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## TECHNICAL INFORMATION

### Zip-Mix™ Hard-Core Casting Combinations

Catalog Nos. HCB100, HCB100Z

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#### INTRODUCTION

HARD-CORE BLUE™ is an all-purpose, gypsum-based casting material that will result in a high-strength, accurate reproduction when properly used. Familiarity with the preparatory process and the material itself is essential. Trial casts should precede any actual evidential casting.

HARD-CORE BLUE™ is supplied in pre-measured quantities for the required 2:1 ratio for casting. The HCB100Z is 3 lbs. of impression compound to 24 oz. of mixing solution and will cast 1 full footprint or 1 partial tire track. The HCB100 is 6 lbs. of compound to 48 oz. of solution. When casting multiple or larger areas, adjust the quantity proportionally using 3 lb. and 24 oz. for each casting frame increment.



## PRECAUTIONS

- Before using this product, consult the appropriate Material Safety Data Sheets (MSDS) found on our website at [www.sirchie.com/support](http://www.sirchie.com/support).
- Extreme temperatures may affect casting. Trial casting is necessary under these conditions.
- Photograph the impression prior to any preparation. Be certain to include a scale.

## PROCEDURE

HARD-CORE BLUE™ is used in the same manner as casting plaster. Following these procedures for consistently good casts.

### Preparation

1. Photograph the impression. Be certain to include a scale.
2. Remove any debris, twigs, or leaves found lying on top of the impression. DO NOT remove any object embedded in the impression.
3. Place a casting frame (No. FCF100, FCF200, or IMP00001) around the impression if necessary (Fig 1).
4. Prepare the surface of the impression by spraying several light coats of Dust & Dirt Hardener No. 638CA over the impression (Fig. 2). Allow 2-3 minutes drying time between coats. *NOTE: Hard soil or clay generally will not require hardening.*
5. (Optional) Apply a light coat of Silicone Rubber Release Agent No. SRA10 to the impression to reduce soil and other contaminants from adhering to the cast.



FIGURE 1



FIGURE 2

## Casting

1. Pour the pre-measured amount of mixing solution into the bag containing the casting material (Fig. 3).
2. Knead the mixture until thoroughly blended for approximately 2 minutes (Fig. 4).
3. Pour the casting mixture into the impression. Be certain to break the fall of the mixture using a spoon or spatula. Begin pouring around the edges and allow the mixture to flow over and into the impression (Fig. 5). Generally, the cast should be 1/2"-3/4" thick. No reinforcement is required.
4. Allow 30-45 minutes for the cast to setup. Remove the cast and allow to dry for at least 24 hours prior to further examination or handling.



**FIGURE 3**



**FIGURE 4**



**FIGURE 5**

## Casting in Standing Water

It is possible to make a cast of an impression that is found under water using the following procedure:

1. Carefully place a restricter/casting frame around the impression. If possible, the restricter should be tall enough so that it stands above the surface of the water (Fig. 6).



**FIGURE 6**

2. Lightly sprinkle HARD-CORE BLUE™ compound to completely cover the impression to a thickness dependent on the water depth (Fig. 7).
3. Mix a quantity of HARD-CORE BLUE™ with mixing solution and pour the mixture on top of the compound covering the impression. Be certain to break the fall of the mixture with a spoon or spatula (Fig. 8).
4. Allow at least 30 minutes for the cast to setup. Remove the cast and allow to dry for at least 24 hours prior to further examination or handling.



FIGURE 7



FIGURE 8

**HCB100 CONTENTS:**

- 1- HCB100Z4.4 HARD-CORE Casting Material, 6 lbs.
- 1- HCB1001 HARD-CORE BLUE™ Solution, 48 fl. oz.

**HCB100Z CONTENTS:**

This combination will cast 1 footprints or part of a tire track.

- 1- HCB100Z2.2 HARD-CORE Casting Material, 3 lbs.
- 1- HCB2002 HARD-CORE BLUE™ Solution, 24 fl. oz.

**RELATED PRODUCTS:**

- HCB1001 ..... HARD-CORE BLUE™ Solution, 48 fl. oz.
- HCB2001 ..... HARD-CORE BLUE™ Casting Material, 3 lbs.
- HCB2002 ..... HARD-CORE BLUE™ Solution, 24 fl. oz.
- HCB3001 ..... HARD-CORE BLUE™ Casting Material, 8 lbs.
- HCB3002 ..... HARD-CORE BLUE™ Solution, 64 fl. oz.
- FCF100 ..... Adjustable Casting Frame, 7.25" x 12"-18"
- 638CA ..... Aerosol Dust & Dirt Hardener, 15 oz. can
- SRA10 ..... Silicone Rubber Release Agent, 4.5 oz.
- IMP00001 ..... Disposable Casting Frames, 4 ea.