

Por-A-Kast TA

Applications

Por-A-Kast TA (thixotropic) is a two-part gel polyurethane system that liquefies when stirred and returns to a firm state upon standing. It can be used for a variety of projects that require a material that cures to a lightweight, rigid material. One of the most common uses of Por-A-Kast TA is as a mother mold or rigid housing (a support system for flexible internal rubber molds). Because Por-A-Kast TA is viscous enough to be applied with a brush or trowel, it is excellent for use as a vertical encapsulating compound and for insitu projects.

Characteristics

Por-A-Kast TA is an MDI-based, creamy gel polyurethane system that emits little or no odor. Por-A-Kast TA is mixed one-to-one by volume and cures at room temperature. Por-A-Kast TA cures to a lightweight, rigid, and off-white urethane.

Instructions for Use

Prepare Flexible Mold

Before your flexible mold has cured, apply Smool to the outside surface of flexible molds. If you do not smooth the surface of the flexible inner mold, Por-A-Kast TA sticks to the ridges that were created when applying the flexible molding material. Next, apply several light coats of Synlube 531 until you can see a wax film. Or, use a mixture of paste wax and mineral spirits. Again, apply the release agent until you can see a wax film. You should allow the release agent to dry approximately 10 minutes before you apply Por-A-Kast TA.

Measure Curative and Prepolymer

Note: Mix the curative before measuring it to evenly distribute the pigment which may settle during storage.

Make sure that the curative and prepolymer are room temperature before mixing them. Please note that in cold weather it may take up to 24 hours for the curative and prepolymer to reach room temperature. Using two clean, dry, plastic containers of equal size, measure equal amounts of the curative (part A) and the prepolymer (part B). Do not measure more Por-A-Kast TA than you can use within its pot life. If you have a large mold that requires more material than you can use in 20–25 minutes, you may apply Por-A-Kast TA more than once (if you apply Por-A-Kast TA more than once, you should do so immediately).

Mix Curative and Prepolymer

Note: Por-A-Kast TA provides approximately 20–25 minutes for you to mix and apply the material before it begins to gel.

After you prepare your flexible mold and measure the curative and prepolymer, you are ready to transfer the curative and prepolymer into another clean, dry, plastic container. Combine the two ingredients for approximately 45 seconds or until no color striations are visible. To mix small amounts of Por-A-Kast TA, use a plastic or metal spatula. For larger amounts, use a small hand drill with a jiffy mixer attachment.

Apply Por-A-Kast TA

Note: You should allow Por-A-Kast TA to stand approximately 3–5 minutes after mixing to allow it to change to a thixotropic state before applying it.

Apply a base coat of Por-a-Kast TA with a brush or trowel in a thickness of ¼" to ¾". The longer you allow the mixture to rest before applying, the thicker the layers will be (wait 8-10 minutes for layers up to ¾" thick). However, do not wait too long to begin applying Por-A-Kast TA or it will start to gel (Por-A-Kast TA gel time is 25–30 minutes). After the first layer begins to gel, you may apply another layer. You may continue to add layers of the material to achieve the thickness you desire. Do *not* allow the material to cure between layers.

Demold and Cure

You may demold after 16 hours. To prolong the life of the mother mold, allow it to cure 24 hours before using it.

Properties

Curative (Part A) and Prepolymer (Part B)

The following table lists the properties of the curative and prepolymer before they have been mixed.

Property	Curative (Part A)	Prepolymer (Part B)
Color	Creamy White	Light Yellow
Mix Ratio by Weight	90	100
Mix Ratio by Volume	1	1
Shelf Life	12 Months	12 Months
Specific Gravity @ 75°F (24°C)	1.06	1.18
Viscosity @ 75°F (24°C), CPS	500	1000

Mixed Curative (Part A) and Prepolymer (Part B)

The following is a list of the properties of Por-A-Kast TA after the curative and prepolymer have been mixed.

Property	Time	Temperature
Mix Time*	45–60 Seconds	75°F (24°C)
Pot Life*	20–25 Minutes	75°F (24°C)
Gel Time*	25–30 Minutes	75°F (24°C)
Cure Time*	24 Hours	75°F (24°C)
Demold Time*	16 Hours	75°F (24°C)

*Mix time, pot life, gel time, cure time, and demold time vary depending on mass, mold temperature, and component temperature.

Cured Por-A-Kast TA

The following table explains the properties of Por-A-Kast TA after it has cured.

Property	Cured Product
Color	Creamy White
Reversion Temperature	270° F (132° C)
Shore Hardness	D75 ± 2
Specific Gravity	1.13

Storage and Handling

Keep the Por-A-Kast TA container tightly closed when not in use and store at temperatures between 60–90° F (16–32° C). Do not expose the curative or prepolymer to moisture! If moisture contaminates the material, it will not cure. If these storage requirements are met, Por-A-Kast TA carries a shelf life warranty of six months.

Be sure to read the *Material Safety Data Sheet* that comes with Por-A-Kast TA. When working with Por-A-Kast TA, please observe the following safety precautions.

- Use only in well-ventilated areas.
- Wear safety glasses, chemical-resistant rubber or plastic gloves, and an apron.
- Avoid prolonged or repeated contact with skin.
- In case of skin contact, wipe affected area with isopropyl alcohol, followed by soap and water.
- In case of eye contact, flush eyes with water for at 15 minutes and consult a physician.
- If swallowed, drink one to two glasses of water and seek medical attention immediately.

Por-A-Kast TA Product Bulletin

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