

- Buff Flowing
- Black Flowing
- White Flowing
- Buff Knife Grade
- Black Knife Grade
- White Knife Grade

## Description

The Filled products are polyester based adhesives with inorganic fillers designed for use with natural and cast stone, especially marble. They are two-part adhesives in beige, white, or black. Each product is fast setting, and easy to apply. They have minimal shrinkage during curing, and a low sensitivity to changes in temperature. **Buff, White and Black Flowing** are medium viscosity fluids similar to thick syrup. **Buff, White, and Black Knife Grade** are high viscosity pastes that are highly thixotropic and very resistant to sagging. All the formulations are cured using a benzoyl peroxide hardening paste that comes in white or black.

## Applications

The Filled Polyester formulations are best suited for interior applications on natural or cast stone, especially marble. They may be used for laminating slabs, bonding or patching broken stones, reinforcing fragile material, and filling porous or chipped stones. Each individual product is best suited for the following applications:

- **Buff, White, and Black Flowing** are ideal for general repair and bonding of horizontal pieces. They may be used to fill cracks and holes.
- **Buff, White, and Black Knife Grade** are excellent choices for general repair and bonding vertical pieces where minimal sag is desired. They may also be used to fill cracks and holes.

## Coloring

The Filled Polyester products are easily colored to match any stone using our Polyester Coloring Pastes. The best shade can be obtained by mixing the product to a shade slightly darker than the actual stone color.

## Directions for Use

**Preparation:** All surfaces must be dry and free of grease, oil, efflorescence and dust. Filled Polyester products will bond to moist surfaces; however, a dry surface will provide the best results.

- Because our products do not bond with polyethylene plastics, containers of this material are ideal for mixing purposes.

**Application:** If needed, add Polyester Coloring Pastes to the mastic before mixing the mastic with the hardening paste. The Correct amount of hardener is 2% to 4% of mastic by weight; this is approximately a 1/2" to 1" bead of hardener for every tablespoon of mastic. Additional hardener speeds the curing time, but causes a deeper yellowing and reduces the bond strength. Too little hardener will result in a mixture that will not cure. Ambient temperature also affects the curing time. Warmer temperatures speed the curing process, while temperatures below 32°F (0°C) will require heating the mixture to start the curing process. The product should be mixed thoroughly and will remain workable until gelling occurs, at which point the product becomes rubbery and excess material may be removed with a razor or chisel. **The product should not be worked once gelling has begun.**

- When bonding stones together, clamps and jigs should be used to ensure a thin bond layer (less than 0.016 inches/0.4 mm) is achieved, thereby providing the strongest bond. After curing, the stone piece may be further processed without damaging the material.

## Clean-Up

After use, equipment may be cleaned with toluene or acetone. Hands should be cleaned with Waterless Hand cleaner or an appropriate solvent such as Cupran.

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Physical Properties							
Characteristic	Method	Buff Flowing	Buff Knife Grade	White Flowing	White Knife Grade	Black Flowing	Black Knife Grade
Color	Visual	Buff	Buff	White	White	Black	Black
Aspect		Thick syrup	Thick paste	Thick syrup	Thick paste	Thick syrup	Thick paste
Viscosity at 77°F (25°C) (cps)	ASTM D2393	50,000 (Spl. 6 @ 5 rpm)	311,000 (Spl. 7 @ 10 rpm)	50,000 (Spl. 6 @ 5 rpm)	350,000 (Spl. 7 @ 10 rpm)	24,000 (Spl. 6 @ 20 rpm)	200,000 (Spl. 7 @ 20 rpm)
Pot life at 77°F (25°C) (3% hardener, minutes)		3 to 4	3 to 4	3 to 4	3 to 4	3 to 4	3 to 4
Curing Time (Thin film, minutes)		8 to 10	8 to 10	8 to 10	8 to 10	8 to 10	8 to 10
Sag Flow		Yes	No	Yes	No	Yes	No

TYPICAL PROPERTIES OF CURED PRODUCT							
Shrinkage (ASTM D2566)	%	1.27%	1.28%	1.27%	1.28%	1.27%	1.28%
Shore D Hardness (ASTM D2240)	Shore D	91	92	90	90	90	90
Tensile Strength (ASTM D638)	psi (MPA)	2,700 (19)	3,800 (26)	2,700 (19)	3,900 (27)	2,700 (19)	3,900 (27)
Compressive Strength (ASTM D695)	Psi (MPA)	15,700 (108)	13,800 (95)	16,000 (110)	14,400 (99)	16,000 (110)	14,400 (99)
Flexural Strength (ASTMD790)	Psi (MPA)	5,900 (41)	7,800 (54)	6,100 (42)	8,100 (56)	6,100 (42)	8,100 (56)

## STORAGE CONDITIONS

- Always keep the container tightly sealed when not in use, and never expose the hardener to temperatures in excess of 100°F (38°C).
- Wood & Stone products are chemically inhibited to extend shelf life and improve product consistency. Storage temperature, however, is an extremely important factor in maximizing the shelf life of the products. The materials should be stored in a cool environment (50°F (10°C)) whenever possible and should never be exposed to direct sunlight.
- If these procedures are followed, the specialty polyesters should have a shelf life of at least one (1) year.

## Precautions and Safety

Observe all measures as described on the container and product MSDS. Avoid contact with skin, eyes, and respiratory system. Use protective gloves and work in a well ventilated area.

**Disclaimer:** This information is presented in good faith to assist the user in determining whether our products are suitable for the application being considered. No warranty or representation, however, is intended or made, nor is protection from any lay or patent to be inferred, and all patent rights are reserved.

In addition, the information provided reflects our current research and is intended to increase the awareness of our products and their uses. They do not establish any liabilities on our part since application, processing, and environmental circumstances remain beyond our control. Our liability is limited to a full refund of the price of the products we supply. Specifications are subject to change. We warranty the quality of our products within the limits of our terms of sale.