



Alja-Safe™

Crystalline Silica-Free Alginate

PRODUCT OVERVIEW

Alja-Safe™ (patent pending) is a new addition to the Smooth-On family of “Life Casting” mold making materials. Alja-Safe™ alginate is suitable for making “temporary” molds of the face, hands and other body parts. For making re-usable molds of any body part, use “Body Double™” silicone rubber (visit www.smooth-on.com for more information).

What’s Sets Alja-Safe™ Apart? In addition to being an exceptional body molding material, Alja-Safe™ alginate **does not contain free crystalline silica** (a known carcinogen). Alja-Safe™ also captures detail better than other alginates, giving you a more accurate reproduction of your original.

Alja-Safe™ is easy to use and cures quickly. It reproduces fine detail and makes an excellent temporary mold – good for one or two reproductions of any body part. You can then cast plaster, Matrix NEO (polymer modified gypsum) or Smooth-Cast™ 300Q ultra-fast urethane resin into the mold to make a reproduction.

TECHNICAL OVERVIEW

| <i>Product</i> | <i>Working Time*</i> | <i>Demold Time*</i> | <i>Specific Volume</i> |
|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------------|------------------------|
| <i>Alja-Safe™</i> | 8 minutes | 10 minutes | 26 cu. in./lb. |
| *Note: Working time and demold time can be reduced by using warmer water. Cooler water will give a longer working time and extend the demold time. | | | |
| Mix Ratio: 1 Part Warm Water (80° F / 27° C)* to 1 Part Alja-Safe Powder By Volume (or 5 parts water to 1 part Alja-Safe by weight). | | | |

Surface Preparation

Preparing To Mix

Measuring

Store and use Alja-Safe™ in a dry environment at room temperature. Alja Safe powder may get warm in storage/shipping during the summer months which will cause the powder/water mixture to set too fast. To remedy, store Alja-Safe™ in a cool area (60°C - 70°F or 15°C - 31°C) for 24 hours before using. Alja-Safe™ has a limited shelf life and should be used as soon as possible. Do not allow moisture to come into contact with unused Alja-Safe™. Use only with adequate ventilation. **Practice:** Make A Mold Of Your Thumb – make a mold of something small before going on to larger models. **You’ll gain a lot of experience with a small test.**

Applying A Release Agent – Alja-Safe™ will not stick to most surfaces. When making a mold of the head, a release preparation is recommended to prevent mechanical lock to the hair. CHOLESTEROL Brand Hair Conditioner (available at most pharmacies) can be applied to hair-covered areas prior to applying Alja-Safe™. It can be washed out of the hair easily after use. **Because no two applications are quite the same, a small test application to determine suitability for your project is recommended if performance of this material is in question.**

Measuring – Alja-Safe™ is mixed 1 Parts warm water to 1 Part Alja-Safe™ Powder by volume. Less water will make Alja-Safe™ thicker, and more water will make Alja-Safe™ thinner.

Water Quality – Water that has a high mineral content (calcium, phosphate, etc.) may cause any alginate to become “lumpy” or not set properly. A small-scale test is recommended prior to mixing large amounts.

Temperature Of The Water - At 80° F / 27° C, Alja-Safe™ will have a working time of 8 minutes and a demold time of 10 minutes. Warmer water will cause the material to cure faster (less working time).

Colder water will give a longer working time and slower demold time. For best results, sift Alja-Safe™ powder into water and mix as directed.

Measuring

Mixing

Applying

Curing

Performance

Mixing – Alja-Safe™ can be hand mixed, but best results will be obtained using a power mixer attachment. Drill mix for best results. Attach a Jiffy Mixer or Squirrel Cage Mixer to a power drill and mix for one minute (depending on volume) to a uniform consistency – smooth without any powder lumps. Jiffy mixers are available at many hardware stores. Squirrel Cage Mixers will yield the best mix and are available from Smooth-On or your Smooth-On distributor.

Applying – Alja-Safe can be poured around an object or applied to vertical surfaces.

Pouring Around An Object

Now Available – Life Casting Video From Smooth-On!



Once mixed, Alja-Safe™ can be poured around the hand, foot, fingers, etc. in a fixed position inside a container. Suspend the model just above the bottom of the container and have at least ½” (1.27 cm) space between the model and the side walls of the container. Pour Alja-Safe™ into the container at the lowest point and let the alginate rise around the model. Once Alja-Safe™ has cured, remove the model slowly and carefully. Removing the model too fast may result in a tear in the mold.

How Much Alja-Safe Do I Need?*

| Anatomy | Alja-Safe™ | Anatomy | Alja-Safe™ |
|-----------------------|------------|---------------------------|------------|
| Baby's Hand / Foot | ½ lb. | Full Torso – Front & Back | 3 lbs. |
| Adult Hand / Foot | 1 lb. | Arm to Shoulder | 1.5 lbs. |
| Face – No Ears | 1 lb. | Buttocks | 1 lb. |
| Full Head & Shoulders | 2.5 lbs. | Intimate Areas | 0.5 lb |
| Front Torso | 1.5 lbs. | Full Body | 15 lbs. |

* This guide is offered as a reference tool only. It is an estimation and actual amounts needed will vary from individual to individual. End User assumes full responsibility for own calculations of material needed.

For Vertical Application – Applying A Support Shell

You may want to experiment with the amount of water added to Alja-Safe™ to find a thicker consistency that is right for vertical surface application. For example, some customers mix 1 part water to 1.5 parts Alja-Safe™. Work Alja-Safe™ into model detail with your hands and let cure.

Apply A Support Shell - Once the alginate cures, a support shell will be necessary to support the alginate mold. “Gypsona” bandages are ideal for this purpose, and are available from Smooth-On or your Smooth-On distributor.

Casting Into The Mold

All alginate molds will deteriorate quickly. It is recommended that you cast into the mold within 4 hours following demold. Materials commonly cast into alginates include Matrix NEO (polymer modified gypsum, available from Smooth-On), plaster, wax, clay and very fast urethane resins (such as Smooth-Cast 300Q).

For Soft “Skin-Like” Castings – You can cast Dragon Skin Q soft silicone rubber into Alja-Safe molds to make realistic hands, limbs, etc.

Safety First!

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CAUTION: Do not inhale dust. In case of eye contact, flush thoroughly with water. **Keep Out Of Reach Of Children.** The International Agency For Research on Cancer (IARC), which is part of the World Health Organization, has rated free crystalline silica a “Group 1” carcinogen, known to cause cancer. Alja-Safe™ alginate does not contain free crystalline silica. Read the Technical Bulletin and MSDS before using.

Important: The information contained in this bulletin is considered accurate. However, no warranty is expressed or implied regarding the accuracy of the data, the results to be obtained from the use thereof, or that any such use will not infringe upon a patent. User shall determine the suitability of the product for the intended application and assume all risk and liability whatsoever in connection therewith.

Call Us Anytime With Questions About Your Application

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