

This email is being sent with corrections to the "time for curing" recommended for a solvent-bonded article. Remember to keep sending us pictures of your Spectar projects. This month, every picture of a solvent-bonded Spectar project wins a free Eastman three-function pen!



## Ask the Spectar team

Ask the Spectar team is a series of emails designed to share practical information about Eastman Spectar™ copolyester (PETG). You will receive one email per month. We hope you find these a valuable resource!



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### Solvent bonding Eastman Spectar™ copolyester

**Question:** Can PETG be solvent bonded with good results? Which solvents and techniques are recommended?

**Answer:** Yes! Eastman Spectar™ copolyester can be solvent bonded with good results. Technique is very important. For those familiar with solvent bonding acrylic, current techniques are still applicable—we recommend a few modifications for best results.

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**Solvent bonding** is a common technique used for joining two plastic parts together. A solvent mixture is applied at the bond joint to dissolve the surface of the two materials. As it evaporates, a strong plastic-to-plastic bond results. Solvent bonding is an effective method for joining sheets made of Eastman Spectar™ copolyester.

Here are a few useful tips:

- Parts should be properly machined; edges adequately prepped.
- Make smooth cuts to ensure a tight fit along the entire edge of the bonding area.
- If using a router bit, we recommend using a straight flute.
- Use a fixture to align or hold parts securely.
- Apply only enough solvent to cover the entire joint without excess. Applying too much solvent may cause the joint to haze. Note SINC (solvent-induced crystallization) may occur if too much solvent is used.
- Make sure the solvents are within their use-by date. Protect solvents from absorbing moisture. Old solvents, or those used in high-humidity areas, may result in weak bonds.

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- Use a 22-gauge syringe, or smaller, to enhance capillary action.
  - Apply slight pressure to parts to eliminate bubbles at the joint.
  - Allow sufficient time for curing:

Green time = 60–90 seconds

(amount of time required before a part can be moved after bonding)

"Strong to the touch" = 8–10 minutes

(amount of time required before additional parts can be added)

Total cure time = 24 hours

(amount of time it takes for a bond to cure)

Typical solvents used are methyl ethyl ketone (MEK), tetrahydrofuran (THF), cyclohexanone, methylene chloride, ethyl acetate, and blends of MEK and methylene chloride.



**This display box was created using the solvent bonding process.**



**View the video below to see solvent bonding in action!**



**Share this information with your customers and colleagues!**

**Do you have a question about Eastman Spectar™ copolyester?  
Reply to this email to Ask the Spectar team!**

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We invite you to share your experience! Email us a picture of your solvent-bonded Spectar project, and the Spectar team will send you a free gift by mail.

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