

KASTEZ™ RESIN

Fast Set, Two-Part, High Quality Polyurethane Plastic Resin

DESCRIPTION: KastEZ is a two-part polyurethane resin used to make castings from rigid and flexible molds. Some of the most common uses of KastEZ are craft items, rapid prototypes, special effects, and sculpture reproductions. However, KastEZ can be used for any application that requires a light-weight, hard plastic.

KastEZ is mixed one-to-one by volume and cures at room temperature. KastEZ begins to gel in 1.5 minutes, and cures to a white color.

MODEL PREPARATION: You can cast KastEZ into many types of molds, but before you begin to cast in a polyurethane mold, you must prepare the mold by applying the appropriate release agent (we recommend Synlube 531). Apply the release agent sparingly, while coating all internal surfaces of the mold. Too much release agent may cover the details of the mold.

You should allow the release agent to dry approximately 10 minutes before you pour the casting. Please note that silicone molds do not require a release agent. If you want to use an in-mold paint, you should apply it after the release agent dries.

MAKING THE MOLD: KastEZ provides approximately 1.5 minutes for you to mix and pour the casting before it begins to gel.

Using two clean, dry, plastic containers of equal size, measure equal amounts of the curative (part A) and the prepolymer (part B). If you want to use a filler or powder, use another clean, dry, plastic container to measure the filler or powder. Do not measure more KastEZ than you can pour within its 2 minutes pot life. If you have a large mold that requires more KastEZ than you can pour in 1.5 minutes, you may use a rotational casting method or pour KastEZ more than once.

Mix your filler or powder into the curative (Part A) and prepolymer (Part B) by mixing half of the filler or powder into the curative and the remaining half of the filler or powder into the prepolymer *before* you mix the curative and prepolymer together.

Combine the two ingredients for approximately 30 seconds, being careful to prevent air bubbles from forming. Use a plastic or metal utensil to mix KastEZ.

POUR CASTING: Once you mix the curative and prepolymer, you have approximately 1.5 minutes to pour the casting.

Although KastEZ gels quickly, you should take your time to carefully pour it into the mold. The best way to pour a casting with KastEZ is to tilt your mold slightly and pour into one spot of the mold. Pour slowly so that any air bubbles that may have formed during mixing can break over the lip of the container as it pours out.

FEATURES

- Fast Cure
- Low shrinkage (less than .0098)
- High Detail
- Scratch resistant
- 1-to-1 Mix means no weighing needed
- Cures bright white
- May be painted in the mold

DEMOLDING: Once you have poured your casting, do not disturb the mold or demold the casting for 8–15 minutes. Although you may work with your cast in as little as 15 minutes after demolding, we recommend that you allow your cast to cure for 30 minutes for best results. You may post cure your cast for 6 hours at 160° F (72° C). After KastEZ has cured, you may turn, drill, grind, sand, and paint it.

STORAGE: Keep the KastEZ containers tightly closed when not in use and store at temperatures between 50–77° F (10–25° C). Do not expose the curative or prepolymer to moisture! If moisture contaminates KastEZ, it will not cure. If these storage requirements are met, KastEZ carries a shelf life warranty of six months.

SAFETY: Be sure to read the *Material Safety Data Sheet* that comes with KastEZ. When working with KastEZ, please observe the following safety precautions.

- Use only in well-ventilated areas.
- Wear chemically resistant rubber gloves, safety glasses, 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 15 minutes and consult a physician.
- If swallowed or comes into contact with eyes, seek medical attention immediately.

DISCLAIMER: The information in this bulletin and otherwise provided by ArtMolds is considered accurate. However, no warranty is expressed or implied regarding the accuracy of this date, the results to be obtained by the use thereof, or that any such use will not infringe any patent. The user assumes all risk and liability whatsoever in connection therewith.

KASTEZ RESIN — Cont'd

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	Curative (Part A)	Prepolymer (Part B)
Color	Translucent Yellow	Opaque Yellow
Mix Ratio by Weight	1	1.13
Mix Ratio by Volume	1	1
Shelf Life	6 Months	6 Months
Specific Gravity @ 75°F (24°C)	0.99	1.10
Viscosity @ 75°F (24°C), CPS	80	30

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

The following is a summary of the properties of KastEZ after the curative and prepolymer have been mixed

Property Curative	Time	Temperature
Mix Time	30 Seconds	75° F (24° C)
Pot Life	1.5 Minutes	75° F (24° C)
Gel Time	2 – 2.5 Minutes	75° F (24° C)
Cure Time	30 Minutes	75° F (24° C)
Demold Time	8 to 15 Minutes	75° F (24° C)

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

Cured KastEZ

The following table lists the properties of KastEZ after it has cured.

Property	Cured Product	Property	Cured Product
Color	White	Modulus of Elasticity, ASTM D790-97, MPA	874.3
Compressive Yield Strength, ASTM D695-96, psi	4293.4	Rebound, Bashore, ASTM D2632-74 %	30
Elongation, ASTM D412-80 %	15	Reversion Temperature	270° F (132° C)
Heat Distortion Temperature, ASTM D648	150° F (66° C)	Shore Hardness, ASTM D2240-75	D73±2
Shore Hardness, ASTM D2240-75	D73±2	Specific Gravity, ASTM D792-66	0.99
Izod Impact – Notched, One Specimen, ASTM D256-93a, ft lb/in	0.26	Stress @ 5% Strain, ASTM D790-97, MPA	33.3
Izod Impact, - Notched, Four Specimens, ASTM D256-93a, ft lb/in	0.29	1 Ultimate Tensile, ASTM D412-80, psi	4700
Izod Impact – Unnotched, ASTM D256-93a, ft lb/in	6.1	Linear Shrinkage, ASTM 2566, in/in	0.0098