



Rayite™ 200

SPRAYABLE

Machinable

Media

Mix it. Spray it. Machine it.

RAYITE™ 200 Sprayable Machinable Media is a new mineral-based material developed by United States Gypsum Company for prototyping, mold, pattern, and model making operations. It can be used for any size application, but is especially suited for large patterns and molds.

RAYITE 200 Sprayable Machinable Media can be used with all machining processes, especially CNC routers and gantry type mills. It machines easy, yet is super-tough and has excellent edge definition. This produces sharp, precise cuts with minimal loading on milling machines and cutting tools.

RAYITE 200 Sprayable Machinable Media is easily applied, in any thickness, to just about any structurally supported armature, such as expanded polystyrene or low density polyurethane foam. No more built-up, labor-intensive pattern construction. Just mix it, spray it, and machine it!



Spray RAYITE 200 on undersized armature.



Spray RAYITE 200 to slightly oversized tolerance.



Machine RAYITE 200 to final dimensional tolerance.

RAYITE 200 Sprayable Machinable Media

- Low abrasion and friction results in less tool wear.
- Ability to spray on almost any reinforced armature.
- Mineral-based, non-combustible, non-toxic formula offers safe mixing, casting, and spraying.
- Ease of use—just mix with water and spray.
- High quality surface reduces surface prep time and finishing—high gloss finishes are possible.
- Dimensional stability provides a shield against wide swings in temperature and humidity.
- Unique formulation results in tremendous reduction in dust from milling.
- No special handling of shavings and waste means easy clean-up.
- Unlimited pattern sizes.
- Can be sprayed in any thickness, on vertical and horizontal surfaces.

Spraying Machines

Applying RAYITE 200 Sprayable Machinable Media is easy with a spray machine available from Rimcraft Technologies, Inc. The machine was developed specifically for RAYITE 200 and is perfect for semi-continuous spraying of RAYITE 200 Sprayable Machinable Media.

Typical Physical Properties		Test Method
Use Consistency, (cc water/100 gram RAYITE powder)	30cc	ASTM C472
Set Time	2 hour slurry accelerated to 5 minute set at gun head	
Wet Compressive Strength (one hour)	1,300 psi	ASTM C472
Dry Compressive Strength	4,000 psi	ASTM C472
Tensile Strength	400 psi	ASTM D638-94
Elongation	0.07%	ASTM D638-94
Flexural Strength	900 psi	ASTM D790-92
Tangential Flexural Modulus	925,000 psi	ASTM D790-92
Unnotched Izod Impact Strength	0.257 ft. lbs./in.	ASTM D4812-93
Wet Density @ 30cc	108 pcf	ASTM C472
Dry Density @ 30cc	96 pcf	ASTM C472
Heat Deflection	308 °F	ASTM D648-88
Coef. of Linear Thermal Expansion	1.19×10^{-5} in./in./°F	ASTM D648-91
Thermal Analysis		
Major Melt Point	302 °F	See Note 1
Minor Melt Point	356 °F	See Note 1
Dimensional Stability	Excellent	See Note 2
Expansion, Maximum (3 hour) (modified)	0.079%	ASTM C472
Expansion, Final (modified)	0.160%	ASTM C472

1. Thermal Analysis was performed utilizing a DuPont Model 910 Differential Scanning Calorimeter.

2. Dimensional Stability represents a seven step environmental test. Changes in dimensions were measured after each environmental immersion. The difference between the initial and the final dimensions were compared. RAYITE 200 exhibited "excellent" dimensional stability (with 0.0019/in. ft.).

Trademarks: The following are trademarks United States Gypsum Company: Rayite, USG.

For more information about RAYITE 200 Sprayable Machinable Media, please call (800) 487-4431.

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