



Product Data

Ren® Professional Tooling Line

RenPaste[™]8281/Ren[®]8281

LOW-DENSITY EPOXY BACKFILL SYSTEM
WITH ROOM-TEMPERATURE PERFORMANCE AND LOW-SHRINKAGE

DESCRIPTION: RenPaste 8281(Resin)/Ren 8281(Hardener) low-density backfill system is a prefilled formulation containing microballoon-filler for casting up to 8 inches at once. This system when used with RenGel 8024 surface coat provides a quick, easy method for building low-cost, lightweight tools, molds, and fixtures.

MIX RATIO: By Weight: By Volume:

Resin to Hardener 100 to 100 100 to 100

| TYPICAL HANDLING PROPERTIES*: | ASTM Method | Resin | <u>Hardener</u> | <u>Mixed</u> |
|-------------------------------|--------------------|-------|-----------------|--------------|
| Color | Visual | Blue | Tan | Light blue |
| Specific Gravity | D-1963 | 0.60 | 0.47 | |
| Gel Time, 14 fl. oz, hours | D-2471 | | | 1.5-2.75 |

NOTE: 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 Product Management Department.

RECOMMENDED CURE SCHEDULE: 1. 77°F (25°C) at 7 days

| TYPICAL CURED PROPERTIES*: | | ASTM Method | Cure Value |
|---|--------------|--------------------|-------------------------|
| Density, lb./ft ³ (g/cm ³) | | D-792 | 37 (0.60) |
| Cubic Inch per Pound | | D-792 | 46.2 |
| Hardness, Shore D | | D-2240 | 45 |
| Ultimate Flexural Strength, psi | | D-790 | 549 |
| Flexural Modulus, psi | | D-790 | 118,000 |
| Ultimate Tensile Strength, psi | | D-638 | 413 |
| Deflection Temperature, °F(°C) | 66 psi | D-648 | 118 (48) |
| Ultimate Compressive Strength, psi | | D-695 | 1,300 |
| Coefficient of Thermal Expansion | | D-3386 | |
| -22 to 86° | °F, in/in/°F | | 9.4 x 10 ⁻⁶ |
| -30 to 30°c | C, in/in/°C | | 16.9 x 10 ⁻⁶ |
| Linear Shrinkage, in/in | | D-2566 | < 0.0002 |

^{*} Tested @ 77°F (25°C) unless otherwise noted.

^{**} Molds are half round steel, 10 inches long, 4.250 inches deep

SAFETY/HANDLING PRECAUTIONS: Do not use or handle this product until the Material Safety Data Sheet has been read and understood.

RenPaste 8281

WARNING! Can cause skin irritation, eye irritation, and allergic skin reaction. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

Ren 8281

DANGER! CORROSIVE. Causes eye burns. Causes severe skin irritation and may cause skin burns. Can cause allergic skin reaction. Can be harmful if absorbed through skin or if swallowed. Do not get in eyes, on skin, or on clothing. Avoid breathing vapor or mist. Avoid tasting or swallowing. Keep container closed when not in use. Use with adequate ventilation. Wash thoroughly after handling.

NOTICE! Contains crystalline silica. Breathing dust may cause cancer and delayed lung injury.

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.

PRECAUTIONARY 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 laminating resin for casting.

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

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Vantico A&T US, Inc. RenShape Solutions 4917 Dawn Avenue East Lansing, MI 48823 USA Tel 517 351 5900 800 375 1363 www.renshape.com Customer Service Hotline: 800 367 8793 Technical Inquiries: 800 759 7165 Product Literature: 800 955 5509