

### INSTRUCTIONS

The **Aqua-Resin<sup>®</sup> L/S3** system provides fiberglass laminating and gel/surface coat mixes in which the **L** Liquid Component and **S3** Powder Component are combined in simple proportions by weight or by volume.

#### LAMINATING & GEL/SURFACE COATS

	Liquid	Powder
<b>Weight</b>	1 part "L"	2 to 3 parts "S3"
<b>Volume</b>	1 part "L"	2 parts "S3"

The pot life – 25 to 120 minutes – is variable, as are other properties, simply by adjusting the quantity of powder.

Extra powder will: increase hardness and stiffness, decrease flexibility and set time, and decrease *beta*.

Less powder will: decrease hardness, increase flexibility and chip resistance, increase pot life, and *beta*, and facilitate wet-out of the fiberglass.

**Molds and Release Agents:** Molds can be of any conventional type and material including **Aqua-Resin<sup>®</sup> L/S3** itself. Mother molds (jackets) can also be made with fiber-reinforced **L/S3**. Silicone molds need no release agent. For other, "non-porous" mold materials, most conventional spray release agents can be used. For **L/S3** molds, and other porous materials, such as plaster, use **SEPR-8<sup>™</sup>** with no prior sealing. Green soap, PVA or other water-soluble materials are not recommended.

**Mixing:** Power mixing using a *Jiffy* type or similar mixer is recommended for all batch sizes, although batches of less than 1-2 lbs may be hand mixed. The **S3** Powder is added to **L** Liquid in the desired proportions as per chart above. Mix in a disposable container until uniformly smooth and lump-free. *To reduce dusting when power mixing, first hand mix until all the S3 Powder is incorporated, then begin power mixing.* The mixed material should readily run off a spatula or mixing blades. All equipment should be kept clean; hardened material on the mixing blades, brushes, etc. will contain active catalyst, which will shorten the pot life.

**Gel/Surface Coat:** Using a medium-stiff brush ("chip brush"), paint the gel/surface coat-mix into the prepared mold. One or two coats are sufficient. Once the gel/surface coat has solidified (not necessarily cured)—approximately 5 to 10 minutes, the laminating coats can be applied. Gel/surface coats are typically about 1/32" thick. Some mold surfaces may release thin gel/surface coats prematurely, causing surface defects. In such cases, thickening or reinforcing the gel/surface coat will prevent this. Some suitable materials for this purpose, used alone, or in combination, are: **THX-6<sup>™</sup>** thickener, **Aqua-Veil<sup>™</sup>** surfacing veil, and **Aqua-Glass<sup>™</sup> 1/2"** chopped fiber. Note: fumed silica products such as Cabosil<sup>®</sup> are not compatible with Aqua-Resin<sup>®</sup>.

**Fiberglass Laminating:** The fiberglass laminating mix, in conjunction with fiber reinforcement, can be brush applied anytime after the gel/surface coat has solidified. Using **Aqua-Glass<sup>™</sup> 3.5-1"** or **4.5"** chopped strand will yield the strongest laminates. First a heavy layer of laminating mix is applied; then the **Aqua-Glass** is sprinkled on top. A ridged fiberglass roller or a chip brush should now be used to help wet through the **Aqua-Glass** with the laminating mix being worked up from below. Additional laminations may be added immediately, or at a later time. The percentage, by weight, of **Aqua-Glass** to laminating mix ideally should be 10 to 15% by weight.. The use of a hard finned fiberglass laminating roller will help release bubbles, increase strength and reduce the amount of laminating mix required—and is therefore highly recommended. Finishing the back of the laminate with a layer of 10 or 30 mil **Aqua-Veil<sup>™</sup>** will both add and equalize stiffness.

Three quarter ounce chopped strand mat or one ounce stitched mat may be substituted for **Aqua-Glass**. In all cases wet through the glass from below.

**It is important to note that total wall thickness of properly applied laminating plus gel/surface coat layers typically is not more than 1/8".**Foam

## AQUA-RESIN® L/S3 INSTRUCTIONS

© Aqua-Resin 2009

---

**Coating:** Carved rigid foam may be coated with either **Aqua-Veil™** or **Aqua-Glass™** chopped fiber incorporated in an **L/S3** mix. Coatings as thin as 1/32" will substantially increase the surface strength of the foam with minimal loss of detail. *(Please see individual instruction sheets for use of these two Aqua-Resin® fiber glass products.)*

**Spraying:** Various types of conventional spray equipment can be used or adapted for spraying L/S3. (Contact us or your distributor for information.)

**Casting Solid:** For small pieces, an **L/S3** mix may be poured directly into a mold. Four parts **S3** or more to one part **L** (by weight) should be used for this purpose. Vibrate into mold if necessary.

**Beta Stage:** Immediately after the mixed product has solidified, it is in the *beta stage*. At this point the material is very easy to work, and we recommend doing most tooling and wet sanding operations during this period. This stage can last 1 to 24 hours.

*Please note that during the beta stage the material is not fully cured and maximum strength has not yet been achieved. Do not attempt to test strength or hardness at this stage. After 24-48 hours the strength will substantially increase, and can be assessed then.*

**Demolding:** If time allows, an overnight cure before demolding is preferable. However, if using flexible molds, demolding can be done as soon as the material is hard to the touch, usually within one hour of application. When demolding, deform the mold, rather than pry force the cast or laminated piece.

**Finishing:** If there is a possibility of any release agent residue on the finished piece, it may be removed with a cleanser and water. Sanding and seam chasing is best done *wet*, with waterproof sandpaper, immediately after demolding, while the piece is still in the *beta* stage. Depressions, seam lines, or cavities can be filled with a L/S3 mix thickened with **THX-6™**.

**Aqua-Resin®** accepts all conventional paints well. After demolding it can be painted immediately with water-based paints or with solvent based paints, after residual water has evaporated.

**Clean-up and Disposal:** Clean brushes in a container of water, as needed. Wipe dry with towel. Brushes will harden if left in water uncleaned. Water from container can be safely poured off down the drain after 24 hours. Solid material can be disposed of using normal means.

**Appropriate Use:** **Aqua-Resin®** has been engineered to be suitably strong for its intended uses. It should not, however, be considered a structural material. The user should conduct tests to determine adequate strength for the particular application. In the case of large-scale pieces, it would be prudent to consider incorporating armatures and other means of adding strength and support.

For exterior applications, the use of a good quality sealer or finish paint is recommended. However, **Aqua-Resin®** may not be suitable for some long-term exterior applications: in particular, submersion in water, or placement on grade or on damp soil. Please consult us for additional information.

**Please contact us or visit our website for the most up to date product instructions and information.**

**WARNING: Encasing any part of the body with Aqua-Resin® L/S3 can result in severe bodily injury. See MSDS for more details.**

<p><b>Aqua-Resin®</b> products do not present any chronic health hazards when used as directed. For additional health and safety information read package warnings and consult MSDS. The use of rubber gloves is recommended when using this product.</p>
---

\*For maximum strength and permanence in general laminating or exterior applications, the use of fiberglass cloth or **Aqua-Veil™** is **not** recommended. Use **Aqua-Glass™** chopped fiber.

[www.aquaresin.com](http://www.aquaresin.com)