

# Superior

# TROUBLESHOOTING

On occasion, you may experience difficulty using stone adhesives and getting them to work properly. It is important to know that we run our adhesives through extensive testing to ensure the product you receive will perform flawlessly. However, there can be outside factors that may prevent the adhesive from working properly. We have compiled a list of common things that can negatively affect how our adhesives perform. Please read through this list to help answer any questions you may have.

## **CORRECT HARDENER:**

Superior supplies the correct amount of hardener with each shipment of adhesives to our customers. It is very important to use the hardener we supply as our formulations are based on these hardener specifications.

A common mistake is to think that “all hardeners are created equal” but this is not true. The percentage of “active ingredient” may vary by manufacturer and our adhesives have been formulated to work with the hardener we supply.

*\*Be sure to rotate your stock of hardener monthly. First In, First Out (FIFO)*

## **HARDENER PROBLEMS:**

White Hardening Paste (BPO/hardener) has a shelf life of 1 year. Hardener is also susceptible to temperature changes which can cause the product to separate in the tube. It is important to thoroughly “knead” the hardener before each use to make sure the ingredients are completely mixed.

## **USE A SCALE FOR ACCURACY!!!**



## **PROPER MIXING:**

Each container of Superior Adhesives has directions for the proper Hardener-Adhesive mix ratio. It is very important that these ratios are followed exactly as listed. Too often, “extra” hardener is added to make it work faster. Although this can make the adhesive work faster, you are actually compromising the integrity and the performance of the adhesive. The adhesive will burn, turn a darker color and cure too brittle. This is common with other brands as some need extra hardener to work in colder temperatures. Our adhesives are designed to work with the specified mix ratios regardless of the temperature.



## **MIXING APPARATUS:**

It is a common practice to place the desired amount of adhesive and hardener onto a piece of scrap cardboard or stone when mixing the two. **STOP!!!**

The problem: cardboard and stone, will absorb some of the hardener affecting the mix ratio. We recommend using a disposable cup for accuracy and consistency.

## **BPO (White Paste Hardener) vs. MEKP (Clear Liquid Hardener):**

Superior Stone Products manufactures Polyesters, Acrylics and Vinyl Esters that all use the same White Hardening Paste (BPO).

EXCEPTION: Superior Water Clear Polyesters (Flowing & Knife Grade) use a different hardener called MEKP (Clear Liquid Hardener)

*\*\*\*MEKP will not work with regular Polyester adhesives and BPO will not work with the Water-Clear Polyesters\*\*\**

# Superior

# TROUBLESHOOTING

## TEMPERATURE:

There are two common scenarios that can prevent an adhesive from working as it pertains to TEMPERATURE.

**SLABS STORED IN COLD ENVIRONMENT** - In colder climates, when slabs are stored in colder temperatures, it is important to bring the slab back up to room temperature before applying adhesives. When slabs are stored in a cold area, then brought into a warmer environment, it creates moisture while warming. This moisture will cause a barrier preventing the adhesive from adhering to the stone. The cold stone will also absorb the heat generated by the adhesive curing preventing the adhesive from curing properly.

**ADHESIVES STORED IN COLD ENVIRONMENT** - Adhesives stored in a cold environment, should be brought back up to room temperature before use. If this is not possible due to time constraints, it is important that you do not adjust your mix ratios in an attempt to “speed up” the mixing process. Our adhesives have been formulated to mix properly regardless of the temperature. If the adhesives are cold, you may see a delayed reaction in gel time and cure time but adding more hardener than instructed will negatively affect the performance of the adhesive.

Superior Adhesives will outperform all of our competitors in colder temperatures. Many “competitors” adhesives will only work by adding extra hardener. **DO NOT ADD EXTRA HARDENER to Superior Adhesives!**

## ADHESIVE STORAGE:

Although our adhesives have a longer shelf life than all other brands, it is important to store them properly. Proper storage is in a climate controlled room away from extreme heat, extreme cold and direct sunlight. Exposure to high heat will drastically reduce the shelf life.

- \* On a 90° day, the interior of your vehicle can reach as high as 160° in less than 20 minutes.
- \* If your vehicle is outside all day long (i.e. weekend) the interior temperature can reach nearly 200°F
- \* DO NOT store adhesives in a vehicle if outdoor temperatures exceed 75°F (24°C).
- \* **If it's too hot for YOU, it's too hot for GLUE\***



## SURFACE PREPARATION:

After covering all of the necessary steps to make sure the adhesives are mixed properly, it is equally important that the material you are working with is properly prepared. All stone surfaces need to be thoroughly cleaned, dried and free of contaminants. This can include old glue, sealer, moisture, cleaning chemicals and dust. Proper cleaning is critical!

## EPOXIES:

Epoxies are much different than Polyester and Acrylic adhesives from a mixing standpoint. There is a “Part A” and “Part B” in our epoxy system. Part A is the Epoxy (*Resin*) and Part B is the Hardener (*Amine*). We offer both a 1:1 mix ratio and a 2:1 mix ratio.

With epoxies, MIX RATIO IS CRITICAL!!! Incorrect mixing of the two epoxy components will prevent the adhesive from curing.



## BATCH TRACKING:

As part of our quality assurance process, we label each container with a Batch Number. This number allows us to identify the product and the date of manufacture.

We also retain a small amount of each batch of adhesive we manufacture in our facility. The reason we do this is so we can re-test a specific product if you were to ever have a concern.

## COLORING PASTE:

Superior Stone Products manufactures (10) different colors of Coloring Paste. Our Coloring Paste can be used with ALL of our adhesive formulations. Do NOT use colorants made by other manufacturers as it can prevent the glue from curing.

# Superior

# TROUBLESHOOTING

## HELPFUL HINTS:

When we test our adhesives to meet exacting specifications, we have the luxury of using a gram-scale for exact measurements of both hardener and adhesive. We realize that fabricators in the shop, or in the field, do not always have this luxury.

You may have heard people using the phrase “*golf ball to a pea*”. While this is a good rule of thumb, we know it is easier to compare a golf ball with a “knife grade” adhesive than it is with a “flowing” adhesive.

To help illustrate this, the image below demonstrates how much “liquid” is equivalent to a golf ball.



The “shot glass” pictured is the same amount of liquid that could be held in a hollowed-out golf ball.

The “pea” is pictured to represent how much white paste hardener is required for this amount of glue.

If you are using our Polyester Water-Clear Flowing or Polyester Water-Clear Knife Grade, the hardener used is Clear Liquid Hardener (MEKP). This liquid hardener comes out of the tube in “drops”.

Based on using the same amount of glue as pictured above, you would need 20-30 “drops”



\*Superior Stone Products recommends that you use a disposable paper cup so the hardener and glue are thoroughly mixed\*