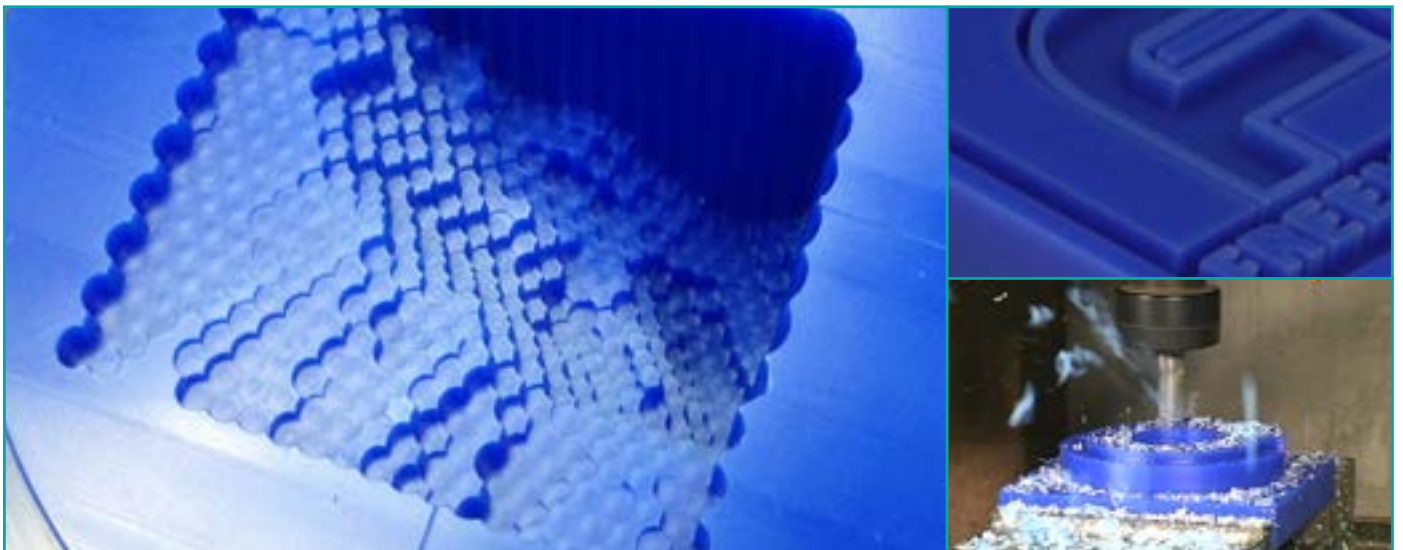




# MACHINABLE WAX

*Formulated and manufactured by Freeman, this extremely hard, synthetic material machines faster than polyurethane and epoxy tooling boards or metals without sacrificing quality of finish, surface detail, or dimensional accuracy.*

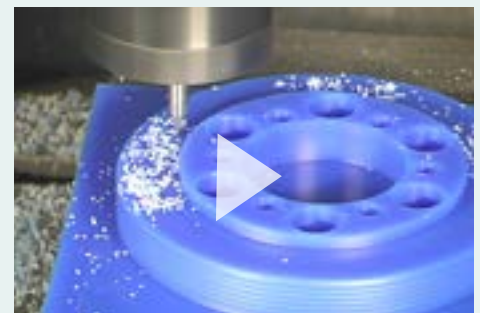
*Machinable Wax features a combination of properties unique to the tooling and prototyping world. Most notable is its non-abrasive, self-lubricating, and self-releasing characteristics, which make it an ideal material for many challenging applications.*



## DID YOU KNOW?

***We have a Machinable Wax video ready to watch!***

Our Video Library is available on our website, [www.FreemanSupply.com](http://www.FreemanSupply.com), or on our YouTube channel [@freemanmfg](https://www.youtube.com/@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!



# FREEMAN MACHINABLE WAX



▶ Standard and custom sizes are available in **three formulations**: the original, industry-standard **Blue**, the economical, user-friendly **Purple**, and the refined and enhanced **Turquoise**.

## What is Machinable Wax?

### Qualities

#### Non-abrasive

Unlike metal and tooling boards that can cause significant wear on cutting tools.

#### User-friendly

Machining produces chips instead of dust for a cleaner work environment.

#### Self-releasing/self-sealing

Pour liquid tooling plastics (including epoxy, urethane and silicone rubber) into Machinable Wax without requiring the use of sealers or release agents.

#### Able to be glued

Produces large or irregularly-shaped pieces for machining with the use of 3M #90 Spray Adhesive (page 3).

#### Self-lubricating

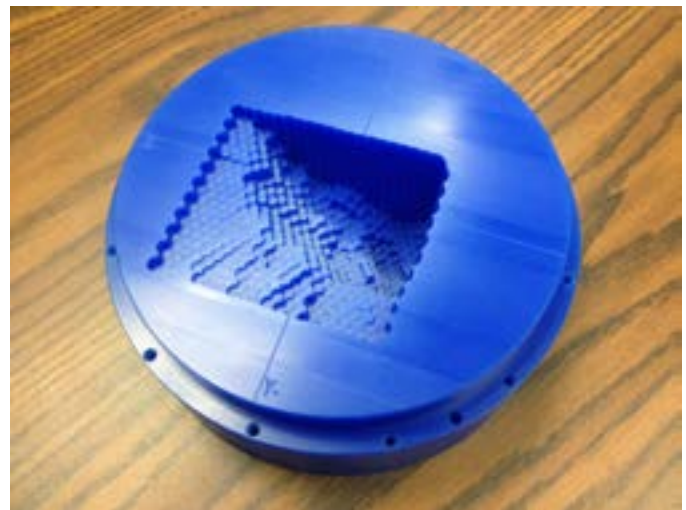
Enables all machining operations to be performed without the need for coolants or cutting fluids.

#### Wide variety of sizes

Eliminates the waste associated with using large tooling boards for smaller projects.

### Applications

- **Molds and prototypes:** creates accurate reproductions
- **Education:** as a training aid and project material
- **CNC:** demonstrations or proofing machining programs
- **Medical/Dental:** molds for proton therapy or dental work



### Machining guidelines

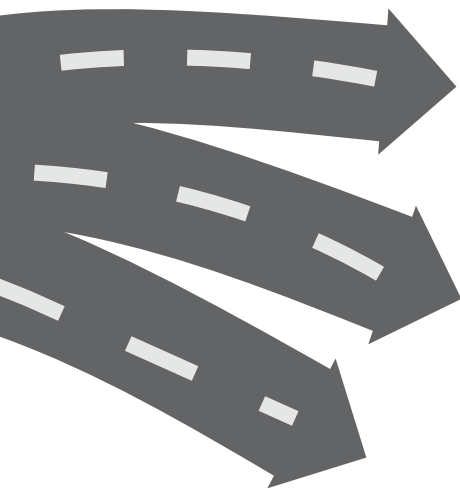
	Spindle Speed	Feed Rate
Roughing	3,000 rpm	100 in./min.
Finishing	8,000-10,000 rpm	40-100 in./min.

Data obtained using a 1/2" ball end mill



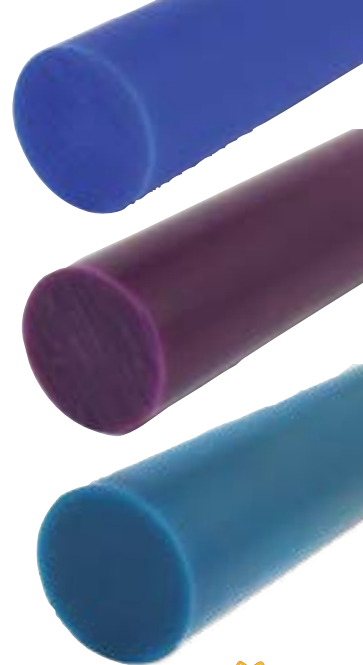
### Calculating weight

$$\frac{L \times W \times \text{Thickness (inches)}}{28.8} = \text{Weight (lb.)}$$



# Which one is right for me?

Each batch is manufactured to the highest standards in world-class facilities with high-quality ingredients while still keeping your budget in mind. With competitive prices and excellent results, you'll find no better match for your project.



	Blue	Purple	Turquoise
<b>Hardness (Shore D)</b>	50-55	52	56
<b>Surface Finish</b>	Excellent	Good	Excellent
<b>Fine Detail</b>	Good	Fair	Excellent
<b>Proofing</b>	Excellent	Excellent	Excellent
<b>Flexibility</b>	Excellent	Excellent	Good
<b>Thin-Walled Sections</b>	Good	Good	Excellent

## Original Classic Blue

This tried-and-true wax has been the industry-standard for over 30 years. It performs exceptionally well on the CNC or when carving by hand.

## Economical Purple

Ideal for educational training programs or testing, this wax undergoes the same quality standards as the other formulations while being budget-friendly.

## Enhanced Turquoise

This premium wax is ideal for applications where a high level of detail and accuracy is needed whether working by hand or machine.

## ACCESSORIES

### 3M™ Hi-Strength 90 Spray Adhesive

High Strength 90 Adhesive bonds **SKU** **Mfg. No.** **Net weight (lb.)**  
to concrete, wood, MDF, laminates, 054515 30023-3 24 fl. oz.  
polyethylene and more. Its extreme high-strength and fast-tack adhesive provides strong permanent bond. Ideal adhesive for machinable wax. It offers a one-minute dry time for fast, extremely strong permanent results and high productivity.



To order any of these products, please see our website, [www.FreemanSupply.com](http://www.FreemanSupply.com), for complete details and part numbers. You can also contact our Customer Service department at (800) 821-3511 opt. 3.

## MASTER PROTOWAX

This unique machinable investment casting wax is perfect for prototype work or even short-run part requirements. Please see our website, [www.FreemanSupply.com](http://www.FreemanSupply.com) or contact Customer Service for complete details.

- ▶ Easily turned, milled, drilled, tapped, and carved faster than metal without any tool wear
- ▶ Excellent stability and low expansion rate virtually eliminate investment shell cracking problems
- ▶ Available in blocks up to 5" thick, and cylinders from 2" to 8.5" in diameter up to 12" long; custom sizes available



### Specifications

Color	Specific Gravity	Ash Content	Hardness (Shore D)	Softening Point	Volumetric Shrinkage @ Room Temp.	Viscosity @ 160°F (CPS)
Red	0.94	0.010%	43	157°F	7%	30

# LOCATIONS

## Branch Locations and Public Warehouses

Freeman has strategically placed satellite locations across North America with customer service representatives ready to help. Thousands of products are stocked at these locations as well as public warehouses to reduce your shipping costs.

## Strategic & Effective Stocking

Freeman's inventory staff constantly monitors sales and stocking data across the country to properly provide the right amount of products at each location.

## Worldwide Shipping

Freeman ships orders all across the globe and has various international distributors available to supply customers with top-quality products.



### OHIO (HEADQUARTERS)

1101 Moore Road  
Avon, OH 44011  
TEL 800-321-8511  
TEL 440-934-1902  
FAX 440-934-7200

### KANSAS

5755 S. Hoover Road Bldg. #5  
Wichita, KS 67215  
TEL 800-792-1047  
FAX 817-568-0908

### ONTARIO

3600B Laird Road Unit 8  
Mississauga, ON L5L 6A7  
TEL 800-345-9259  
FAX 586-774-1019

### QUEBEC

3475 boul Pitfield  
Montreal, QC H4S 1H3  
TEL 800-263-7699  
TEL 514-335-3530  
FAX 514-335-3225

### CALIFORNIA

5525 S. Soto Drive  
Vernon, CA 90058  
TEL 800-325-2100  
FAX 440-934-7200

### MICHIGAN

27655 Groesbeck Highway  
Roseville, MI 48066  
TEL 800-345-9259  
TEL 586-774-1210  
FAX 586-774-1019

### OREGON

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Portland, OR 97203  
TEL 800-558-0866  
FAX 262-789-5407

### TEXAS

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Fort Worth, TX 76140  
TEL 800-792-1047  
TEL 817-551-7301  
FAX 817-568-0908

### GEORGIA

5060 N Royal Atlanta Dr. #6  
Tucker, GA 30084  
TEL 770-493-4131  
FAX 440-934-7200

### NORTH CAROLINA

101 Bailey Street  
Mocksville, NC 27028  
TEL 800-321-8511  
FAX 440-934-7200

### PENNSYLVANIA

203 Enterprise Rd.  
Lititz, PA 17543  
TEL 800-631-4230  
TEL 717-653-5300  
FAX 717-653-7372

### WISCONSIN

4921 South 2nd St.  
Milwaukee, WI 53207  
TEL 800-558-0866  
TEL 262-789-9800  
FAX 262-789-5407

# TERMS & CONDITIONS

## 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.

## Damaged Goods

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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