

## Micro-Measurements Strain Gage Accessories

Micro-Measurements strain gages are produced under rigidly controlled manufacturing conditions, with the utmost care and attention given to ensuring the high level of quality for which these gages have gained world-wide recognition. However, the gages' full potential for accurate strain measurement can be realized only when they are properly installed. There are, in fact, three principal components in every strain gage installation: (1) The strain gage itself, (2) the tools, materials, and supplies (accessories) needed to install the gage, and (3) the techniques employed in performing the installation. Professional stress analysts have learned from experience that compromising any of these may lead to compromising the quality of the installation and the accuracy of the strain data.

The well-established formula for making consistently successful strain gage installations is quite simple:

- Select high-quality precision strain gages.
- Select professional-caliber accessories which have been laboratory-tested and field-proven for effectiveness and compatibility with the strain gages.
- Follow the installation procedures recommended by the manufacturer of the gages and accessories.

A small sample of the Micro-Measurements strain gage installation accessories is featured on the following two pages. As indicated, the appropriate materials, supplies, and tools are available for each important step in the gage installation process—from preparing the surface of the test piece to applying a protective coating over the

bonded and wired gage. All accessory items, whether manufactured directly by Micro-Measurements or specified for purchase from an outside supplier, are of the highest quality, and have been designed or selected specifically to help ensure successful installation of Micro-Measurements strain gages.

Regular users of strain gages will want to request a copy of Micro-Measurements Strain Gage Accessories databook. This fully illustrated catalog describes the complete line of gage installation accessories and related equipment. In addition to detailed product descriptions and specifications, it includes, where applicable, extensive recommendations for the appropriate selection and application of the accessories. Micro-Measurements Strain Gage Accessories databook is available on request from our Applications Engineering Department. A complete listing is available on our website.



## Micro-Measurements Strain Gage Accessories

### SIX SIMPLE STEPS TO SUCCESSFUL STRAIN GAGE INSTALLATION

#### 1. Surface Preparation



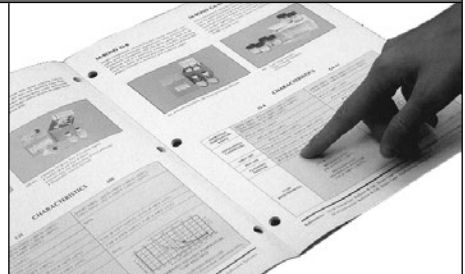
CSM Degreaser  
M-Prep Conditioner A  
M-Prep Neutralizer 5A  
Silicon-Carbide Paper  
Cotton Tip Applicators  
Gauze Sponges



#### 2. Adhesive Selection



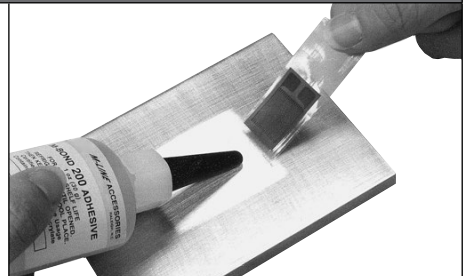
M-Bond 200  
M-Bond AE-10  
M-Bond AE-15  
M-Bond 600  
M-Bond 610



#### 3. Gage Handling and Bonding



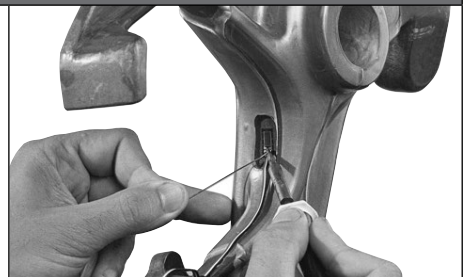
Gage Handling Tape  
Mylar® Tape  
Spring Clamps  
Teflon® Film  
Silicone Rubber Gum Pads  
Application Tools



#### 4. Leadwire Attachment



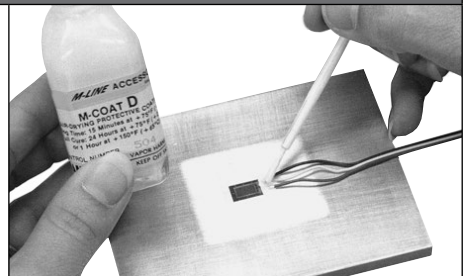
Solder Terminals  
Wires, Cables –  
Solid, Stranded, Tinned  
Solders  
Soldering Station  
Wiring Tools



#### 5. Protective Coating Application



M-Coat A Polyurethane  
M-Coat B Nitrile Rubber  
M-Coat C  
Silicone Rubber  
M-Coat D Acrylic  
M-Coat W-1  
Microcrystalline Wax



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**6. Gage Installation Tester**



Reads insulation resistance (leakage) to 20 000 MΩ with 15 VDC.  
Measures deviation of installed gage resistance from precise standards to a resolution of 0.02%.  
Auxiliary ohmmeter scale for troubleshooting questionable installations.  
Reads with the push of a button.  
Verifies the complete gage circuit including leadwires.



**GENERAL APPLICATION KITS**

It is often of greatest convenience for the strain gage user to purchase all of the needed accessory supplies and materials in a single package.

**GAK-2 Series Kits** provide specific selections of M-LINE accessories for making basic strain gage installations with the M-Bond 200, AE-10, or 610 Adhesives.

The ultimate in gage installation capability is provided by the **MAK-1, Master Strain Gage Application Kit**. The MAK-1 includes all of the supplies and special tools necessary for making a wide range of gage installations for both laboratory and field applications.



**GAK-2 Series Kit**



**MAK-1 Master Strain Gage Application Kit**

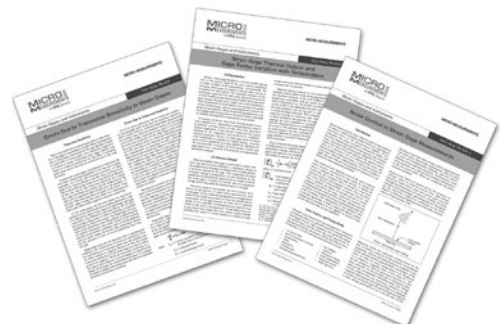
**INSTRUCTIONAL MATERIALS**

Because technique is such an important ingredient in successful strain gage installation, detailed **Instruction Bulletins** have been prepared for virtually all Micro-Measurements strain gage installation products.

In addition, a library of **Tech Notes** and **Application Notes** is available for reference on a broad range of subjects within Strain Gage Technology.

**Application Notes** present practical strain gage application techniques for “out-of-the-ordinary” situations, and represent, as much as possible, a practical “how-to” approach to strain gage installation.

**Tech Notes** contain in-depth technical treatments of specific subjects having direct or indirect bearing on the successful application of stress/strain measurement technology.





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