

For over 30 years, Freeman Fast-Cast Polyurethanes have set the industry standard for dependability, consistency and performance in reproduction plastics.

Our fast-cast systems are world-renowned for exhibiting exceptional reproduction detail, and offer a quick, easy, and cost-effective solution to many of today's tooling challenges.

Freeman now offers the most advanced and extensive line of fast-cast products with brand names including Repro, Master, Pro-Cast and RenCast. Newer formulations feature non-settling fillers to reduce mixing time, lower levels of solvents to promote better release

higher heat resistance.

From simple foundry patterns and prototypes, to short run production and vacuum form tools, Freeman Fast-Cast Polyurethanes provide the ability to get the job right the first time, every time.

and better performance in closed-molds, and



## DID YOU KNOW?

#### We offer instructional videos online!

Our Video Library is available on our website, **www.FreemanSupply.com**, or on our YouTube channel **@freemanmfg**. We feature over three hours of instructional and product videos, offering the most comprehensive free resource for the making of parts, patterns, tools and molds. We also have all our videos available for purchase on **eBay!** Start watching today!



# REPRO FAST-CAST POLYURETHANES

#### **Choosing a Repro formulation**

All Repro formulations offer the below characteristics that make them user-friendly and reliable. To find something suited specifically for your project, consider your specifications and requirements, and then refer to the chart for our recommendations.

#### **All Repro Products feature:**

- 1:1 mix ratio by weight or volume
- Very low shrinkage
- Low viscosity ensuring easy pouring characteristics and excellent surface reproduction
- Consistent batch to batch quality

Criteria	Product
Balance of features	Repro 83, Repro NS
Higher temperatures	Repro One, Repro NS, Repro 95
Speed	Repro Fast, Repro 10
Accuracy	Repro Slow, Repro One
Light weight	Repro Light, Repro Ultra Light
Machinability	Repro 95, Repro Light, Repro Ultra Light
Large size	Repro Surface Coat and Laminating Resin
Easy mixing/non-settling	Repro One, Repro NS
Tintable	Repro Fast, Repro 10 Tan, Repro Slow

#### **Repro One**

Repro One is our newest and most advanced formulation. This castable polyurethane can be used in mold making, durable foundry tooling, thermoforming, as well as most general plastic casting applications.

•	6-7 min. gel time
•	60-90 min. demold

SKU	Size	Color	Net weight (Ib.)
053090	Quart Kit	Gray	5
053093	Gallon Kit	Gray	20
053095	5 Gallon Kit	Gray	100

#### **Additional advantages of Repro One:**

- Higher heat resistance for elevated temperature applications
- Higher Shore D hardness for improved abrasion resistance
- Lower moisture sensitivity for void-free castings
- Improved release characteristics for easier demold
- Non-settling formulation for fast and easy mixing
- Compatible with expanded polystyrene (Styrofoam)

#### Repro 83

Repro 83 is our most popular tooling urethane with a great balance of speed and accuracy. This castable polyurethane is used extensively in foundry and thermoforming applications, mold making, and in most general plastic casting applications.

- ▶ 6-7 min. gel time
- ▶ 60-90 min. demold

SKU	Size	Color	Net weight (lb.)
053150	Quart Kit	White	5
053156	Gallon Kit	White	20
053152	Quart Kit	Blue	5
053158	Gallon Kit	Blue	20
053164	5 Gallon Kit	Blue	100
053154	Quart Kit	Gray	5
053160	Gallon Kit	Gray	20

#### **Repro NS (Non-Settling)**

Repro NS features a non-settling additive that eliminates filler "hard-packing" and dramatically reduces the time required to pre-mix the material for use. It is formulated to match the color, mix ratio, work time, low shrinkage, and surface hardness of our most popular fast-cast product, Repro 83.

- ▶ 6-7 min. gel time
- ► 60-90 min. demold

SKU	Size	Color	Net weight (lb.)
053153	Quart Kit	Blue	5
053159	Gallon Kit	Blue	20
053165	5 Gallon Kit	Blue	100

#### **Repro Fast**

Formulated to have the shortest demold time of all of the Repro products for maximum part production. Repro Fast is the best choice when time is most important.

▶ 4-5 min. gel time▶ 15-30 min. demold

SKU	Size	Color	Net weight (lb.)
053181	Quart Kit	Tan	5
053183	Gallon Kit	Tan	20
053184	5 Gallon Kit	Tan	100

#### Repro 10

The original Repro formulation, this product has a slightly longer work time, longer demold time, and less shrinkage than Repro Fast.

► 5-6 min. gel time ► 30-60 min. demold

SKU	Size	Color	Net weight (lb.)
053060	Quart Kit	Tan	5
053064	Gallon Kit	Tan	20
053062	Quart Kit	Black	5
053066	Gallon Kit	Black	20

#### **Repro Slow**

Our most accurate fast-cast polyurethane system, Repro Slow features extremely low shrinkage and an extended work time that allows for the creation of larger tools.

▶ 12-14 min. gel time▶ 3-4 hour demold

SKU	Size	Color	Net weight (lb.)
053201	Gallon Kit	Tan	20
053202	5 Gallon Kit	Tan	100

#### **Repro Light**

Repro Light is a versatile castable urethane approximately one half the weight of our other Repro products. It can be used for lightweight tools, backfill applications, and as an adhesive for many urethane modeling boards. It offers easy machinability and can be readily worked and carved with hand tools.

•	6-8 min. gel time
Þ	90-120 min. demold

SKU	Size	Color	Net weight (lb.)
053197	Quart Kit	Tan	2.5
053198	Gallon Kit	Tan	10

### **Repro Ultra Light**

Repro Ultra Light is a very low-density, syntactic material designed for weight critical applications and easy machinability. This cream-colored formulation may be worked with hand tools or CNC machining equipment when cured. A long work time allows for large, accurate castings. Repro Ultra Light is also an excellent choice to use as a hardness-matched adhesive for RenShape urethane foam boards.

▶ 2-3 hour	demold	
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SKU	Size	Color	Net weight (lb.)
053196	Gallon Kit	Cream	7

### REPRO FAST-CAST POLYURETHANES CONTINUED

#### Repro 95

Repro 95 is a unique castable polyurethane featuring a high aluminum content, providing excellent machining and polishing characteristics. Its gray, metal-like appearance is ideal for prototype thermoforming and wax injection mold applications for investment casting.

•	6-7 min. gel time
•	60-90 min. demold

SKU	Size	Color	Net weight (lb.)
053051	Quart Kit	Gray	5
053052	Gallon Kit	Gray	20

#### **Additional advantages of Repro 95:**

- Dense, non-porous surface even after machining
- The ultra-smooth finish of the material, even after machining, allows for easy sand release in pattern and core box applications



#### **Repro Surface Coat & Laminating Resin System**

- ► Surface Coat: 13 min. gel time
- ► Laminating Resin: 15 min. gel time
- ▶ Demold time: 3-4 hrs.

A Freeman exclusive! The Repro Surface Coat and Laminating Resin System is a lowcost, fast, and very accurate alternative to traditional epoxy fiberglass tooling. Although not designed for high-temperature or high-wear applications, it is the ideal choice for larger moldmaking applications.

SKU	Description	Size	Net weight (lb.)
053189	Repro Surface Coat – White	Gallon Kit	22.5
053194	Repro Laminating Resin – White	Gallon Kit	22
054073	1/4" Fiberglass Strand	Box	5
054071	1/4" Fiberglass Strand	Box	50

#### Additional advantages:

- Low exotherm system provides for very low-shrinkage tools system will not get hot even in thick applications
- Quick 3-4 hour demold time compared to a 24-hour cure time for epoxy systems
- Very easy system to use for first time toolmakers
- Both the surface coat and laminating resin will adhere to material that has previously been cured



#### THE PROCESS Upon sealing and applying appropriate release:

- 1. Brush Repro Surface Coat on model and apply additional coats at 'almost tack-free' stage.
- 2. Combine Repro Laminating Resin with chopped fiberglass strand.
- 3. Apply fiberglass strand and resin mixture behind surface coat. After approximately 3-4 hours, demold tool when cured (shown right)









# **OTHER FAST-CAST POLYURETHANES**



Pro-Cast and Master Fast-Cast Polyurethanes are now manufactured exclusively by Freeman. These urethanes are highly filled, rigid, and fast setting. They offer low exotherm, shrink, and cost for producing foundry patterns, molds, fixtures, prototype vacuum form molds, or prototypes. We also offer RenCast products in two-component as well as three-component systems, both of which feature ease of mixing, good surface reproduction and excellent physical properties.





### **Specifications**

	Mix Ratio (h	Gel Time (m:	Demold Time	Hardness (Shoress	Specific 6	Mixed Viscosit. (Cps) (Cps)	Volumetric Vic.	Shrink (in #.	Compressive Strengessive	Flexural Streness	Flexural Modulus	Tensile Strengar	Tensile Modulus	lzod Impact (ft. lb. pact	Deflection Temp.	C.T.E. (İn./In./ºF)
Pro-Cast 20	1:1	7 - 10	60 - 90	85	1.78	1,500	15.6	0.0017	7,400	4,900	580,000	3,100	941,000	0.28	139°F/59°C	2.5 x 10 <sup>-5</sup>
Pro-Cast 132	1:1	5-7	30 - 60	84	1.71	5,000	16.2	0.0028	8,200	6,700	635,000	4,200	759,000	0.31	146°F/63°C	3.5 x 10 <sup>-5</sup>
Master Dyna-Cast	1:1	6-7	60	85	1.9	1,500	14.5	0.0010	7,841	4,705	803,333	2,663	990,833	0.31	148°F/64°C	_
Master Cast 783	1:1	7-8	60 - 90	85	1.9	1,650	14.5	0.0010	6,500	3,500	900,000	3,000	902,000	0.30	125°F/51°C	_
RenCast 205-3	1:1	6-7	60 - 100	70	1.12	80	24.7	0.0022	5,000	5,600	168,000	3,300	170,000	0.35	137°F/58°C	7.61 x 10 <sup>-5</sup>
RenCast 205-3 (w/DT-081)	1:1:1	9-10	30 - 120	73	0.95	1,700	29.1	0.0023	4,500	4,000	325,000	2,400	373,000	0.22	144°F/60°C	4.12 x 10 <sup>-5</sup>
RenCast 205-3 (w/DT-082)	1:1:3	9-10	60 - 120	80	1.65	2,500	16.8	0.0027	6,100	5,200	512,000	3,200	587,000	0.36	127°F/53°C	4.56 x 10 <sup>-5</sup>
RenCast 6426-1 (w/DT-081)	1:1:1	7-8	60 - 120	65	0.8	2,500	34.6	0.0028	5,500	3,700	340,000	2,400	-	0.24	122°F/ 50°C	_
RenCast 6426-1 (w/DT-082)	1:1:3	10-12	60 - 120	83	1.7	4,400	16.2	0.001	5,500	4,500	510,000	2,860	-	0.34	122°F/50°C	4.13 x 10 <sup>-5</sup>
ASTM Tests	_	_	-	D-2240	D-792	_	-	D-2566	D-695	D-790	D-790	D-638	D-638	D-256	D-648	D-696-88

<sup>\*</sup>Dependent upon mass.

## **PRO-CAST POLYURETHANES**

#### **Pro-Cast 20**

This fast-cast, low-shrinkage, general-purpose polyurethane is offered with a choice of three colors.

- ▶ 7-10 min. gel time
- ▶ 60-90 min. demold

SKU	Size	Color	Net weight (lb.)
056363	Gallon Kit	Blue	20
056364	Gallon Kit	Gray	20
056365	Gallon Kit	White	20

#### **Pro-Cast 132**

This durable and high-strength, fast-curing polyurethane offers accurate reproductions with fine detail. It is good for producing

holding fixtures, foundry patterns and vacuum-forming molds.



▶ 30-60 min. demold



SKU	Size	Color	Net weight (lb.)
056347	Gallon Kit	Gray	20
		•	

### **MASTER FAST-CAST POLYURETHANES**

#### **Master Dyna-Cast**

Master Dyna-Cast is the most popular fast-cast urethane in the Master line. This two-component material features a perfect blend of gel time, demold time, and accuracy for a wide range of uses.



Its low odor, viscosity, and shrinkage all work together for detailed and precise duplications. It is perfect for producing durable foundry patterns, core boxes, and fixtures.

▶ 6-7 min. gel time
▶ 60-90 min. demold

SKU	Size	Color	Net weight (lb.)
053600	Quart Kit	Green	5
053605	Gallon Kit	Green	20

#### **Master Cast 783**

Master Cast 783 is a two-component urethane that is ideal for a variety of applications. This product also features low moisture sensitivity and fast demold times without sacrificing accuracy.

▶ 7-8 min. gel time
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•	60-90	min.	demold
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## RENCAST FAST-CAST POLYURETHANES



#### **RenCast 6426-1**

- ▶ 7-8 min. gel time
- ▶ 60-120 min. demold
- ▶ 65 or 83 Shore D

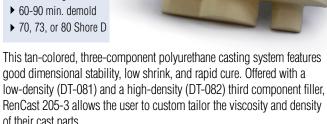
This gray, three-component polyurethane features ease of mixing, good surface reproduction and excellent physical properties. Depending upon product application, either DT-081 Low Density (1:1:1 ratio) or DT-082

High Density (1:1:3 ratio) fillers can be used (sold separately).

SKU	Description	Size	Net weight (lb.)
056203	RenCast 6426-1	Gallon Kit	18
056235	Ren DT-081 Low Density Filler	50 lb. bag	50
056236	Ren DT-082 High Density Filler	5 Gallon	33

#### RenCast 205-3

- ▶ 6-10 min. gel time
- ▶ 60-90 min. demold
- ▶ 70, 73, or 80 Shore D



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SKU	Description	Size	Net weight (lb.)
056320	RenCast 205-3	Gallon Kit	15
056321	RenCast 205-3 (Resin)	5 Gallon	38
056322	Ren 205-3 (Hardener)	5 Gallon	38
056235	Ren DT-081 Low Density Filler	50 lb. Bag	50
056236	Ren DT-082 High-Density Filler	5 Gallon	33



# **FAST-CAST ACCESSORIES**

## **DEGASSING, MIXING & DISPENSING EQUIPMENT**

#### **Gas Vac II Industrial Vacuum Degassing Unit**

Designed for simplified and dependable operation, this vacuum efficiently deaerates urethane elastomers and silicone rubbers resulting in casts that are virtually void-free in quality. The clear acrylic lid permits viewing while maintaining complete seal and the heavy-gauge steel support stand mounted on swivel casters offers portability.

mounto	2 011 0111101 0401	ord oriord portability.
SKU	Description	Net weight (lb.)
054300	Degassing Unit	185
054303	Vacuum Seal	_

Vacuum Seal included with purchase, sold separately as well.

- ▶ Large chamber (14" dia. x 17" deep)
- ▶ 1/2 hp, two stage, direct drive pump displaces up to 6 CFM
- ▶ Thermal protected capacitor start & 20 micron factory rating
- ▶ 28"W x 25"D x 31"H, 115V, 60 hz motor

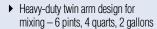
#### **Plunge Industrial Mixers**

This heavy-duty Plunge Mixer has a rugged zinc-aluminum alloy mixing head mounted with a set screw to a steel shaft. Its smooth-bottom teeth thoroughly mixes resins containing high-density fillers much faster and more effectively than standard drill-driven paint mixers. The mixing head's tumble finish allows for quick clean up of resins and paints.

SKU	Size	Length	Shaft Dia.	Head Dia.	Model No.
054190	Quart	131/4"	<sup>5</sup> / <sub>16</sub> "	21/4"	002
054195	Gallon	17"	5/16"	3¾6"	003
054200	5 Gallon	23½"	1/2"	5%"	006A

#### **Red Devil Mixer**

Make any project easier with the Red Devil Mixer's 3-way agitation action for smooth and quiet mixing. This heavy-duty, clamp-design, electric mixer is for effective mixing of Freeman's line of Repro Fast-Cast urethanes, paint, or any other low to medium viscosity liquid. Available with bench or pedestal mount.



- ▶ New safety covers for mixer arms
- ▶ 15-minute dial timer
- ▶ 110 volt, 1/3 HP, 60 Hz, heavy guard



SKU	Description	Height	Width	Depth	Weight (lb.)
054311	1400-00 Red Devil Mixer	31½"	41%"	295/8"	191
054313	No. 5153 Counter Base*	19"	33"	20¾"	20
054314	No. 5151 Pedestal Base*	46"	33"	18"	75

<sup>\*</sup>Dimensions include mixer.

#### **Jiffy Mixer**

This all-purpose mixer is designed and manufactured to thoroughly mix epoxies, resins, plastics, chemicals, paints and many other materials at 450 to 750 RPM without sucking air into material or splashing material outside container.

SKU	Shaft Length	Container Size	Top Dia.	Bottom Dia.	Depth of Head	Shaft Dia.	Model No.
054220	101/4"	Pint	11/4"	11/4"	1¾"	1/4"	LM
054215	101/4"	1-2 Gallon	2%"	2%"	2¾"	1/4"	HS-1
054210	20½"	5-10 Gallon	45%"	5½"	5"	1/2"	PS-1

### **MIXING ACCESSORIES**

#### **Paper Cups**

These paper cups are ideal for mixing all types of tooling and reproduction plastics. The lined paper cups are specially coated to prevent resin absorption. The larger paper cups are untreated. Cups sold individually.

SKU	Description	Cups/package	Cups/Case
054037	Lined Paper Cups (16 oz.)	50	500
054042	Lined Paper Cups (32 oz.)	25	500
054048	Untreated Paper Cups (83 oz.)	25	100
054050	Untreated Paper Cups (165 oz.)	25	100

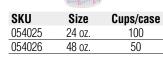
### **Plain Plastic Cups**

These cups are ideal for mixing all types of tooling and reproduction plastics. They are made of high-density polyethylene (HDPE), white in color, and unmarked. Cups sold individually.

SKU	Size	Cups/case
054031	12 oz. Cups	500
054036	16 oz. Cups	500
054041	32 oz. Cups	500
054047	64 oz. Cups	200
054049	85 oz. Cups	200
054055	128 oz. Cups	120
054051	166 oz. Cups	120

#### **Graduated Plastic Cups**

These convenient plastic cups are also made of high density polyethylene (HDPE). However, these cups are translucent and have both milliliter and



ounce graduations on the container to aid in mixing. Cups sold individually.

#### **Wood Mixing Paddles**

Wood mixing paddles for both gallon and 5 gallon containers. Both paddles are ideal for mixing paint, urethanes, epoxies, or any other liquid. Sold by the box.

SKU	Description	Thickness	Width	Length	Qty/box
054524	Paddles for 1 Gallon	1/8"	11//8"	14"	50
054521	Paddles for 1 Gallon	1/8"	11//8"	14"	500
054525	Paddles for 5 Gallon	7/32"	1%"	21"	250

<b>Tongue Depressors</b>	SKU	Width	Length	Qty/box
These polished hardwood depressors are	054520	3/4"	6"	500

excellent for mixing small quantities of tooling plastics and repair materials.

## **OTHER ACCESSORIES**

#### **Devcon Flexane FL-10 Primer**

This blue, one-component adhesion promoter increases the bonding strength of liquid polyurethanes to metal surfaces. To use, apply two coats to a clean and roughened metal surface permitting 15 minutes between applications and 30 minutes prior to pouring the urethane. Offered in a 4 oz. can. (SKU #054635)

#### **Devcon Flexane FL-20 Primer**

FL-20 is an orange, one-component adhesion promoter that increases the bonding strength of liquid polyurethanes to concrete, rubber, urethane, wood, fiberglass, and cured epoxy surfaces. To use, apply two coats to the clean and roughened surface permitting 15 minutes between applications and 30 minutes prior to pouring the urethane. Offered in a 4 oz. can. **(SKU #054639)** 

#### **Freeman 302 Urethane Protectant**

Freeman 302 is an inert gas used to preserve and prolong the usable life of moisture sensitive polyurethanes. Before resealing the containers, spray a short burst of Freeman 302 in the open container and seal immediately. Repeat after every use. Offered in a 10 oz. aerosol can. **(SKU #054706)** 

#### **Ren Accelerators**

These liquid catalysts	SKU	Description	Net weight (lb.)
accelerate the curing	056557	Ren 178-57 (Quart)	1.7
process and reduce	056556	Ren 178-62 (Quart)	1.5
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demold times. Mix thoroughly in the hardener before adding the required amount of resin. Ren 178-57 is for use ONLY with RenCast 6442, 6443, 6444, Freeman 1050, or Freeman 1060. Ren 178-62 is for use ONLY with RenCast 6400, 6401, 6402, 6403, 6405, 6410 or Freeman 1040.

### PREPARATION TIPS

#### **Sealing A Wood Pattern/Model**

(also applies to plaster and sheet wax)



Apply one coat of Freeman Wood and Plaster Sealer (a fairly thin viscosity, lacquer-based paint) to the bare wood surface using a pure bristle brush and allow the material to absorb into the wood.





- 3. Wipe off the pattern with a cloth and then apply a second coat of sealer.
- 4. After allowing the second coat to dry overnight, lightly sand the wood again and wipe it off with a cloth.
- 5. You are now ready to apply the release agents.



**Applying Release Agents** 







- Cover the entire surface with Freeman Wax Release (a semi-paste, typically
- 2. Allow this coat to dry or immediately wipe the off excess with a cloth.

applied with a brush).

- 3. We suggest at least two coats of Wax Release to make sure your entire part is covered evenly.
- Next, you'll need to apply two layers of Partall PVA mold release (a polyvinyl alcohol) with brush or a spray.
- 5. Each coat will require a half hour of drying time unless you use a fan or air hose.
- 6. After the second coat of PVA has dried thoroughly, apply a final coat of Freeman Wax Release.
- 7. Buff this last coat very gently so as not to break through the layers of the PVA.

#### **Additional Notes**

- Epoxy, urethane, or metal patterns require only the use of wax release agents. Apply three coats and lightly buff after each.
- Plaster patterns should be dried in an air-circulating oven at 120°-125° F for 16 hours, or in dry air for 48 hours before applying sealer.
- Plaster patterns can also be sealed.
- Sheet Wax should be seated with aerosol version.

#### **Fast-Cast Polyurethanes Specifications**

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	Mix Ratio (hy	Gel Time (mir.)	Demold Time	Hardness (Shore B.)	Specific Grant	Mixed Viscosity (cps) @iscosity.	Volumetric Yiel	Shrink (in "	Compressive	Flexural Street	Flexural Moduling	Tensile Strengar	Tensile Modulus	kod Impact (ft. In pact	Deflection Temp.	Coefficient Therman
Repro One	1:1	6-7	60 - 90	87	1.75	1,500	15.8	0.0010	7,860	4,290	799,000	2,350	582,000	0.30	156°F/69°C	1.79 x 10 <sup>-5</sup>
Repro 83	1:1	6-7	60 - 90	84	1.9	1,100	14.5	0.0010	6,470	5,140	939,000	3,130	941,000	0.31	135°F/57°C	_
Repro NS	1:1	6-7	60 - 90	84	1.9	1,750	14.5	0.0010	5,970	2,990	684,000	1,710	869,000	0.35	142°F/61°C	1.45 x 10 <sup>-5</sup>
Repro Fast	1:1	4-5	15 - 30	84	1.9	1,100	14.5	0.0015	6,470	5,140	939,000	3,130	941,000	0.31	135°F/57°C	_
Repro 10	1:1	5-6	30 - 60	84	1.9	1,100	14.5	0.0012	6,470	5,140	939,000	3,130	941,000	0.31	135°F/57°C	_
Repro Slow	1:1	12-14	3-4hr	84	1.9	1,100	14.5	0.0009	6,470	5,140	939,000	3,130	941,000	0.31	135°F/57°C	_
Repro Light	1:1	6-8	90 - 120	68	0.9	1,500	30.0	0.0014	3,980	2,620	347,000	1,530	350,000	0.15	132°F/56°C	3.50 x 10 <sup>-5</sup>
Repro Ultra Light	1:1	10-11	2-3hr	55	0.59	1,200	47.0	0.0014	2,700	1,840	160,000	1,490	72,400	0.12	128°F/53°C	4.18 x 10 <sup>-5</sup>
Repro 95	1:1	6-7	60 - 90	84	1.9	1,450	14.5	0.0012	7,140	3,070	505,000	1,770	561,000	0.29	131°F/55°C	3.13 x 10 <sup>-5</sup>
Surface Coat	1:1	13	3 - 4 hr	84	1.9	6,000	14.5	_	_	_	_	_	_	_	_	_
Laminating Resin	1:1	15	3 - 4 hr	84	1.9	3,500	14.5	_	_	_	_	_	_	_	_	_
Pro-Cast 20	1:1	7 - 10	60 - 90	85	1.78	1,500	15.6	0.0017	7,400	4,900	580,000	3,100	941,000	0.28	139°F/59°C	2.5 x 10 <sup>-5</sup>
Pro-Cast 132	1:1	5-7	30 - 60	84	1.71	5,000	16.2	0.0028	8,200	6,700	635,000	4,200	759,000	0.31	146°F/63°C	3.5 x 10 <sup>-5</sup>
Master Dyna-Cast	1:1	6-7	60	85	1.9	1,500	14.5	0.0010	7,841	4,705	803,333	2,663	990,833	0.31	148°F/64°C	_
Master Cast 783	1:1	7-8	60 - 90	85	1.9	1,650	14.5	0.0010	6,500	3,500	900,000	3,000	902,000	0.30	125°F/51°C	_
RenCast 205-3	1:1	6-7	60 - 100	70	1.12	80	24.7	0.0022	5,000	5,600	168,000	3,300	170,000	0.35	137°F/58°C	7.61 x 10 <sup>-5</sup>
RenCast 205-3 (w/DT-081)	1:1:1	9-10	30 - 120	73	0.95	1,700	29.1	0.0023	4,500	4,000	325,000	2,400	373,000	0.22	144°F/60°C	4.12 x 10 <sup>-5</sup>
RenCast 205-3 (w/DT-082)	1:1:3	9-10	60 - 120	80	1.65	2,500	16.8	0.0027	6,100	5,200	512,000	3,200	587,000	0.36	127°F/53°C	4.56 x 10 <sup>-5</sup>
RenCast 6426-1 (w/DT-081)	1:1:1	7-8	60 - 120	65	0.8	2,500	34.6	0.0028	5,500	3,700	340,000	2,400	_	0.24	122°F/50°C	-
RenCast 6426-1 (w/DT-082)	1:1:3	10-12	60 - 120	83	1.7	4,400	16.2	0.001	5,500	4,500	510,000	2,860	_	0.34	122°F/50°C	4.13 x 10 <sup>-5</sup>
ASTM Tests	_	_	_	D-2240	D-792	_	_	D-2566	D-695	D-790	D-790	D-638	D-638	D-256	D-648	D-696-88

Dependent upon mass.

## **LOCATIONS & TERMS**



#### FREEMAN MANUFACTURING & SUPPLY CO.

1101 Moore Road, Avon, Ohio 44011 Phone 800-321-8511 • Fax 440-934-7200 www.FreemanSupply.com FREEMAN contactus@freemansupply.com

Please see our website, www.FreemanSupply.com/aboutus for complete details and contact information on all of our locations.

#### **Returned Goods**

To save transportation charges, and facilitate handling of merchandise upon our receipt, we request that no merchandise be returned without prior written authorization.

Merchandise given to a transportation firm is their responsibility to deliver in satisfactory condition. If merchandise is delivered damaged, the customer should note as such on freight bill and file a claim with the delivering carrier. Regulations require that hidden damage, identified upon unpacking, must be reported within ten (10) days of delivery in order to file a proper claim.



#### Liability/Warranty Statement

Our products are intended for sale to industrial and commercial customers. We request that customers inspect and test our products before use and satisfy themselves as to contents and suitability. Nothing herein shall constitute a warranty, expressed or implied, including any warranty or merchantability or fitness, nor is protection from any law of patent to be inferred. All patent rights are reserved. The exclusive remedy for all proven claims is replacement of our materials and in no event shall we be liable for special, incidental, or consequential damages.

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