



BCC PRODUCTS, INC.



BLEHM PLASTICS

FAST CAST – EPOXIES – URETHANES – POLYESTER PASTES – TOOLING BOARDS – RELEASE AGENTS – SILICONES

BP 5000 SERIES EPOXY CLAY COMPOUNDS

DESCRIPTION:

Blehm epoxy clay compounds are two part systems, which when mixed together form into a soft, dough-like consistency and cure to a hard solid with excellent toughness and dimensional stability. The gray resin and a colored hardener provide visual assistance to obtain thorough mixing. The mixed clay compounds cure at room temperature and can be carved with wood working tools, or easily machined.

ADVANTAGES:

Blehm epoxy clay compounds offer a more convenient and accurate method of duplicating shapes than either by laminating or casting. Through the use of Blehm epoxy clay, plastic duplications can be made faster than by laminating, and have improved dimensional accuracy and stability. In addition, engineering changes in plastic duplications are more easily made than with laminated shapes for two notable reasons: in many cases a laminated shape will distort when cut, this will not happen with a clay duplication. Secondly, since clay fixtures do not contain any fiberglass, the clay is more easily worked without dulling cutting tools.

USE PROCEDURE:

Mixing of the clay can be accomplished by hand kneading the resin and hardener together or by the use of a mechanical dough mixer. Hand kneading will require about 10 to 15 minutes per gallon unit. The dough mixer will blend a gallon unit in 1 to 2 minutes.

Hand Mixing: The epoxy clay can be weighed out using the proportions shown on the label for small quantities. When using a gallon unit of the clay, the usual practice is to pour out all the resin onto a clean sturdy table and shape it into a loaf. Follow the same method with the colored hardener. Divide each loaf into quarters by first dividing the loaf into half and then each half into half again. Mix a quarter portion of resin with a quarter portion of the hardener by using a kneading action with your hands similar to kneading bread dough. The material is now ready for use; if more clay is required proceed to mix the second quarter portion and so forth. A full gallon unit of clay can be mixed by quarters in about 10-15 minutes.

Machine Mixing: A dough mixer is recommended when epoxy clay is used on a regular basis. The labor saved by using a mechanical mixer will pay for the mixer in a short time.

To mix a gallon unit of clay, simply place all the resin and hardener into the mixing bowl and flip the switch. Mixing is complete when the colored hardener is thoroughly blended into the resin - usually in one to two minutes.

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Application Procedure: Pack the clay onto the surface of the model to any thickness. Usually a 1/2" to 1" thickness is considered satisfactory. In most cases the clay is used in conjunction with a surface coat, in which case the packing process should begin as soon as the surface coat has firmed up but before it is hard. Care is needed to avoid air bubbles near the surface. This is best achieved by taking a handful of clay no larger than a baseball and pressing it down while vibrating your hand. The vibration gently settles the clay and forces any entrapped air up through the porosity of the clay. Another handful of clay is then applied overlapping the first and again vibrating to settle the clay and exclude air. Continue until the entire surface is covered.

Cleanup: Cleanup of mixed clay should be done as soon as possible after hands, tools or mixing surfaces have been soiled. The sooner cleanup is started the easier the mixed material is to clean up. Freshly mixed clay can usually be cleaned with soap and water. If a solvent is needed, alcohol or lacquer thinner is recommended. If a solvent is used to help clean hands, follow with soap and water. Solvent cleaners always leave a film on the skin which must be removed otherwise irritation may result.

PRECAUTIONS:

Although the epoxy clays have a low irritation potential hardener system, the use of disposable polyethelene gloves is recommended when handling the uncured material. For further information on safety, please see the MSDS.

Clay Product Number	Mix Ratio: by wt.	Working Time: minutes	Cure Time: hours	Coverage: cu. in./gal	Density: cu. in./lb.	Hardness: Shore D	Color:
5001	70/10	45	16	>250	22.4	70	gray
5002	70/10	10	1	>250	22.4	70	gray
5003	70/10	130	24	>240	21.4	70	gray
5323	100/50	40	16	>280	62.3	50	brown
5401	100/20	45	16	>285	26.5	68	gray
5403	100/20	70	16	>285	26.5	68	gray
5700	100/100	120	24	235	46.9	55	gray
5750	100/100	70	16	235	25.1	70	gray

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