

#### ALFA INTERNATIONAL CORPORATION

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Aluminum Filled, High Temperature, Epoxy Gel Coat

## **GENERAL DESCRIPTION**

E80-105 is an aluminum filled, epoxy, gel coat system that offers high heat resistance, low shrinkage, and non-warping properties for superior performance in the most demanding applications. This fast-gelling, non-sagging formula cures at room temperature to form a durable face coat that exactly reproduces surface details.

E80-105 is thixotropic and will not sag when applied to a vertical or slumping surface. In addition, this versatile gel coat is easily machined and can be drilled, tapped, sanded, or milled with conventional tools.

E80-105 is well suited for molds filled with aluminum chips or sand. It can also be backed with fiberglass cloth. Quick drying time eliminates print-through.

E80-105 can be used in many applications, such as, molds for low melting alloys, autoclave molds, molds for thermostats, hot press dies, foam molds, blow molds, molds for wax, high temp. vacuum and pressure forming molds, etc.

## SPECIFICATIONS

## HANDLING CHARACTERISTICS

Workable Pot Life, 100 g @ 25°C: 20-30 min. Mixed Viscosity @ 25°C cps: thixotropic Shelf Life: 1 year

## PHYSICAL CHARACTERISTICS

Specific Gravity, 25°C / 25°C: 1.45 Shrinkage Linear, in / in: 0.0007 Tensile Strength, psi: 9,000 Tensile Elongation, %: 1.0 Ultimate Flexural Strength, psi: 10,000 Compressive Yield, psi: 19,000 Izod Impact, ft / lbs / in of Notch: 0.75 Water Absorption, 24 hr. Immersion, %: 0.10 Thermal Conductivity, btu / hr / ft<sup>2</sup> / °F / in: 11.5

The information given and the recommendations made herein are based on our research and are believed to be accurate but no guarantee of their accuracy is made. In every case we urge and recommend that purchasers before using any product in full scale production make their own tests to determine to their own satisfaction whether the product is of acceptable quality and is suitable for their particular purposes under their own own constitutions. No representative of ours has any authority to waive or change the foregoing provisions but, subject to such provisions, our engineers are available to assist purchasers in adapting our products to their needs and to the circumstances prevailing in their business. Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention governed by any patent, without the authority from the owner of this patent. We also expect purchasers to use our products in accordance with the guiding principles of the Chemical Manufacturers Association's Responsible Care® program. TB02067-Ide



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# APPLICATION

1. <u>Storing Unmixed Materials</u> – Since settling may occur in storage, remix each container prior to use. Store in a cool, dry area. Be sure containers are tightly sealed when not in use.

Use a release agent so that molds and patterns won't adhere. Apply several thin coats and wipe lightly. Also check for undercuts in your mold or pattern. Even small undercuts will prevent a mold and pattern from separating.
When ready to use, mix by adding the catalyst to the resin. Blend thoroughly, preferably by mechanical agitation. Use mixed material immediately. These reactive materials may exotherm excessively if allowed to stand in a concentrated mass.

4. Apply the mixed surface coat to the model or mold with a stiff brush and a wiping action to prevent mechanical air entrapment. A uniform coating of 30-60 mils is recommended. For many casting applications, the back up resin may be cast immediately onto the wet surface coat. However, to prevent bleeding through where coarse aluminum or sand aggregates are used, it is recommended that the surface coat be allowed to reach its gel-state. 32 Mechanic Avenue Unit 99 • Woonsocket RI 02895 Tel. 401-765-0503 or (866) 353-ALFA • Fax 401-765-0508 www.alfaadhesives.com • E-mail: : info@alfaadhesives.com CATALYST INFORMATION

Catalyst E80-105A – This catalyst is a fast, general purpose, curative designed for small mass castings and thin cross sections up to 1" thick. Operating temp. is 350°F. By weight, mix 5-10 parts catalyst per 100 parts resin. Cure for 8 hours @ room temp. then 1-3 hrs. post-cure at 150-200°F.

Catalyst E80-105B – This catalyst is a very fast, room temperature, curative designed for good impact resistance in thin film and thin cross sections up to 1.5" thick. Operating temp. is 250°F. By weight, mix 7 parts catalyst per 100 parts resin. Cure for 4-8 hours @ room temp.

Catalyst E80-105C – This catalyst is a slower, room temperature curative designed for small castings up to 2" thick. Good adhesion makes this hardener perfect for patching and repairs. Operating temp. is 250°F. By weight, mix 12 parts catalyst per 100 parts resin. Cure for 6-8 hours @ room temp.

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