

**Advanced Materials****RenCast<sup>®</sup> 3215-1 / Ren<sup>®</sup> 3215-1 System  
RenCast<sup>®</sup> 3215-2 / Ren<sup>®</sup> 3215-2 System****BLACK CASTING SYSTEMS****DESCRIPTION:**

RenCast<sup>®</sup> 3215-1(Resin) / Ren<sup>®</sup> 3215-1(Hardener) and RenCast<sup>®</sup> 3215-2(Resin) / Ren<sup>®</sup> 3215-2(Hardener) casting systems offer the convenience of using one resin with two hardeners to meet different requirements.

RenCast<sup>®</sup> 3215-1 resin uses a fast curing hardener and is designed for casting thicknesses up to one inch, while RenCast<sup>®</sup> 3215-2 resin uses a slower curing hardener which allows casting thicknesses up to six inches. Both systems contain filler for wear resistance.

**ADVANTAGES:**

- Low mixed viscosity
- No filler hardpack on storage
- Self-deairing
- Excellent impact resistance
- Low shrinkage on cure
- High volume per pound
- Low odor

**MIXING INSTRUCTIONS:**

Reaction Ratio	RenCast <sup>®</sup> 3215-1 Resin	RenCast <sup>®</sup> 3215-2 Resin
	100R to 9H by wt.	100R to 18H by wt.
	100R to 17H by vol.	100R to 35H by vol.

**Mixing:** Stir each component thoroughly before use. Weigh each component accurately ( $\pm 5\%$ ) into clean containers. Thoroughly mix resin and hardener together (minimum 3 minutes) scraping container sidewalls, bottom and mixing stick several times to assure a uniform mix.

**TYPICAL MIXED PROPERTIES:**

Property	ASTM Test Method	Test Values <sup>(1)</sup>	
		RenCast <sup>®</sup> 3215-1 Resin	RenCast <sup>®</sup> 3215-2 Resin
Gel Time, 14 fl. oz.	D-2471	65 min.	200 min.
Color	Visual	Black	Black
Viscosity (mixed)	D-2393	3,600 cP	3,600 cP

<sup>(1)</sup> Tested @ 77°F (25°C)

**TYPICAL CURED PROPERTIES:**

Property	ASTM Test Method	Test Values <sup>(1)</sup>	
		RenCast <sup>®</sup> 3215-1 Resin	RenCast <sup>®</sup> 3215-2 Resin
Specific Gravity	D-792	1.76	1.65
Cubic inch per lb.	D-792	15.9	16.9
Gardner Impact (5/16" thickness)	D-2393	Pass 44 in/lbs	Pass 54 in.lbs
Hardness (Shore D)	D-2240	90	88
Ultimate Compressive Strength (psi)	D-695	13,300	11,100
Ultimate Flexural Strength (psi)	D-790	7,600	7,300
Flexural Modulus (psi)	D-790	0.86 x 10 <sup>6</sup>	0.44 x 10 <sup>6</sup>
Ultimate Tensile Strength (psi)	D-638	6,000	4,900
Tg per DMA (°F)	D-4065	162	154
Deflection Temperature (264 psi) (°F)	D-648	138	132
Coefficient of Thermal Expansion (in/in/°F)	D-3386	2.40 x 10 <sup>-5</sup>	3.80 x 10 <sup>-5</sup>
Shrinkage (in/in) Cast	D-2566	Mold #1	0.001
		Mold #2	0.005
		Mold #3	--
			0.0014
			0.0036
			0.0085

<sup>(1)</sup> Cure Schedule – 7 days @ room temperature or 4 hrs. @ 150°F after overnight cure, tested @ 77°F

**NOTE:** Typical Properties – These physical properties are reported as typical test values obtained by our test laboratory. If assistance is needed in establishing product specifications, please consult with our Quality Control Department.

**CURING INSTRUCTIONS:**

Although room temperature epoxies will normally set up to a rigid, demoldable state within 24 hours at room temperature (75°F ± 5°F), these systems reach their full cure after seven days at room temperature. A full cure can be accelerated by applying heat after the part has set rigid. We recommend a postcure of 150°F for a minimum of six hours. (Add to this adequate time to bring the part to the postcure temperature.) After cure, the part should be cooled at a slow rate so as not to shock the part thermally.

Uniform heat distribution is also required during postcure; concentrated heat, such as that directed from a lamp, can cause warp. An elevated temperature cure will slightly increase the shrinkage compared to a room temperature cure.

**STORAGE/HANDLING INFORMATION:**

**RenCast<sup>®</sup> 3215-1 resin and RenCast<sup>®</sup> 3215-2 resin/ Ren<sup>®</sup> 3215-1 hardener and Ren<sup>®</sup> 3215-2 hardener**

Store at 60-100°F in a dry place After use tightly reseal.

Work in a well ventilated area and use clean, dry tools for mixing and applying. For two component system, combine the resin and hardener according to mix ratio. Mix together thoroughly and use immediately after mixing. Material temperature should not be below 65°F (18°C) when mixing.

**RenCast<sup>®</sup> 3215-1 resin and RenCast<sup>®</sup> 3215-2 resin**

This product may crystallize upon storage. If crystallized, vent container and heat to 125-145°F until crystals dissolve. Stir well after product has liquefied.

Stir well before use. This material will separate.

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**SHELF LIFE:**

Provided materials are under the recommended storage conditions in their original containers, they will remain in useable condition for at least two years from date of shipping.

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**PACKAGING:**

This product is available in the following package size(s):

RenCast® 3215-1 Resin –	Preweighed kits, 6 per kit (20.37# total) Resin pails at 60#, hardener pails at 5.40#
RenCast® 3215-2 Resin–	Preweighed kits, 6 per kit (18.06# total) Resin pails at 60#, hardener pails at 10.81#

Please call Customer Service (800-367-8793) for price and availability.

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**SAFETY/HANDLING PRECAUTIONS:**

Do not use or handle this product until the material Safety Data Sheet has been read and understood.

**RenCast® 3215-1 and RenCast® 3215-2 resins**

**WARNING!** Causes skin and eye irritation. May cause allergic skin reaction.

Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling.

**Ren® 3215-1 hardener**

**DANGER!** CORROSIVE – Causes skin and eye burns. May cause allergic skin reactions.

Do not get in eyes, on skin, or on clothing. Avoid breathing vapor or mist. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.

**Ren® 3215-2 hardener**

**DANGER!** CORROSIVE – Causes skin and eye burns. May cause allergic skin reactions.

Do not get in eyes, on skin, or on clothing. Avoid prolonged or repeated contact with skin. Avoid breathing vapor or mist. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.

Nuisance dust may be generated when sanding or sawing cured material.

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**FIRST AID:**

In case of contact with:

**Skin:** Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. Destroy contaminated shoes.

**Eyes:** Immediately flush with water for at least 15 minutes. Call a physician.

**Ingestion:** If conscious, give plenty of water to drink. Do not induce vomiting. Call a physician.

**Inhalation:** Remove to fresh air. Administer oxygen or artificial respiration if necessary. Call a physician.

**Other:** Referral to physician is recommended if there is any question about the seriousness of any injury.

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**PRECAUTION NOTE:**

Thermosetting systems generate heat when curing. The amount of heat and the period of time in which heat is released vary significantly between systems. Additionally, ambient or compound temperature, amount of material mixed, and construction and shape of the mold or container can also be factors in the temperature profile of a mixed system.

In some cases, the thermosetting reaction can be vigorous, generating heat sufficient to cause decomposition of the system with subsequent liberation of large volumes of acrid smoke.

A good rule of thumb is never mix more material than can be applied during the stated pot life or gel time. Also take care when using materials in applications other than stated on the Product Data Sheet, i.e., a laminated resin for casting.

Please feel welcome to call our Product Information Department or your local Ren<sup>®</sup> representative for instructions before you start your job.

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