

Mold Putty 15

Silicone Mold Making Putty

Product Description:

Alumilite's Mold Putty 15 is a long work time putty that allows you to work on large scale projects. Mold Putty 15 has a 15-minute work time and 1-2-hour cure time. The Mold Putty 15 also has a higher durometer meaning it is more firm after curing which is generally required when working on larger scale projects. It is FDA compliant and is safe when mixed and used properly for making food safe molds as well as molds of the body that come in contact with skin.

Physical Properties:

Color	Blue
Mixed Viscosity (cps)	Putty
Hardness, (ASTM D-2240) Shore A	50
Specific Gravity	1.20
Shrinkage (in/in)	NIL
Elongation (in/in)	100%
Temperature Range (Degrees F)	-67 to 395
Tear Strength (ppi)	35

General Properties:

Color	"A" Side - Base	White
	"B" Side - Catalyst	Blue
Mix Ratio	1:1 by wt. or vol.	
Shelf Life	1 year	
Work Time at 75 Degrees F (100g mass)	15 minutes	
Demold Time at 75 Degrees F (100g mass)	1-2 hours	
Full Cure Schedule	7 days	

	<u>Approximate Volume:</u>	
Packaging:	1 lb.	.5 lb. A/.5 lb. B
	2 lb.	1 lb. A/1 lb. B
	5 lbs.	2.5 lbs. A/2.5 lbs. B
	20 lbs.	10 lbs. A/10 lbs. B
	100 lbs.	50 lbs. A/50 lbs. B

Safety: Read complete labels, SDS, and technical data sheet including instructions before using.

Instructions

Keep materials out of the reach of children, do not take internally, and do not use in any way other than it's intended use.

Before Starting

Make sure your work area is appropriate for measuring, mixing, and pouring mold making materials as they can and will stain any porous materials such as carpet and clothing. Also make sure to use and store materials in an area where children cannot reach or access.

Food Compliant

When measured/mixed properly and fully cured, the Mold Putty 15 complies with FDA 21 CFR 177.2600 and can be used safely in contact with food. It is highly recommended to allocate molds intended for food use to only be used for food and no other casting materials to prevent contamination.

1. Mold Preparation

Before measuring, mixing and applying your Mold Putty 15, there are a few things you can do to ensure a good mold.

Thoroughly clean and remove all dirt/contaminates.

Mold release is required when using the Mold Putty 15 against another Mold Putty or another platinum silicone if you do not want the two to bond, as when making two piece molds. Alumilite's UMR, Rubber to Rubber Mold Release, or a thin layer of Vaseline are adequate to avoid the two pours from bonding to one another. Avoid contact with all porous materials such as fabric, clothing, carpet, and other non-sealed materials as mold making products can wick in, bond, and attach itself to those porous materials.

2. Calculating Material Needed

Take one side of the putty and pretend to cover half of your original up with the thickness you desire in your mold. Once you have half of the master completely covered (don't need to actually press it on ... just hold or lay over the top to get an approximate volume of putty), roll the putty into a ball and measure out an equal amount of the other side of the putty. Now you theoretically have enough to cover the entire master with the thickness you desire in your mold.

3. Mix Ratio

The mix ratio of the Mold Putty 15 is 1:1 by weight or volume. Simply measuring by eye balling equal amounts of both sides of the putty is adequate for a proper mix. A gram scale or more precise volume measuring is also sufficient but not required.

4. Open Time

Alumilite Mold Putty 15 has a Work Time of 15 minutes at 75 Degrees F (100g mass). Demold time is approximately 1-2 hours which makes it a great product for making quick molds. Relative humidity and temperature will affect the cure speed. The more humid and warmer the environment is, the faster it will cure. Temperature alone will accelerate the cure of the Mold Putty 15. Warming the material in your hands prior to mixing will shorten the open time and demold time.

5. Measuring and Mixing

Knead the two putties in your hand quickly until no swirls are seen. One needs to complete this task in approximately 45-60 seconds. Once the two putties are completely blended and NO swirls are seen, roll the mixed putty into a ball and press while rolling to eliminate all of the creases.

6. Pressing - Making the Mold

Once the material is thoroughly mixed, rolled into a ball with no creases, you are ready to roll and press around your master. Starting from the highest point, lay the mixed putty ball on the master and roll the ball around the master. Rolling the putty around the master will roll the putty into the detail of your master rather than simply pressing the master into the putty in which the detail may drag or smear. Continue rolling the putty around the master until you have achieved the desired depth of your mold.

7. Inhibition

Mold Putty 15 as well as all other platinum base silicones are susceptible to Inhibition. Inhibition is when the material comes in contact with certain materials and fails to cure (remains wet ... never hardens) whereas the rest of the material not in contact with the certain materials will cure absolutely fine. These materials will act like a poison and not allow the Platinum base silicone to cure. Most of the time this ruins your mold and wastes the silicone you attempted to make the mold out of. Therefore, it is very important to know that the material you are pouring the Platinum base silicone rubber over is not going to impede, inhibit, or prevent it from curing.

Materials consisting of or that are known to inhibit platinum base silicones are: tin or amine cured resins, vinyl (duct tape, pvc, etc.), sulphur (clays), cyanoacrylates (super glue), latex, neoprene, Buna N, and natural rubbers (rubber stamps).

Whenever you are in question and are not 100% sure the material you are pouring is compatible with the Plat series, it is recommended to test in a small area prior to making your entire mold. Simply mix up a small amount of Mold Putty 15 and press it over the area/substrate in question to make sure it cures completely. If the Mold Putty 15 inhibits, the detail will smear and the putty will not harden on the surface of the mold in those areas.

8. Storage & Shelf Life

Store in a cool dry place. Unopened containers will have a shelf life of 1 year when properly stored at room temperature. Avoid high humidity areas and replace lids to containers as soon as you are finished using.

9. Mold Life

Mold life expectancy is a variable of many different factors including but not limited to the type of resin being used in the mold, the length of time the resin is in the mold, the exotherm of the resin, cycle times, the design of the part, the intricacies of the detail, the force needed to demold, etc. Even with all of these factors, there are some things you can do to get the most life out of your molds. In no particular order, here are some of the ways to extend the life of your molds. Use mold release such as Stoner or UMR. Avoid leaving castings sit in the molds any longer than they need to (especially overnight). Allow molds time to cool from peak resin exotherms prior to pouring the next part. Use Silicone Oil to condition molds whenever you stop production for a day or two as well as condition molds with Silicone Oil prior to storing for periods of time. Integrate a bake out process of 400 degrees for 2 hours and allow to cool back down prior to running more parts every 25% of the expected mold life (this process will draw silicone oil back to the surface of your mold rejuvenating what has been lost or depleted from the casting process). Store molds in a clean and dry environment.

UMR, Stoner, or Silicone Oil should not be used as a mold release when using the Mold Putty 15 for food applications. If a release is needed for a food application, a food grade release such as Pam cooking spray should be used.

10. Work Area & Clean Up

Mold Putty 15 will absorb into porous materials and will stain! Avoid clothing, carpet, upholstery, and any other porous materials which will stain and will not come out. Mold making and casting is best done in a designated work area such as a basement, garage, or hobby room with adequate air movement or ventilation. Cover any surfaces including floors with plastic sheeting, cardboard, or plywood to prevent damage from spilled resin. To clean up unmixed putty, use rubbing alcohol on a rag or paper towel to quickly clean and remove. Once cured, the materials are extremely resistant and nearly impossible to remove. There are a couple solutions out in the market that claim to dissolve cured silicones and urethanes. If you are in need of such a material, please call us and we may be able to refer you to some possible solutions.