

**Advanced Materials****RenCast<sup>®</sup> 3269 / Ren<sup>®</sup> 3269 Casting System****CASTING SYSTEM FOR ALUMINUM FILLED CAST TOOLS - GRAY**

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**DESCRIPTION :**

RenCast<sup>®</sup> 3269 (Resin) / Ren<sup>®</sup> 3269 (Hardener) casting system is an aluminum-filled epoxy formulated for casting up to ¾" thick. Outstanding characteristics of RenCast<sup>®</sup> 3269 are low viscosity for easy pouring and mixing, adequate working life, relatively slow cure for low shrink and dimensional stability, good machinability, strength, and hardness.

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**MIXING INTRUSCTIONS :**

Reaction Ratio            100R to 9H by wt.  
                                  100R to 18H 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.

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**APPLICATIONS :**

- Metal forming
- Foundry patterns
- Holding fixtures
- Nesting fixtures
- Cast duplicator models

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**TECHNIQUES :**

1. Seal and apply mold release according to approved shop practices.
2. Carefully weigh RenCast<sup>®</sup> 3269 resin and hardener together, mix thoroughly and pour. Pouring should be done in a thin stream from a height of about one foot to avoid air entrapment, or the mixture can be degassed under vacuum. Attempt to pour in a continuous stream, pouring from one end of the cavity so that the air is swept out ahead of the advancing liquid.
3. Allow casting to set at least overnight before attempting to demold or allow to fully cure on the model. Full cure requires 7 days at 77 °F (25 °C)?

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**TYPICAL MIXED PROPERTIES :**

| <b>Property</b>     | <b>ASTM Test Method</b> | <b>Test Values<sup>(1)</sup></b> |
|---------------------|-------------------------|----------------------------------|
| Gel Time, 4 fl. oz. | D-2471                  | 140 min.                         |
| Color               | Visual                  | Gray                             |
| Viscosity, mixed    | D-2393                  | 4,300 cP                         |

<sup>(1)</sup> Tested @ 77 °F (25 °C)

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**TYPICAL CURED PROPERTIES :**

| <b>Property</b>                             | <b>ASTM Test Method</b> | <b>Test Values<sup>(1)</sup></b> |
|---|-------------------------|----------------------------------|
| Specific Gravity                            | D-792                   | 1.78                             |
| Cubic inch per lb.                          | D-792                   | 15.6                             |
| Hardness (Shore D)                          | D-1706                  | 87 – 88                          |
| Water Absorption (%)                        | D-570                   |                                  |
| 24 hrs. @ 77 °F (25 °C)                     |                         | 0.02                             |
| 168 hrs. @ 77 °F (25 °C)                    |                         | 0.16                             |
| Ultimate Compressive Strength (psi)         | D-695                   | 14,400                           |
| Ultimate Flexural Strength (psi)            | D-790                   | 13,000                           |
| Flexural Modulus (psi)                      | D-790                   | 1.10 x 10 <sup>6</sup>           |
| Ultimate Tensile Strength (psi)             | D-638                   | 8,700                            |
| Glass Transition (°F)                       | D-4065                  | 171                              |
| Coefficient of Thermal Expansion (in/in/°F) | D-696                   | 3.76 x 10 <sup>-5</sup>          |
| Shrinkage (in/in) Mold #1                   | D-2566                  | 0.001                            |

<sup>(1)</sup> Cure Schedule – 7 days @ 77 °F (25 °C), tested @ 77 °F

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

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**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.

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**HANDLING :****RenCast<sup>®</sup> 3269 / Ren<sup>®</sup> 3269**

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.

**Ren<sup>®</sup> 3269**

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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**PACKAGING :**

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

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**STORAGE:**

RenCast<sup>®</sup> 3269 (Resin) / Ren<sup>®</sup> 3269 (Hardener) should be stored in a dry place, in the sealed original container, at temperatures between +2°C and +40°C (+35.6°F and 104°F). Under these storage conditions, the shelf life is 2 years. The product should not be exposed to direct sunlight.

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**PRECAUTIONARY STATEMENT:**

Huntsman Advanced Materials Americas LLC maintains up-to-date Material Safety Data Sheets (MSDS) on all of its products. These sheets contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Users should review the latest MSDS to determine possible health hazards and appropriate precautions to implement prior to using this material.

**First Aid!**

Refer to MSDS as mentioned above.

**KEEP OUT OF REACH OF CHILDREN**

**FOR PROFESSIONAL AND INDUSTRIAL USE ONLY**

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