

DRYSTONE™ Casting Media



- No drying required—cast, paint, package, and ship in one day.
- Excellent duplication of fine detail.
- Can be painted or decorated within 2-4 hours of demolding.
- Highest compressive strength of any product offered.
- Highest early “green strength” of any product offered.
- Excellent alternative to polyester resin.
- Use for solid cast pieces.

DRYSTONE™ Casting Media Typical Physical Properties (at use consistency)

Use Consistency (per 100g)	18-20 cc
Working Time (after mix)	5-10 minutes
Demolding Time (after set)	15-25 minutes
Maximum Temperature (during hydration)	<190 °F
3 Hour Expansion (max.)	0.275%
Surface Hardness (kg) load for 0.01” penetration of 10 mm steel ball	226 kg

Compressive Strength

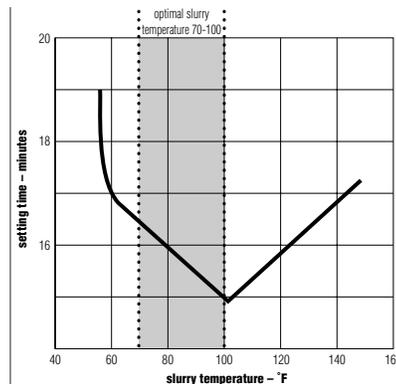
1 Hour (ambient)	8,000 psi
2 Day (ambient)	10,000 psi
Dry (oven-dried)	16,000 psi

Cast Density

Wet	130 lb./ft. ³
Dry	128 lb./ft. ³
Dry Modulus of Elasticity	1.78x10 ⁹
Dry Modulus of Rapture	2,500 psi
% Absorption 24-Hour Immersed	2.5%

Preparing the Mix

Use potable water at temperatures between 70 and 100 °F (21 and 38 °C). Since variations in slurry (DRYSTONE and water mixture) temperature produce variations in setting time, it is important to keep both DRYSTONE and water in a stable temperature environment prior to use. The higher the temperature of the water, the shorter the set time. See the graph below.



Measuring

Weigh both DRYSTONE and water at the recommended use consistency for each mix (see technical properties above). The water-to-DRYSTONE ratio is critical because it governs all physical properties of the final cast piece.

Soaking

Do not soak DRYSTONE Regular or DRYSTONE Ultimate.

Mixing

Properly mixing DRYSTONE gypsum cement is the most important step in producing casts with maximum strength, hardness, and other important properties. Unlike other plasters and gypsum cements, DRYSTONE cannot be mixed by hand and must be mixed mechanically. Additionally, DRYSTONE can only be mixed by a batch process, not by a continuous process mixer. To properly mix DRYSTONE, follow these easy steps:

- 1 Weigh the DRYSTONE Casting Media and water accurately for each mix. For better accuracy use a digital scale.
- 2 Sift or strew 1/2 to 2/3 of the DRYSTONE Casting Media into the water slowly and evenly. Use the proper mechanical mixer and mixing bucket (see fig. 1).

- 3 Start mixing to incorporate this material into the water immediately.
- 4 Once incorporated, continue to add the remaining DRYSTONE Casting Media to the mix while the mixer is running.
- 5 Continue mixing until all the powder is incorporated.
- 6 Mix for a total of 2-4 minutes until a lump of slurry is achieved.

Depending on actual batch size, adjustments can be made to the mixing cycles, typically, larger batches may require slightly longer mixing cycles.

For best results, use the recommended mixer/mixer motor combination as indicated in Figure 1. The mixing shaft should be maintained at an angle 15° from vertical. The shaft should be about halfway between the center and the side of the container. The propeller or HANSON mixer should clear the bottom of the container by 1 to 2 inches, forcing the mix downward.

Keep all equipment clean to avoid acceleration of the reaction between the water and the DRYSTONE Casting Media.

Figure 1. Mixer and mixing bucket recommendations

Batch Size		Bucket Dimensions		Mixing Blade-Size/Type	Mixing Motor
Pounds DRYSTONE	Total Mix Volume	h=height d=diameter	Volume		
<20 lb.	<1.8 gal.	h=10" d=8.5"	2.5 gal	2-3" prop/Jiffy	3/8", 2500 rpm drill
20-50	1.8 to 4.5	h=13" d=11"	5.4 gal	4 prop/3.75"/Jiffy	3/8", 2500 rpm drill
		h=17" d=12"	11.8 gal	4 prop/3.75"/Jiffy	1/2", 1200 rpm drill
50-100 lb.	4.5 gal	h=22" d=14"	14.7 gal.	4 prop/5"/Jiffy	1/2", 1200 rpm drill

Pouring DRYSTONE Casting Media

DRYSTONE Casting Media can be used with most mold materials such as silicone, latex, or urethane-type molds.

To prepare the mold, make sure it is clean, then dip the mold or spray it with a suitable mold rinse. Using a steady rate, pour the DRYSTONE Casting Media slurry into one corner of the mold or into the lowest point and allow the slurry to rise and seek its own level. Continue pouring until the mold is full. To minimize air entrainment, mechanically vibrate or shake the mold or the surface onto which the mold is placed. Do not vibrate for more than 30 seconds.

Demold the DRYSTONE after it reaches peak heat (approximately 30 minutes).

Finishing

If trimming is required, do so immediately after demolding. For best results, place cast piece in front of a fan for at least two hours.

DRYSTONE Casting Media products can be decorated approximately 2-4 hours after set time.

Warning

When mixed with water, this material hardens and becomes very hot—sometimes quickly. DO NOT attempt to make a cast enclosing any part of the body using this material. Failure to follow these instructions can cause severe burns that may require surgical removal of affected tissue or amputation of limb. Dust can cause eye, skin, nose, throat, or respiratory irritation. Avoid eye contact and inhalation of dust. Wear eye protection. If eye contact occurs, flush thoroughly with water. If dusty, wear a NIOSH/MSHA-approved respirator. Use proper ventilation to reduce dust exposure. Do not ingest. If ingested call physician. Product safety information: USA (800) 507-8899.

KEEP OUT OF REACH OF CHILDREN.

Trademarks

The following trademark used herein is owned by USG Corporation or its subsidiaries: DRYSTONE, HANSON, USG.

Notice:

We shall not be liable for incidental or consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instruction or for other than the intended use. Our liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing to us within thirty (30) days from date it was or reasonably should have been discovered.