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# FREQUENTLY ASKED QUESTIONS

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V2 COMPOSITES, INC  
770 Lee Road 191 Auburn, AL 36830  
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## Biscuit FAQ

Where do I get the Biscuits?

Tee Biscuits are sold directly from our main location in Auburn, Alabama.

Call 334-502-3000 or e-mail us at [sales@V2composites.com](mailto:sales@V2composites.com)

Is the epoxy paste included with the Biscuits?

The proprietary Biscuit bond paste is sold as a complete package with the Biscuits and is included in the price of the Biscuits.

How many can I buy at a time?

Our standard packaging is 20 Biscuits with a 2-gallon kit of Biscuit Bond Paste. You can buy as little as five Biscuits at an adjusted price, but we will also include a kit of paste.

Can I use any type of epoxy with the Biscuits?

No, the system is designed around the Biscuit Bond Paste. Use of any other type of adhesive without our written approval will void any warranties.

What warranty is on the Biscuits?

The Biscuits are fully warranted for their physical properties and manufacturing.



Do you warranty the installation?

We are only a material supplier and do not perform any installations, therefore we have no direct control over the actual installation. As such we cannot warranty the final installation.

Do you provide engineering designs?

We provide the design engineers with the necessary technical information to design any installations, but we do not provide direct engineering services for the Biscuits.

Do I need special training?

Most concrete restoration or masonry contractors possesses the skill set to properly install the Biscuits, however we do require that the Biscuits be installed only by V2 Composites certified installers. We offer onsite training for an additional fee to achieve or renew that training.

Do I need special tools?

There are minimal tools that are required to put in the Biscuits. A complete list is included in our Installation Manual. Most contractors already have these tools or they are easily obtained at the local supply house.

How many can be installed in a day?

That is very job and contractor specific. But generally, a three-person crew can install in excess of 30 a day.



Do I have to repair the existing connections first?

The existing connections do not need to be repaired for the T-Biscuits to function as designed.

What do I do about the existing connections?

That is up to the engineer and the owner. If they only have the welds broken and are not presenting a spalling issue, they can just be left as is.

Can the Biscuits be put into a full depth repair?

The Biscuits can be installed into a properly designed, executed, and cured full depth repair.

Can the Biscuits be put into a partial depth spall repair?

The Biscuits can be installed into a properly designed, executed, and cured full depth repair.

What type of saw do I use?

The method to cut the slot is up to the contractor. To date the most success has been with some sort of walk behind concrete saw, either wet or dry cutting using a 14" diameter blade(s). For smaller or jobs, contractors use a handheld cutoff saw.

What if the slot is wet?

The slot should be dry to the touch with no standing water in it before any Biscuits are installed.



Can the slot be at an angle to the joint?

We do not recommend this as it puts excess stress on the concrete deck on the acute angled portion. We highly recommend the biscuit is installed at a 90-degree angle across the seam.

Can I cut through the joint sealant?

Yes, you can cut through the sealant and install the Biscuit. The sealant can then be repaired locally following the sealant manufacturer's instructions

Can I caulk over the Biscuit?

The center of the Biscuit is designed to be at least  $\frac{3}{4}$ " below the surface. The joint sealant should easily clear the top of the biscuit, so there should be no issue in applying sealant to the whole length of the joint. A proper bond breaker should be used over the actual Biscuit if it is in contact with the sealant.

Is the Biscuit repair waterproof?

While the nature of the Biscuit installation is waterproof, there are many external factors that affect an installations waterproofness. As such for full waterproof confidence, an additional waterproof membrane should be installed over the Biscuit installation.

Does the epoxy change color/fade in the sun (UV)?

The Biscuit Bond epoxy adhesive is structurally resistant to UV degradation, however there will be a slight change in color as it ages in the sun and is exposed to traffic.



The top of the Biscuit is interfering with the sealant, what do I do?

In certain cases, the top of the Biscuit extends into the sealant line. In such instances, the Biscuit can be slightly ground down to not interfere with the sealant.

Can I use a blower instead of an air compressor to clean out the slots?

No, a blower does not produce the needed velocity of air to properly remove the concrete dust from the slotting operation.

What diameter blade do I use?

The standard Biscuit is designed to be paired with a standard 14" diameter diamond concrete blade. Larger diameter blades will result in excessive cutting and paste usage.

How wide does the slot have to be?

The slot needs to be 1/4" to 5/16" in width.

What if I cut the slot in the wrong place?

You can fill the errant slot in with the Biscuit bond paste.

What happens if I get Biscuit half in, and the epoxy hardens?



You will have to grind it flat with the deck and then use the saw to re cut the slot thus removing the Biscuit.

The Biscuit is sticking out of the bottom of the deck, what do I do?

If the slot was over cut, or the decks were not in alignment, the Biscuit may protrude slightly from the bottom. It can be left that way or ground flush with the bottom. If it extends more than 1/2" of an inch contact us or the engineer.

How deep do I cut the slot?

The slot is always to be cut no less than 1/2" from the bottom face of the tee.

How long do I cut the slot?

For a standard depth slot, the cut should be 18" long centered on the joint.

What type of blade do I use to cut the slot?

A 1/4" wide x 14" diameter concrete blade is the top choice. Two standard 1/8" wide x 14" diameter blades can be stacked to achieve the same result.

Is the installation in a field top deck different from one in pre-topped tees?

There is no difference in how the Biscuits are installed. However, many field topped decks have a total thickness that is greater the standard pre-topped tee. This means that you may have to make the cut deeper and longer to get the Biscuit within 1/2" of the bottom.



How thin of a tee flange can the Biscuits be installed in?

The standard Biscuit can be installed in a deck as little as 3.25" thick. Custom Biscuits are available for decks as thin as 2.5"

What is the recommended spacing for the Biscuits?

The Biscuits are a one for one replacement for the existing connectors. Based on your engineers design they may be placed at a different spacing.

How close to an existing connector can I place a Biscuit?

Biscuits are to be placed no closer than 12" center to center of an existing connector.

How close to another Biscuit can I place a second one?

No closer than 12" center to center.

What is the widest gap between the tees is acceptable?

The maximum gap between the actual tees (not considering the sealant block out) is 1.0". Any greater than that you need to contact us or the engineer.

What is the lowest temperature that they can be installed?

A deck temperature of 40°F and rising is the lowest temperature that the Biscuits can be installed without special provisions.

What is the maximum installation temperature?



There is no actual temperature limit, however the Biscuit Bond will set to rapidly to be practically worked with in temperatures above 100°F. Also, extreme deck temperatures present some issues regarding thermal volume changes that should be discussed with your engineer.

How fast does the epoxy take to get hard?

The rate at which the Biscuit bond epoxy takes to set is very temperature dependent. At 70° the epoxy will set in about 15 minutes. This is not to be confused with the cure time which is of a much longer duration.

What is the ratio of Biscuits to existing connectors that is recommended?

The Biscuits are designed to be a 1:1 replacement for the existing connectors.

How close to the end of the tee should I put a Biscuit

No closer than 12"

Do I need to put more Biscuits in the drive lanes (middle) than the parking spaces (edges)

That is very dependent on the existing connector's locations. At times, design engineers have installed additional Biscuits in the drive lanes on specific decks. Consult with your design professional if you think they are needed.

Do I have to support or shore the deck to install the Biscuits?

No, you do not. However, you cannot allow the tees and newly installed Biscuits to be loaded prior to achieving full cure of the epoxy, which is 8 hours at 70°F.



How long do I have to wait until I can put traffic over the Biscuits?

At 70°F we recommend 8 hours of waiting time. For each 10 degrees change in temperature, cure time halves or doubles i.e., 60 degrees 16 hours, 80 degrees 4 hours.

Can I install them on a ramp?

Yes, you can.

Can I put them on a ramp/deck transition?

Yes, you can, but you will probably have to cut completely through the flat deck to accommodate the angle transition.

What if I cut through the deck?

Cutting through the deck is only an aesthetic and installation issue and does nothing to either the structural integrity of the deck or of the new Biscuit connection. Strong duct tape should be placed over the bottom of the cut to contain the epoxy during installation.

What if the adjacent tees are not level?

It is important to have the Biscuit no more than 1/2" from the bottom of both tees. This will necessitate having to cut through the bottom of the higher tee and having some Biscuit exposed. If the exposed Biscuit is aesthetically objectionable, it can be ground flush with the bottom of the deck.

Is it necessary to tape off the slots?



It is not necessary, but it leaves a very professional and aesthetically pleasing installation. It also makes the installation easier.

Do I have to use a tuck pointer or trowel in the slot?

Yes, this is a crucial step in getting a good solid bond with the existing concrete tee.

How much epoxy do I use?

A standard installation uses 10-12 oz of mixed Biscuit Bond. This is about a tennis ball size quantity of each component. Mix only one Biscuit worth of material at a time.

How do I mix the epoxy?

The Biscuit Bond epoxy is hand mixed on a board or other flat surface using a trowel or spatula.

Can I mix the epoxy with a mixing drill?

The use of mechanical mixers is strongly discouraged.

Can I mix in a bucket or pail?

Mixing in a bucket is impractical and strongly discouraged.

Can I use xylene, toluene, or paint thinner to clean the Biscuits off?

NO! These types of solvents contain oily additives that will inhibit the bond of the epoxy. Use only MEK or if unavailable Acetone.



How do I get the epoxy off my tools and or other items?

Uncured Biscuit Bond can be removed with Acetone. Hardened material can only be removed by abrasive methods.

How do I dispose of the excess/waste epoxy?

The hardened Biscuit Bond is environmentally safe to dispose of in standard refuse containers. The containers should be scraped clean and any excess mixed together and then disposed of in standard refuse containers.

Why don't you put the epoxy in mixing cartridges?

Due to the viscosity (thickness) of the Biscuit Bond it is very difficult to use it in cartridges. Additionally, in warmer temperatures, you cannot get all the material mixed before the initial material starts to get hard.

If you have any questions that are not covered in this document or want further explanation to the answered questions, please contact us:

Call 334-502-3000 or e-mail us at [sales@V2composites.com](mailto:sales@V2composites.com)

