SMASH! Plastic®

Breakaway Glass Plastic

www.smooth-on.com

PRODUCT OVERVIEW

SMASH! Plastic® is a new urethane liquid plastic designed to shatter/crumble on impact ("breakaway glass"). **SMASH! Plastic®** is water clear and, once fully cured, shatters like glass. It can be cast solid in thin sections to make window panes or rotationally cast to form hollow bottles, jars or other glass-like objects to be used as breakable props for movie and stage productions. Maximum recommended thickness is 1/8" (0.33 cm.). **SMASH! Plastic®** is a room temperature cure system that is easy to use – mixed 1A:1B by volume (1 cup + 1 cup). Low viscosity ensures easy mixing and pouring. Cured castings are UV RESISTANT. Vibrant colors and color effects are achieved by adding pigment dispersions.

CAUTION: NOT FOR HOME USE. THIS PRODUCT IS FOR INDUSTRIAL USE ONLY. Proper ventilation, A NIOSH Approved Respirator and Protective Clothing are required to minimize the risk of inhalation and dermal sensitization. If breathing is affected or a dermal rash develops, immediately cease using this product and seek medical attention. Read MSDS before using.

PROCESSING RECOMMENDATIONS

Preparation - Store and use at room temperature (73°F/23°C). These products have a limited shelf life and should be used as soon as possible. Environmental humidity should be as low as possible. **Proper Ventilation Is Essential!** If inhaled in significant concentrations, fumes may effect breathing and cause skin rashes (sensitization). To minimize exposure risk, use room size or better ventilation. An exhaust vent will offer additional protection. A NIOSH approved Full or Half Face piece respirator with an organic vapors cartridge will also offer good protection (follow OSHA guidelines for respirator use). Mixing tools and containers should be clean, dry and made of metal, plastic or glass. Wear safety glasses, long sleeves and rubber gloves to minimize contamination risk. (Refer to safety information on reverse side of this technical bulletin.)

TECHNICAL OVERVIEW

Mix Ratio: 1A:1B by volume	
Mixed Viscosity, cps: 900	(ASTM D-2393)
Specific Gravity, g/cc: 1.036	(ASTM D-1475)
Specific Volume, cu. in. /lb.: 26.7	(ASTM D-1475)
Pot Life: 5 min. (73°F/23°C)	(ASTM D-2471)
Demold Time: 90 min. (73°F/23°C)	
Color: Clear	
Shore D Hardness: 80	(ASTM D-2240)
Shrinkage, in./in.: 0.0001 in./in.	(ASTM D-2566)

All values measured after 7 days at 73°F / 23°C

NOTE: Can be broken after 6 hours.

A 1 gallon unit of SMASH! Plastic® yields 23.7 sq. ft. of window panes at 1/8" thickness.

Selecting A Mold Rubber - Casting into a silicone mold made with Smooth-On Mold Max® Silicone is recommended. Do not use other silicone products. If you are unsure about surface compatibility, a trial casting should be made.

To prevent cure inhibition, post-cure newly made Mold Max® silicones for 8 hours at 150°F/60°C and let cool prior to casting resin.

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.

MIXING & MEASURING...

Measuring - Materials should be stored and used in a warm environment (73°F/23°C). This product has a limited shelf life and should be used as soon as possible. The proper mixing ratio is 100A:100B by weight or volume. Dispense equal amounts of Parts A and B into a mixing container and mix thoroughly for 90 seconds, making sure you scrape the sides and bottom of the container several times. If coloring or adding filler, add filler or tint to Part B and pre-mix thoroughly before adding Part A.

POURING, CURING & PERFORMANCE...

If vacuum degassing prior to pouring, subject mixture to 29 h.i.g. mercury in a suitable vacuum chamber for 2 - 3 minutes or until mixture rises, breaks and falls. Allow for 3 to 4 times volume expansion in mixing container. Do not vacuum too long, as this material gels quickly.

Apply Universal® Mold Release to mold surface prior to casting to ensure easy demold of fragile castings.

Pouring - **Warning:** Fumes, which may be visible as this product starts to "gel" and cure, will dissipate with adequate ventilation. Only use this product with room size ventilation and do not inhale/breathe fumes. Castings will be extremely hot immediately following cure and may burn the skin. Let cool to room temperature before handling. Do not spill on skin. Pouring Into Mold Cavity – pour material in the lowest spot of mold cavity and let material rise and seek its level.

IMPORTANT: Shelf life of product is reduced after opening. Remaining product should be used as soon as possible. Immediately replacing the lids on both containers after dispensing product will help prolong the shelf life of the unused product. **XTEND-IT® Dry Gas Blanket** (available from Smooth-On) will significantly prolong the shelf life of unused liquid urethane products.

Safety First!

The Material Safety Data Sheet (MSDS) for this or any Smooth-On product should be read prior to use and is available upon request from Smooth-On. All Smooth-On products are safe to use if directions are read and followed carefully.

Be careful.

Part A is a modified aliphatic diisocyanate. Vapors, which can be significant if heated or sprayed, cause lung damage and sensitization. Use only with adequate ventilation. Contact with skin and eyes may cause severe irritation. Flush eyes with water for 15 minutes and seek immediate medical attention. Remove from skin with waterless hand cleaner followed by soap and water Refer to MSDS.

Part B is irritating to the eyes and skin. Avoid prolonged or repeated skin contact.. Remove from skin with soap and water. If contaminated, flush eyes with water for 15 minutes and seek immediate medical attention. Use only with adequate ventilation.

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.

Rotationally Casting - Pour material into mold and rotationally cast for 7 – 10 minutes. Estimating the amount of material you need to build 1/8" – 0.33 cm thickness on your rotationally cast piece may take some practice & experimentation.

Demold - After 90 minutes, plastic is cured enough to be removed from the mold. Plastic is very fragile, so be careful removing your casting from the mold. Applying Universal Mold Release® to mold surface before casting should aid in removing the casting from your mold. The longer this material cures the more brittle it becomes, reaching full "brittleness" in 24 hours.

Temperature - When castings are exposed to temperatures above 80°F/26°C, they may soften and warp. Store castings at or below room temperature for 24 hours prior to use.

Usage - Inanimate Object: Let material cure for at least six hours prior to "smashing" against inanimate object (for example, on the floor, a wall, etc.).

Usage - On A Person: Before "smashing" a cast piece over someone's head, make sure that the wall thickness in all directions is not more than 1/8" – 0.33 cm. Also, let the material cure for at least 16 hours at room temperature to become fully "brittle".

Warning: Smashing a cast piece that is not fully cured or has a wall thickness greater than 1/8" – 0.33 cm against a body part may result in serious physical injury.

Call Us Anytime With Questions About Your Application

Toll-free: **(800) 762-0744** Fax: **(610) 252-6200**

The new **www.smooth-on.com** is loaded with information about mold making, casting and more.