



# PRODUCT INFORMATION

**HIGH TECHNOLOGY MATERIALS**

## MERECO X-305 EPOXY SUPER GLUE

### **RAPID SETTING AND BONDING EPOXY ADHESIVE**

**MERECO X-305** is a quick bonding and rapid room temperature setting liquid epoxy super glue. After only 45 seconds **MERECO X-305** provides tensile shear strengths in excess of 2000 psi! This unique non-flammable adhesive needs only an equal parts mix and sets without fuming.

**MERECO X-305** repairs printed circuits, fastens down and seals electronic components, replaces soft soldering and welding of jewelry, sets jewel stones, repairs and bonds glass and procelain. **MERECO X-305** is exceptionally good in the machine shop for temporary jiggling and fixturing.

#### DIRECTIONS FOR USE

Bonding surfaces must be scrupulously clean! Alkaline substances (uncleaned aluminum or even aluminum oxide abrasives) can neutralize the activity of the adhesive. Detergent cleaning agents and other chemical cleaners must be washed off, and surface must be dry. Simple equal parts mixtures of base and activator may be used. However, for critical bonding, a 2 to 1 mixture of **MERECO X-305 BASE** to **ACTIVATOR** is recommended. Approximately one ounce of material (30 grams) is the largest practical amount which can be easily mixed and applied due to the speed of reaction and exotherm of 250°F. Adding less Activator WILL NOT slow down the adhesive but will only reduce the bond strength. (Mereco retarder X-305R is available for special applications).

Stir **MERECO X-305** Activator into the Base in a disposable container. REACTION TIME is 45 seconds, so mix quickly, thoroughly and use immediately.

Apply mixture to one surface, join parts, squeeze out and wipe away excess. Adjust positioning within 10 to 15 seconds of joining. Bonded parts may be removed from jigs and holding fixtures within one minute.

#### ALTERNATE PROCEDURE FOR SMALL PARTS

1. Place two drops of Adhesive Base onto a clean surface and one or two drops of Activator onto the two drops of Adhesive Base.
2. Mix "drops" thoroughly with a clean toothpick or other disposable applicator and transfer the mixed adhesive to the bonding surface.
3. Place parts together for 45 seconds to allow the adhesive bond to form.

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**TYPICAL PROPERTIES OF UNCURED MEREKO X-305 ADHESIVE**

|                        |             |                  |
|------------------------|-------------|------------------|
|                        | <u>Base</u> | <u>Activator</u> |
| Color                  | Gray*       | Dark Brown       |
| Viscosity (cps @ 25°C) | 18,000      | 800              |
| Specific Gravity       | 1.2         | 1.2              |
| Shelf Life             | 6 months    | 4 months         |

**TYPICAL BOND STRENGTHS VS. SETTING TIME FOR CURED MEREKO X-305**

Aluminum to Aluminum (2 to 4 mils glue line)

|                     |                            |
|---------------------|----------------------------|
| <u>Setting Time</u> | <u>Tensile Shear (psi)</u> |
| 5 minutes           | 2000                       |
| 10 minutes          | 2100                       |
| 120 minutes         | 2300                       |
| 240 minutes         | 2400                       |
| 2 days              | 2600                       |
| 7 days              | 3500                       |

Variation of Tensile Shear Strength with Parts Ratio

|                  |             |                            |
|------------------|-------------|----------------------------|
| <u>Activator</u> | <u>Base</u> | <u>Tensile Shear (psi)</u> |
| 1                | 10          | 900                        |
| 1                | 5           | 1900                       |
| 1                | 3           | 2450                       |
| 2                | 5           | 2450                       |
| 1                | 2           | 2650 (Optimum)             |
| 3                | 5           | 2500                       |
| 3                | 4           | 2300                       |

\*Also available in clear, Product X-305-1

**PRECAUTIONS FOR STORAGE AND HANDLING**

Refer to Material Safety Data Sheets for applicable handling precautions. **MEREKO X-305** should be stored in tightly sealed polyethylene containers. To prevent high exotherm, do not mix more than 30 grams (one ounce) at one time. Moisture, alkaline chemicals or storage in metal containers will render the adhesive useless. Traces of perspiration, alkaline detergents, cleaning gents, and some oxide films on metals such as aluminum inhibit bond formation. Common degreasing solvents do not adequately clean most metal surfaces. Methods for preparing surface for bonding are outlined in Technical Service Bulletins TSB 3-627, TSB 3-626 and TAB 3-640.