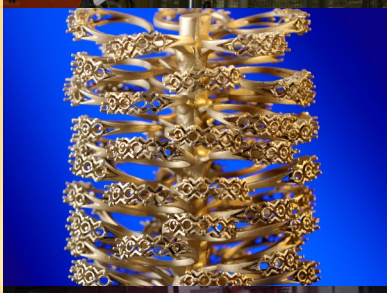
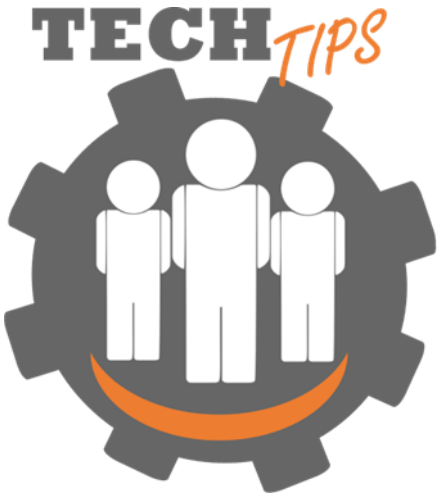
Ransom & Randolph

SEP-DEC 2022

Casting Connection



Tech Tip: Viscosity Control for Primary Slurries



For primary slurries, the key slurry test parameters are binder solids and viscosity. Other slurry tests, such as density and pH are important and provide a more complete representation of a slurry's composition. However, basic slurry control can be accomplished with viscosity and binder solids.

In most cases, binder solids tests are not available at every viscosity test. When water additions are made to bring the binder solids range into control, it should be assumed that binder solids are OK. A good rule of thumb is that all liquid additions to the slurry between binder solids tests will be water, unless binder solids are in range and viscosity is still high. Refer to Viscosity Cup Correlations to check if your results are in range.

Use a slurry log to record all test results and additions to a slurry. We provide slurry control sheets on our R&R Academy. By carefully analyzing this data, you can determine the proper daily water addition. This is done by determining the viscosity and water/refractory addition effect on slurry properties. When adding materials into your mixture, be sure to first add water to bring binder solids in range and then add refractory to bring viscosity into range... *continue reading on page 4...*

Inside this issue

Receiving a Frozen Shipment

Take action IMMEDIANTLY:

1. Make notation on your carrier delivery receipt prior to the carrier leaving your facility: **"POSSIBLE CONCEALED DAMAGE – PRODUCT HAS BEEN EXPOSED TO FREEZING TEMPERATURES"**

Always accept a damaged shipment. Follow the instructions on How to Handle Lost or Damaged Shipments.

2. If able, test the specific gravity of the material as soon as possible. Material may be used if it falls within the limits noted to the left.

If you are unable to test specific gravity, contact R&R customer service to have a freeze test kit sent to you:

customerservice@ransom-randolph.com or call 800-800-7496

Instructions on how to accurately use a freeze test kit are available at ransom-randolph.com/technical-tips.

Managing Freezable Shipments

During the upcoming winter months, freezable materials, such as colloidal silica based binders, should be shipped as early as possible in the week to ensure that they are continuously moving to their destination to decrease its chance of freezing. While this does not guarantee product will not freeze, it reduces the risk associated with shipping over a weekend where product may sit at a freight facility unprotected from freezing temperatures.

To help you ensure that the product you receive has not been damaged, R&R applies a freeze check indicator to your shipment, which features a check mark in a green circle. Temperature-sensitive liquid is encased in a clear bubble over the check mark. The fluid will begin to turn white, meaning the check mark is no longer visible once it has been exposed to subfreezing temperatures.

Note: This does NOT mean that the material in the package has been frozen; it only means the package has been exposed to freezing temperature.

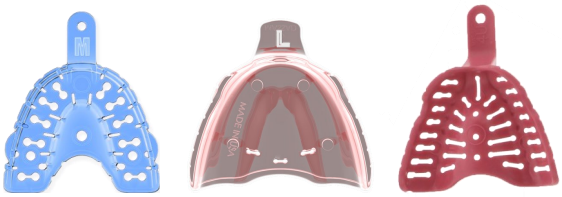
Specific Gravity Acceptable Limits:

Primary Binders	Range
Levasil® colloidal silica	1.200 - 1.230
Keycote® binder	1.197 - 1.214
Primcote® binder	1.177 - 1.183
Primcote® PLUS binder	1.173 - 1.179
Core Materials	**Range**
Core-Hardener 2000™ binder	1.390 - 1.410
Kwik-Core™ binder	1.108 - 1.112

Backup Binders	Range
Customcote® binder	1.145 - 1.155
EHT binder	1.322 - 1.382
Fastcote® binder	1.146 - 1.152
Matrixsol® 30 colloidal binder	1.200 - 1.230
Jewelry Materials	**Range**
Plasticast® PT binder	1.385 - 1.407

Massad® Trays: Top 100 Dentistry Products of 2022

Dentistry Today® has recently announced the Top 100 Products of 2022 in their July/August issue, one of the products is Massad® impression trays. These include the Massad Overdenture Low Temp Tray, the Massad Edentulous Low Temp Tray, and the Strong Massad DenPlant™ Low Temp Tray.



Massad impression trays have earned this spot because they are made of a low temperature thermoplastic material, making them limber and moldable when placed into a hot water bath. When heated, they can be molded into a patient's teeth using only the patient's facial muscles or finger pressure. Trays then retain the heat molded position.

Click below to purchase Massad impression trays via our webstore.

BUY NOW

Helpful Glass-Casting Resources

Our engineers at R&R know that sometimes its tough to figure out the exact amount of investment that is needed to create the perfect glass casting. This is why R&R provides you with an automatic flask calculator that is FREE to download from the R&R Academy.

The flask calculator calculates necessary measurements for R&R®'s Glass-Cast™ 101 BANDUST™ investment, Glass-Cast 400 investment, Glass-Cast™ 910 investment, and Glass-Cast™ 965 investment.

Simply select an R&R® Glass Cast™ investment and let the spreadsheet calculate the measurements for you.

The flask calculator provides information specific for the chosen product such as the recommended water to powder ratio, the powder density, the mixed density, volume of the flask, the amount of powder required for the flask, and the amount water required for the flask.

Visit the R&R Academy to accesses more resources like this.

Happy Halloween!

You've "CAST" a spell on us...

Have a safe and happy Halloween from your friends here at R&R.

Artist: *Robin Lehman Glass*
robinlehmanglass.com

Casted using Glass-Cast™ 101 BANDUST™ investment

Tech Tips

To read this Tech Tip and more, visit www.ransom-randolph.com/technical-tips.

Tech Tip: Viscosity Control for Primary Slurries (continued)

Viscosity Testing Too Low

If your viscosity is low, and your binder solids test low, then you need to evaporate excess water and add refractories to the mixture.
If your viscosity is low, but your binder solids test normal, then we recommend you add refractories to the mixture.
On the other hand, if your viscosity is low, and your binder solids test high, you should add refractories, and you may need to add water.

Viscosity Testing Normal

If your viscosity is normal, but your binder solids test low, we recommend you evaporate excess water from the mixture.
If your viscosity is normal, but your binder solids test high, then you need to add water and you may need to also add refractories to the mixture.

Viscosity Testing Too High

If your viscosity is high, but your binder solids test low, then you need to evaporate excess water and mix in additional binder.
If your viscosity is high, but your binder solids test normal, you will need to mix in additional binder and you may need to add refractories.
On the other hand, if your viscosity is high, but your binder solids test high, we recommend you add water into the mixture. You may need to mix in additional binder and you may need to add refractories.

Tradeshow Information

Unsure if we will be attending a tradeshow in your area?

Here is how to stay up to date on trade show announcements:

Follow us on social media:

Subscribe to our newsletter:
Casting Connection

Another Successful Show: ICI 2022

Thank you to everyone who came to visit us at the ICI tradeshow at Disneyland this past August! You are the ones who make these shows a blast.

Pictured left to right: Ralph Carter (Product Development Manager), Mike Hendricks (VP of technology), Dave Berta (Product and Application Specialist), Scott Todd (Director of Global Sales), Chris Matej (Midwest Regional Sales Manger), Dan Nixon (President), & Darin Wise (West Regional Sales Manger)

Meet our European Application Engineers

You talk to them, you email them, you see them at trade shows, but who are they? Well, let us introduce them to you...

Carel Wegman • *Application Engineer based in Steenenkamer, Netherlands*

Carel joined the R&R team in 2011 as an Application Engineer. He is responsible for providing on-site technical support, implementing comprehensive solutions and application technologies for ceramic shell customers in Belgium, the Netherlands, Luxembourg, Scandinavia, Finland, Israel and the United Kingdom. As a technical expert in ceramic shell application, Carel helps customers improve their casting quality and production efficiency. He earned his Chemical Degree in Laboratory and Analysis Techniques from ROC Aventus Deventer the Netherlands.

Prior to joining R&R, Carel has 10 years of industry experience as a Production Engineer, Shell Room Team Leader, Chemical Analyst and Quality Manager. Prior to joining the R&R team, Carel worked as a Production Engineer for an aerospace and defense foundry, casting steel and aluminum alloys using ceramic shell and plaster block molds. He also has experience converting a foundry to attain AS9100 and ISO14385 certification.

Bastian Schulte • *Application Engineer based in Finnentrop, Germany*

Bastian joined the R&R team in 2019 as an Application Engineer. In this role, he provides technical support to R&R ceramic shell customers, further providing comprehensive product solutions and troubleshooting process issues. He assists all customers throughout Western Europe (in exception to United Kingdom, Benelux and Scandinavia).

Prior to joining the R&R team, Bastian attended the University Duisburg-Essen in Duisburg, Germany and earned his Bachelor of Engineering degree in Applied Material Technology, specializing in Casting Technology. He then gained 25 years of foundry experience in positions such as Development Engineer, Production Engineer, or Castings Material Engineer. Bastian now holds 27+ years of technical know-how and hands-on foundry experience that he uses everyday to solve troubleshooting process issues and assist customers with technical needs.

Contact Information

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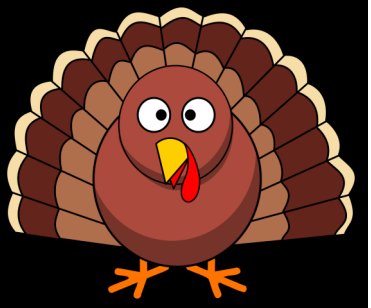
Happy Thanksgiving!



R&R Holiday Schedule

Please consider these closing dates when planning for your material needs.

CLOSED for Thanksgiving
- Thursday, November 24th
- Friday, November 25th

REOPENING to assist you
- Monday, November 28th at 8am EST

CLOSED for the Holidays
- Monday, December 26

PARTIALLY OPEN to take orders & ship materials
Customer Service & Shipping from OH open from 10am-3pm EST
- Tuesday, December 27th
- Wednesday, December 28th

CLOSED for the Holidays
- Thursday, December 29th
- Friday, December 30th
- Monday, January 2nd

REOPENING for the 2022 New Year
- Tuesday, January 3rd at 8am EST

Contact R&R at 800.800.7496 or customerservice@ransom-randolph.com if you have any questions regarding this schedule.

Contact Us

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PO Box 1570
Maumee, Ohio 43537 USA

US Toll Free: 800.253.4502
US Phone: 419.865.9497

US Fax: 419.865.9997

Email:
Marketing@ransom-randolph.com

Web:
www.ransom-randolph.com

Webstore:
shop.ransom-randolph.com

Social:

Ransom & Randolph

At R&R, *Investing with Innovation™* is more than just a slogan, it's a way of life. Dedicated to advancing the investment casting industry, we take pride in providing foundries with extensive process knowledge, exceptional technical expertise and innovative product technology. By coupling our revolutionary product developments with our experienced staff, manufacturing and warehousing facilities, we successfully help you become a casting industry leader.

R&R's core businesses are comprised of ceramic shell, industrial mold, jewelry and dental investment casting.

R&R takes great pride in providing customers with a pleasant procurement experience. R&R's Maumee, Ohio based customer service team services North America and US export customers. Our UK-based agent, HTM Tradeco, Ltd., provides service for the European Union. From initial order placement through delivery, R&R's customer service team takes responsibility for accurate and efficient processing of your material needs. As a result, R&R's customer service team is unmatched in the industry.

Investing with Innovation™