

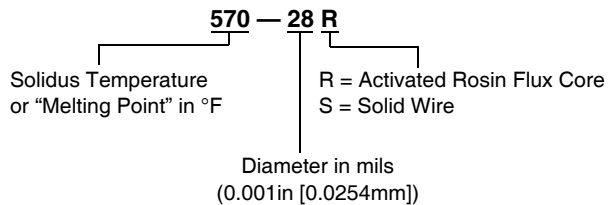
## Solders, Fluxes, Kits and Soldering Units for Transducer Applications

The quality of the solder joints is a critical element in the performance of any strain gage installation. Because of special requirements associated with strain gage circuitry, many commercial soldering stations, solders and fluxes are not satisfactory for this purpose. Micro-Measurements stocks and distributes two special soldering stations, a

selection of solders, and soldering fluxes which have been carefully tested and qualified for use with strain gages. See Micro-Measurements Strain Gage Accessories databook for additional solder types available for special applications.

### SOLDERS

*M-LINE* strain gage solders are listed at right, along with their compositions and principal properties. For ordering purposes, the solders are specified according to the coding system shown below. All solders listed are supplied on spools.



SOLDER SELECTION CHART				
Solder Type (See Note 1)	Packaging		Solidus/ Liquidus Temperature	Dia.
	Order No.	Unit Size		
<b>361A-20R</b> 63%Tin, 36.65% Lead, 0.35% Antimony	361A-20R-25	25ft [7.6m]	361°/361°F [183°/183°C]	0.020
	361A-20R	1lb [450g]		
450-20S 95% Tin, 5% Antimony	450-20S-25	25ft [7.6m]	450°/460°F [232°/238°C]	0.020
	450-20S	1lb [450g]		
450-20R 95% Tin, 5% Antimony	450-20R-25	25ft [7.6m]	450°/460°F [232°/238°C]	0.020
	450-20R	1lb [450g]		
<b>570-28R</b> 93% Lead, 5.2% Tin, 1.5% Silver	570-28R-20	20ft [6.1m]	565°/574°F [296°/301°C]	0.028
	570-28R	1lb [450g]		

### FLUXES

Although some of the solders described in the table have rosin-flux cores, it is often necessary to use separate, externally applied fluxes. This may be the case, for instance, when soldering fine jumper wires to gage tabs or printed-circuit terminals, because not enough flux is released from the cored solder. It may also be necessary to supplement the cored flux in high-temperature solders such as Type 570.

Two fluxing compounds are available for strain gage soldering applications. M-Flux AR is an activated rosin flux which is effective on constantan, copper, nickel, and K-alloy gages with DP soldering pads. M-Flux SS is a very active acid flux which is used primarily with solid-wire solders applied to isoelastic, Nichrome®, and stainless steel. The two fluxes should never be mixed. Whether the rosin or acid flux is used, it must be completely removed immediately after soldering to prevent degradation of protective coatings and

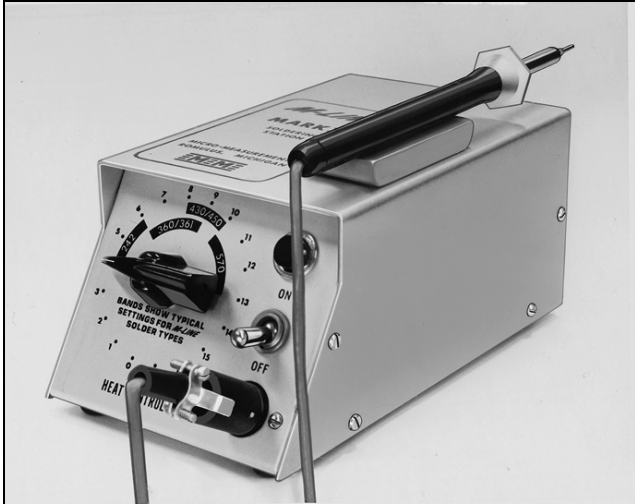
corrosion of the metals, and to eliminate conductive flux residues. Rosin residues are best removed with *M-LINE* Rosin Solvent. Removal of M-Flux SS requires two steps: liberal applications of M-Prep Conditioner A, which must be blotted dry; and then M-Prep Neutralizer 5A, also to be blotted dry.

FLUX AND ROSIN SOLVENT KITS
M-Flux AR Kit FAR-1
2 1-oz (30-ml) brush-cap bottles M-Flux AR 2 1-oz (30-ml) brush-cap bottles M-LINE Rosin Solvent
M-LINE Rosin Solvent Kit RSK-4
4 1-oz (30-ml) brush-cap bottles
M-Flux SS Kit FSS-1
1 1-oz (30-ml) applicator cap bottle M-Flux SS 1 1-oz (30-ml) brush-cap bottle M-Prep Conditioner A 1 1-oz (30-ml) brush-cap bottle M-Prep Neutralizer 5A

**Note 1:** Products shown in bold are not RoHS compliant.

Solders, Fluxes, Kits and Soldering  
Units for Transducer Applications

**MARK V SOLDERING STATION**



A time-proven precision soldering instrument for miniature and/or delicate soldering applications. Full 25-watt rating in 17 selector positions to handle all *M-LINE* solder alloys listed on page 52. Magnetic solder pencil holder and flexible, burn-resistant cord. Lightweight soldering pencil [1.1oz (31g)]. Operates on 50 or 60Hz. Specify 115 or 230Vac.

- M5S-1** Mark V Soldering Station, Complete
- M5S-2** Mark V Control Unit Only
- M5S-3** Mark V Soldering Pencil Only

**Soldering Tips for Mark V**

- M5S-A** Type A, general-purpose 1/16in (1.5mm) screwdriver.
- M5S-B** Type B, miniature 1/16in (1.5mm) chisel.
- M5S-C** Type C, heavy duty 1/8in (3mm) screwdriver.
- M5S-D** Type D, high-temperature 3/32in (2.5mm) chisel.

Types A, B, and C tips are pretinned, ironclad copper, overlaid with nickel/chromium to retard oxidation. Type D is nickel-plated copper, particularly suited to high-temperature soldering.

**MARK IX SOLDERING STATION**



Manufactured for Micro-Measurements, the Mark IX is a compact soldering unit with a lightweight soldering pencil. The modular design of the pencil allows for easy changing of tips, and heating element replacement. Includes both the M9S-A and M9S-B soldering tips, selected for ease of use

with strain gages. The Mark IX incorporates closed-loop control technology for precise tip temperature management. Tip temperature range of +500° to +800°F [+260° to +425°C] is ideal for most laboratory and field strain gage applications. The temperature control is color-coded for proper tip temperatures for all Micro-Measurements soft solders. Not for use with Type 1240-FPA solder.

- M9S-1-115** Mark IX Soldering Unit, Complete, Voltage 115
- M9S-1-230** Mark IX Soldering Unit, Complete, Voltage 230
- M9S-1-230-CE** Mark IX Soldering Unit, Complete, Voltage 230, CE Version

**SOLDERING TIPS FOR MARK IX**

- M9S-A** Narrow tip 0.047 in [1.2mm] screwdriver.
- M9S-B** Wide tip 0.062 in [1.6mm] screwdriver.
- M9S-RS** Replacement Sponge, package of 1.



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