0.02	Sb: 0.50	Zn: 0.003
As: 0.03	Cd: 0.002	In: 0.10	

### MAJOR ALLOY INGREDIENTS IN PERCENT

Au	Sn
80% ± 1%	Remainder

### ALLOY PHYSICAL DATA

Ultimate Tensile Strength	
MPA (ksi)	
23°C	469 (68)
120°C	270 (39)
165°C	166 (24)
190°C	90 (13)

Young's Modules	
GPA (10 <sup>6</sup> psi)	
23°C	59.2 (8.58)
150°C	35.8 (5.19)

Thermal Conductivity	
57.3 W/M <sup>2</sup> K	

Coefficient of Thermal Expansion			
ppm/°C			
Heating		Cooling	
30°C - 168°C	19.91	150°C - 25°C	15.82
168°C - 225°C	-79.10	225°C - 150°C	-43.42
30°C - 225°C	-8.40	225°C - 25°C	-6.39

## HANDLING & STORAGE

Indefinite shelf life if proper storage conditions are observed.

## FLUX COMPATIBILITY

Alloy Au80/Sn20 is compatible with most electronic grade, high-temperature fluxes.

## CLEANING

Refer to data sheets provided by flux manufacturer.

## SAFETY

Use with adequate ventilation and proper personal protective equipment. Refer to the accompanying Safety Data Sheet for any specific emergency information. Do not dispose of any hazardous materials in non-approved containers.