



Technical Bulletin

SYMPOXY 1010-809 A&B

**LOW VISCOSITY, ROOM TEMPERATURE CURING, UNFILLED,
EPOXY POTTING AND CASTING SYSTEM**

DESCRIPTION:

Symproxy 1010-809 A&B is a clear, low viscosity, 100% solids, long pot life system designed for clear castings of 1/8 inch to 3 inch thickness. 1010-809 A&B system may be used in applications such as potting, casting, and impregnating, where easy to use ratios with medium gel time are needed.

1010-809 A&B cures to a high gloss finish and has good electrical properties. It has excellent physical characteristics such as high impact resistance and good thermal shock resistance. It may also be colored as desired.

PHYSICAL PROPERTIES:

Mix Ratio - (*see processing notes)	
by volume A:B	100:50
by weight A:B	100:42
Gel Time 100 grams @ 25°C	45-50 min.
Viscosity - mixed @ 25°C cps	1,400-1,800
Hardness Shore D	82 D
Specific Gravity - mixed	1.09
Cure schedule - ¼" thick (see curing procedure)	24-48 hrs.
Shrinkage - in./in.	0.0009
Tensile Strength (psi)	7,600
Izod Impact (notched)	0.94
Flexural Strength (psi)	16,300
Compressive Strength (psi)	18,500
Operating Temperature - °C	90-125
Moisture Resistance - % (24 hrs. @ 25°C)	0.10

ELECTRICAL PROPERTIES:

Dielectric Constant - 10 ⁶ (cps)	3.6
Dielectric Strength (volts/mil.)	480
Volume Resistivity (ohm-cm)	3.6 x 10 ¹⁴
Insulation Resistance - ohms @ 25°C	1.5 x 10 ¹⁴
@ 100°C	2.8 x 10 ¹¹
@ 120°C	4.6 x 10 ⁹
Dissipation Factor - 10 ⁶ (cps)	0.019

MATERIAL HANDLING, PROCESSING, & SAFETY NOTES

MIXING:

Mix, only when ready to use, by adding 42 parts of Part B to 100 parts of Part A, by weight, OR 1 part of Part B to 2 parts of Part A, by volume, and blending together thoroughly. Be sure to scrape and stir in all material sticking to the sides and bottom of the mixing container. Do not use paper containers or wooden mixing sticks. They may contain moisture. For best results, use plastic or coated containers, and metal or plastic sticks.

CURING:

Sympoxy 1010-809 A&B will gel in a 1/4 inch thickness in 3-4 hours and will cure in 24-48 hours. Thickness of 1/2 inch or greater will cure in 16-24 hours. Low heat (ie; 65°C) will accelerate the cure.

SURFACE PREPARATION TO PREVENT ADHESION:

To prevent adhesion to the mold, use a GREASE-IT release agent. The following are recommended: GREASE-IT II, GREASE-IT IV, GREASE-IT V, GREASE-IT WAX P, or GREASE-IT WAX LT, use GREASE-IT FDG when a Food & Drug grade release is required. For best results, apply in a few thin coats, drying between coats. Porous surfaces, i.e. wood, plaster, etc, must be sealed thoroughly before release is applied. Use multiple coats of a good coating, such as: a high grade lacquer or urethane lacquer.

SURFACE PREPARATION FOR ADHESION:

For applications where adhesion is desired, the surface must be cleaned, abraded and dried. Sandblasting and mechanical roughing are the preferred ways of abrading surfaces to be bonded. For added adhesion to metals, use Primer 200 and for added adhesion to plastic, use Primer 810. Make sure all surfaces are clean, dry, and free from moisture.

CLEAN UP:

Cured polymers are difficult to remove. It is best to clean tools and equipment immediately after use. For best results use Hapco's A-TAK.

STORAGE:

Polymer systems have a minimum shelf life of six months when unopened. Both components should be stored in a room temperature dry place. When not in use, containers should be kept tightly closed.

RESEALING:

Many polymers are moisture sensitive, reseal, using one of the following two (2) methods: blanket with nitrogen or use a hair dryer for 30 seconds to cover with dry air.

PRECAUTIONS:

CAUTION: The MSDS should be read thoroughly before using this product.

Skin or eye contact with polymers should be avoided. Clean housekeeping procedures are urged and the use of gloves and/or protective creams suggested. All polymers, as a general practice, should be used in well ventilated areas. Spot ventilation is most effective. Contaminated clothing should be removed immediately and the skin washed with soap and water or waterless skin cleaner. Should accidental eye contact occur, wash thoroughly with water and consult a physician.

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The information presented here is based on carefully conducted laboratory tests and is believed to be accurate. However, results cannot be guaranteed and it is suggested that customers confirm results under their conditions and in their applications before production use.

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