



Master™ Wax Products



**ISO 9001
CERTIFIED**

The Kindt-Collins Company has pioneered many industrial waxes that have now become standard in the pattern and foundry industries. Our years of experience, our continuing program of wax research and development, and our investment in state-of-the-art equipment have enabled us to consistently provide better products to our customers. As a result, the MASTER trademark has become a symbol of quality world-wide.

We have always anticipated the wax requirements for industry and therefore have maintained highly versatile production facilities for blending, casting, extruding, sheeting, injecting and forming waxes in almost any shape, size or formula. We offer a wide range of properties

including various hardness and rigidities, many gradations of melting and softening points and highly controlled shrinkages.

More than 80 years of experience in custom formulating waxes qualifies us to develop specialized waxes for unusual applications. Our highly skilled technical consultants, modern laboratory and equipment are at your disposal.

The wax products presented in this section represent a small portion of the entire Kindt-Collins line of waxes and allied products we produce. Contact our sales department for complete product literature or visit our web site at www.kindt-collins.com.

Custom Wax Blending and Formulating

Kindt-Collins is a world leader in the formulation of waxes for custom applications and has ISO-9001 registration for the design and manufacture of waxes. Beginning with prototype performance criteria, Kindt-Collins can produce specially formulated compounds incorporating materials ranging from basic waxes to ultra-high performance wax derivatives and synthetic blends. All proprietary development work is done to accepted ICI, ASTM and other applicable industry standards.

Complimenting our wax research and development laboratory is a modern production facility that was built for the millennium. Here virtually every wax process capability is available including bending, extruding, rolling and beading. In addition we operate our own in-house tool and die shop to manufacture custom wax extrusion and injection dies.

From incoming raw materials to the finished product, stringent quality testing is performed at all critical process stages. This ensures high product consistency batch after batch. Complete material certification and test data will be supplied upon request with your order.

Whether you have a unique wax application in mind or simply a slight modification to a standard wax, contact us. Our experience and professionals assure a solution based on decades of wax development work with companies around the world.





Master™ Sheet Waxes

MASTER Sheet Waxes (Regular, Superflex and HT-260®) have a wide variety of uses in many industries including pattern shops, tool and die shops, aircraft, automotive and plastic industries.

MASTER Sheet Waxes can be used to add thickness to patterns, to provide additional stock on the casting for machining and also to line core boxes that have been made too large. They conform to practically any shape or compound curve.

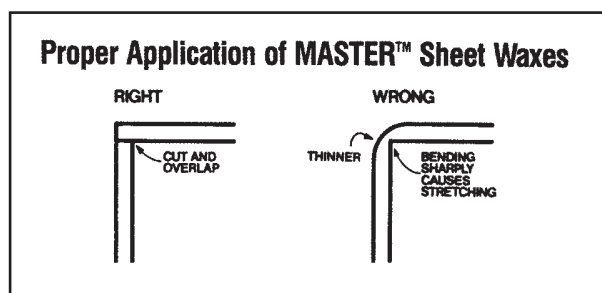
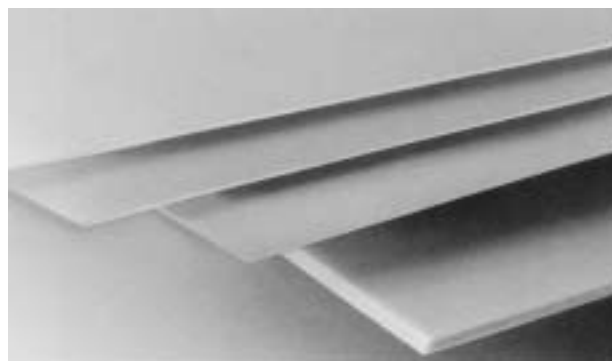
Tool and Die Shops: MASTER Sheet Waxes may be used as a metal thickness in the production of dies.

A male or female die pattern is first produced. MASTER Sheet Wax of the thickness of the metal to be formed is then shaped over the die, completely covering it and conforming exactly. Plaster or plastic is then poured over the top of the wax to produce a duplicator model or a casting for the top half of the die. This process saves considerable time and money and produces excellent results.

Aircraft and Automotive Industries: MASTER Sheet Waxes are used as a metal thickness in the production of stamping or draw dies of fuselages, wing sections of planes and quarter panels, hoods, etc. of automobiles.

Our sheet waxes conform perfectly to compound curves and odd shapes to allow for an exact metal thickness requirement. This process saves time and money.

Plastics Industry: MASTER Sheet Waxes can be used as part thickness in the construction of tools.



There are many other industries in which MASTER Sheet Wax can be utilized and our experts will be pleased to make recommendations to help you with your specific requirements.

Master™ Sheet Waxes

With Pressure Sensitive Adhesive Coating

MASTER Sheet Waxes, including Regular, HT-260® and Superflex are available either plain or with pressure sensitive adhesive coating on one side. The sheets of wax are rolled slightly undersized so that when the adhesive coating is applied the total thickness is as specified.

The adhesive permits any of our three types of MASTER Sheet Waxes to be attached quickly and easily to practically

any oil-free surface with just a slight pressure. It is particularly effective to hold the sheet firmly in place where compound curves are involved.

When stored in a cool, dry environment away from heat and light, pressure sensitive sheet waxes will have a shelf life of at least one year.



Master™ Regular Sheet Waxes

Regular Sheet Wax • Versatile, Accurate, Economical

MASTER Regular Sheet Wax is the original sheet wax. It is highly adaptable for many uses in pattern shops, tool and die shops, foundries and the plastic industry. Because MASTER Regular Sheet Wax is transparent up to 1/8" thickness, fine lines, identification marks, dimensions, etc., are easily read without distortion. Some of its applications are:

- Forming over cores to obtain the desired wall or metal thickness allowance.
- Increasing metal thickness of patterns. Excellent for adding thickness to patterns to provide stock for machining.
- Temporarily lining core boxes to compensate for oversize cores.
- Providing a uniform wall thickness allowance in the production of prototypes.



To order please specify MASTER Regular Sheet Wax, fractional, decimal or millimeter thickness, sheet size, number of sheets or number of boxes and whether or not pressure sensitive adhesive coating is required.

Properties

Ring and Ball Softening Range: Approximately 151° to 163°F (66° to 73°C)

Color: Light yellow

Flexibility: A 3/16" thick piece may be bent around a 1" mandrel at average room temperature. (Care should be taken when applying over small radii so that the wax will not stretch and reduce thickness)

Thickness Accuracy: ± .002"

Availability: MASTER Regular Sheet Wax is available with or without pressure sensitive adhesive coating on one side. Sheet sizes, thickness, and packaging are shown on this page.

Standard Thicknesses and Sheets per Box

For Regular, HT-260® and Superflex Sheet Waxes

Thickness			Sheets/Box		DECIMAL THICKNESSES MAY BE ORDERED IN INCREMENTS OF .001 INCH OR BY FRACTIONAL INCHES.
Decimal	Millimeter	Fraction	12 x 24	8 x 10	
From .007 to .032	From .18 to .81	From 1/64 to 1/32	5	10	
From .033 to .079	From .84 to 2.01	From 3/64 to 5/64	4	8	
From .080 to .110	From 2.03 to 2.79	From 3/32 to 7/64	3	6	
From .111 to .219	From 2.82 to 5.56	From 1/8 to 7/32	2	4	
From .220 to .251	From 5.57 to 6.38	From 15/64 to 1/4	2	3	
From .252 to .313	From 6.40 to 7.95	From 17/64 to 5/16	2	2	
From .314 to .375	From 7.98 to 9.53	From 21/64 to 3/8	1	2	
From .376 to .500	From 9.55 to 12.90	From 25/64 to 1/2	1	1	

ORDERING INFORMATION

MASTER Sheet Waxes can be ordered in increments of .001", in fractions or in millimeters.



Master™ Sheet Waxes

HT-260® Sheet Wax – The Efficient High Temperature Sheet Wax

MASTER HT-260® Sheet Wax was developed for use with casting and laminating resins that either require or give off heat during curing. This sheet wax is a scientific blend of materials that provides a flexible sheet which melts at temperatures in excess of 260°F.



HT-260® Sheet Wax can be used as part thickness in the forming of dies. In addition, the high temperature stability of HT-260® permits laminating or casting a hollow core in a plastic.

This wax is ideal for increasing pattern size to provide stock for machining.

We recommend HT-260® whenever an extra margin of flexibility or temperature stability is needed.

Properties

Ring and Ball Softening Range: Approximately 270° to 280°F (132° to 138°C)

Color: Tan

Flexibility: More flexible than our Regular Sheet Wax. Easily formed around tight compound curves. (Care should be taken when applying so that the wax thickness will not be reduced).

Thickness Accuracy: ± .002"

Availability: Available with or without pressure sensitive adhesive coating on one side. Sheet sizes, thicknesses, and packaging are shown on preceding page.

To order please specify MASTER HT-260® Sheet Wax, fractional, decimal or millimeter thickness, sheet size, number of sheets or number of boxes and whether or not pressure sensitive adhesive coating is required. See Page 36 for specifications.

Superflex Sheet Wax

Extremely Flexible...Drapes Evenly Over Highly Complex Curves

MASTER Superflex Sheet Wax is our most flexible wax at room temperature. This wax can be used wherever Regular Sheet Wax is used, but where greater flexibility is required.



The unique features of Superflex allow the sheets to be easily formed over an extremely intricate surface for precise pattern lay-up work.

Its melting range is not as high as our HT-260®, but it remains stable at curing temperatures above that of Regular Sheet Wax.

Properties

Ring and Ball Softening Range: Approximately 185° to 195°F (85° to 91°C)

Color: Dark Brown

Flexibility: Our most flexible sheet wax available for use when forming over highly intricate angles and curves. (Extreme care should be taken when applying so that the wax thickness will not reduce while bending).

Thickness Accuracy: ± .002"

Availability: MASTER Superflex Sheet Wax is available in thickness of .010" and greater with or without pressure sensitive adhesive coating on one side.

To order please specify MASTER SUPERFLEX Sheet Wax, fractional, decimal or millimeter thickness, sheet size, number of sheets or number of boxes and whether or not pressure sensitive adhesive coating is required. See Page 36 for specifications.

Sheet Wax Adhesive

When your application requires an adhesive coated sheet wax, we recommend that the wax be coated when ordered because we are equipped to apply the adhesive uniformly. When we apply the adhesive, the wax is rolled slightly undersize so that with the adhesive added, the total thickness of the wax and the adhesive will be as specified. If you apply adhesive to plain sheets, the resulting thickness will be slightly oversize.

There are times when our pressure sensitive adhesive can be used to excellent advantage within the shop.

We therefore make it available in 1 quart or 1 gallon containers for easy brush-on applications. Available in liquid.

Size	Catalog Number
1 Quart	920-SWA1Q
1 Gallon	920-SWA1G

To order specify catalog number and quantity desired.

Pattern Shop/Foundry Supplies



Master™ Machinable Waxes

File-A-Wax®

MASTER File-A-Waxes possess extreme hardness and toughness and are suitable for a wide range of machining and carving applications. They are used extensively in machining operations as a highly cost efficient way to check setups on NC and CNC machines. These tough, durable waxes are also used to form fiberglass production tools, for making jigs and fixtures and for a variety of prototype applications.

File-A-Wax can be easily drilled, reamed, tapped, turned or milled, typically without the need for lubricants or cutting fluids. This unique Kindt-Collins product creates additional cost savings by extending tool life.

Properties

Ring and Ball Softening Point: 230°F (110°C) (ICI 3.0)

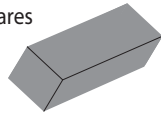
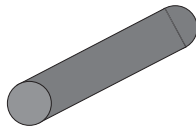
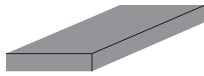
Color: Blue

Penetration @ 77°F: 2.5 dmm

Specific Gravity (g/cm³): .985 (ICI 7.0)

Shore D Hardness: 50

To order please specify shape, dimensions (inches) and number of pounds

Shape	Shapes & Dimensions (Inches)
Squares 	3-9/16" square x up to 36" long 5-1/2" square x up to 36" long 7-1/2" square x up to 24" long 9-1/2" square x up to 24" long
Bars 	1-1/4" diameter x up to 36" long 2-1/4" diameter x up to 36" long 3-1/16" diameter x up to 36" long 3-3/4" diameter x up to 14" long 5-1/4" diameter x up to 12" long 6-3/4" diameter x up to 14" long 8-3/8" diameter x up to 12" long 10-3/8" diameter x up to 12" long 12-1/2" diameter x up to 12" long 14-3/8" diameter x up to 12" long
Blocks 	2" thick x up to 24" wide x 48" long 3" thick x up to 44" wide x 55" long 4" thick x up to 44" wide x 55" long 5" thick x up to 44" wide x 55" long 6" thick x up to 44" wide x 55" long 7" thick x up to 17-1/2" wide x 21" long 8" thick x up to 17-1/2" wide x 21" long 9" thick x up to 17-1/2" wide x 21" long 10" thick x up to 17-1/2" wide x 21" long

NOTE: There are approximately 28 cubic inches (459 cubic centimeters) of File-A-Wax per pound (0.45 kg). This product is sold by the pound or kilogram and is weighed at time of shipment. The above widths and lengths are the maximum available. We will cut them smaller to your specifications, and we welcome your inquiries for special sizes not listed.

Protowax™

A uniquely machinable investment casting wax, Protowax is perfect for prototype work or even short run part requirements. It can be easily turned, milled, drilled, tapped, carved and sawed faster than metal...without any tool wear.

Possessing excellent stability, the low expansion rate of Protowax virtually eliminates shell cracking problems. In addition, it will not react with shell systems and Protowax requires no special handling requirements.

Sold by the pound in a variety of shapes and sizes. Approximately 28 cubic inches per pound.

Properties

Ring and Ball Softening Point: 157°F (72°C) (ICI 3.0)

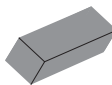
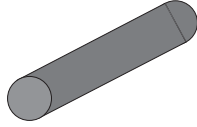
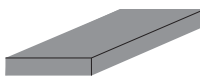
Color: Red

Penetration @ 77°F: 6.5 dmm (ICI 4.0) 1000 gms/5 sec.

Specific Gravity (g/cm³): .941 (ICI 7.0)

Shore D Hardness: 43

To order please specify shape, dimensions (inches) and number of pounds

Shape	Shapes & Dimensions (Inches)
Squares 	5-1/2" square x up to 12" long 7-3/8" square x up to 12" long 9" square x up to 12" long
Bars 	3/4" diameter x up to 3" long 1-7/8" diameter x up to 6" long 2-3/8" diameter x up to 10" long 2-7/8" diameter x up to 10" long 3-7/8" diameter x up to 14" long 4-7/8" diameter x up to 14" long 6-7/8" diameter x up to 20" long 8-1/2" diameter x up to 12" long 10-1/2" diameter x up to 12" long 12-1/2" diameter x up to 12" long 14-1/2" diameter x up to 12" long
Blocks 	2" thick x up to 24" wide x 48" long 3" thick x up to 24" wide x 48" long 4" thick x up to 24" wide x 48" long 5" thick x up to 24" wide x 48" long 6" thick x up to 24" wide x 48" long 7" thick x up to 24" wide x 48" long 8" thick x up to 24" wide x 48" long 9" thick x up to 24" wide x 48" long

NOTE: There are approximately 28 cubic inches (459 cubic centimeters) per pound (0.45 kg) of Protowax. This product is sold by the pound or kilogram and is weighed at time of shipment. The above widths and lengths are the maximum available. We will cut them smaller to your specifications, and we welcome your inquiries for special sizes not listed.



Scientifically Formulated for Specific Applications

Hard Pattern Wax

For Filling Small Dents and Nail Holes



This wax is an old favorite in the pattern shop for filling nail holes and small dents in wood patterns. It is remarkably easy to use in conjunction with an alcohol lamp and a putty knife. This wax does not soften when in contact with warm sand in the foundry.

MASTER Hard Pattern Wax can be coated with shellac, MASTER Kincote or any standard pattern coating. It is very light tan in color.

Saw Lubricator

Increases the Life and Accuracy of Saw Blades



MASTER Saw Lubricator is a unique compound of waxes and lubricants that makes sawing easier and increases production. When applied to a saw blade it retards the accumulation of wood, pitch or metal chips. If used regularly MASTER Saw Lubricator helps keep the saw blade clean and sharp, thereby lengthening its life.

Toolube



A solid blend of waxes and lubricants with properties of cutting oil for use on saws, drills, taps, and cutting tools of all types. It adheres to the cutting surfaces, prevents clogging, lengthens tool life and helps produce a smooth finish.

Aluminum Hard Pattern Wax

For Filling Holes/Defects in Aluminum Patterns



MASTER Aluminum Hard Pattern Wax has the same properties as MASTER Hard Pattern Wax, except that powdered aluminum has been added to make it ideal for filling holes and defects in aluminum patterns and castings. It hardens instantly and can be machined. The aluminum color makes it less noticeable on an aluminum pattern.

Beeswax



MASTER Beeswax is a pure grade of beeswax that has been fully refined to eliminate foreign materials. It has very light natural color and it has been adopted by patternmakers over the years for a wide variety of uses.

Available in one pound blocks, each individually packaged in a resealable plastic bag to maintain purity and freshness.

To order MASTER Wax Specialties please specify quantity and catalog number.

Description	Size	Catalog Number
Hard Pattern Wax	1 Pound Bar	490-A1
Aluminum Hard Pattern Wax	1 Pound Bar	490-A2
Saw Lubricator (Box of 12 Bars)	1" dia. x 8" Long Bar	451-S
Toolube	1-3/4" dia. x 10-3/4" Long Bar	451-T
Beeswax	1 Pound Block	490-A4



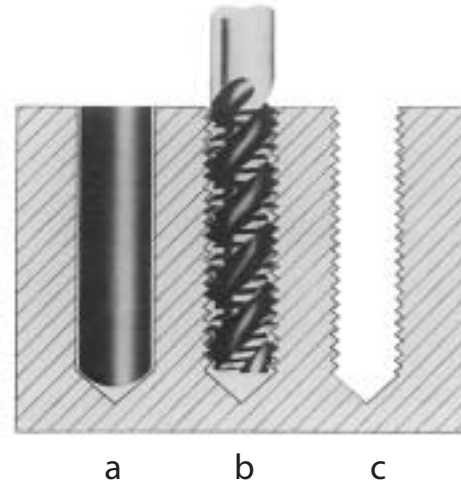
Master™ Tapping, Bayberry & Core Vent Waxes

Pattern Shop/Foundry Supplies

Tapping Wax

MASTER Tapping Wax provides a clean, fast and precision method for tapping blind holes while also extending tap life. After the blind hole (a) has been drilled, a solid piece of tapping wax of the proper diameter is placed in the hole. When the hole is tapped (b), the chips are embedded in the wax and carried out through the tap flutes...the chips do not pack in the bottom of the threaded hole. The tapped hole (c) is now clean and ready to use...no blowing out is needed.

Available in 6" long tap size cartridges which are easily cut to required length. Tapping wax for most tap diameters is available in one-half or one pound boxes.



To order please specify tap size and quantity desired.

Bayberry Wax

A time tested method for protecting iron castings from rusting and corroding. The wax is melted to flow over the entire surface to be protected...easy to use and very effective.



How to Order (order by the pound)

Description	Catalog Number
Bayberry Wax	490-A3

Core Vent Wax



MASTER Core Vent Wax is a time-tested standard in the foundry industry for ensuring the production of high quality castings. This specially formulated pure wax flows freely into the baked sand core to produce a clean vent and a permeable core. It is ideal for use with all metals and works equally well with either oil, cereal or synthetic binders. MASTER Core Vent Wax is available in round solid, round hollow and flat oval shapes in diameters from 1/32" thru 5/8". Hollow core vent wax offers the additional advantage of minimizing the amount of wax necessary to dissipate, while providing a more permeable core.

To order please specify shape, diameter and quantity.

Round

Diameter (Inches)	Round Solid		Round Hollow	
	Pounds Per Roll	Catalog Number	Pounds Per Roll	Catalog Number
1/32	1	450-SA1	—	—
1/16	1	450-SB1	—	—
3/32	1	450-SC1	—	—
1/8	4	450-SD4	3	450-HD3
5/32	4	450-SE4	3	450-HE3
3/16	4	450-SF4	3	450-HF3
1/4	4	450-SG4	3	450-HG3
5/16	4	450-SH4	3	450-HH3
3/8	4	450-SJ4	3	450-HJ3
7/16	4	450-SK4	—	—
1/2	4	450-SL4	—	—
5/8	4	450-SM4	—	—

Flat Oval Solid

Dimensions (Inches)	Pounds Per Roll	Catalog Number
1/32 x 1/8	1	450-FN1
1/16 x 3/16	1	450-FP1
3/32 x 1/4	4	450-FQ4
1/8 x 3/8	4	450-FR4
3/16 x 1/2	4	450-FS4
1/4 x 3/4	4	450-FT4

Master™ Regular, Bond & Marble Wax Fillets



Master™ Regular Wax Fillet

Easy to Install • Produces Accurate Radii • Takes Coatings

MASTER Wax Fillet is specially designed and formulated to give the patternmaker a quality product that is easy to apply, produces accurate results and is economical. It is primarily used for master patterns.

MASTER Wax Fillet offers the following features:

- Produces accurate radii with thin edges that blend into the pattern
- Easily applied with a heated fillet tool of proper size
- Adheres to bare wood or coated surfaces without glue or adhesive
- Bends and shapes around corners, fits to all angles
- Can be coated with any standard pattern coating without affecting drying time of the coating
- Designed for both summer or winter and is always pliable under normal working conditions
- Blended to remain fresh and workable almost indefinitely



Properties

Ring and Ball Softening Range: 166° to 178°F (74° to 81°C)
Color: Light Yellow

To order specify catalog number and quantity desired.

1 Pound Rolls (Continuous Length)				2 Pound Boxes (24" Long Pieces)			
Size	Diameter (D) or Radius (R)	Approximate Feet/Roll	Catalog Number	Size	Diameter (D) or Radius (R)	Approximate Feet/Box	Catalog Number
00-R*†	1/32" D	1500	440-R00	0-R*	3/64" D	4500	440-B000
0-R*	3/64" D	2250	440-R000	1-R*	1/16" D	3000	440-B01
1-R*	1/16" D	1500	440-R01	2	1/8" R	900	440-B02
2	1/8" R	450	440-R02	3	3/16" R	450	440-B03
3	3/16" R	225	440-R03	4	1/4" R	270	440-B04
4	1/4" R	135	440-R04	5	5/16" R	160	440-B05
5	5/16" R	80	440-R05	6	3/8" R	140	440-B06
6	3/8" R	70	440-R06	7	7/16" R	115	440-B07
7	7/16" R	58	440-R07	8	1/2" R	90	440-B08
8	1/2" R	45	440-R08	10	5/8" R	50	440-B10
10	5/8" R	25	440-R10	12	3/4" R	42	440-B12
12	3/4" R	21	440-R12	16	1" R	30	440-B16

* To facilitate application, these small sizes of wax fillet are made round. However, when applied to a pattern with a MASTER Steel Fillet Tool, the wax will form a perfect radius.

† OO-R rolls are 1/2 pound.

Master™ Wax Bond Fillet

This is a soft, self-adhering wax compound for the full-mold process and is used to apply a smooth radius to a foam pattern. The wax burns at a rate equal to 1.1 pound per cubic foot density foam, thus eliminating inclusions. 24" strips.

Packaged in Two Pound Boxes

Size	Radius (Inches)	Catalog Number	Size	Radius (Inches)	Catalog Number
2	1/8	441-02	7	7/16	441-07
3	3/16	441-03	8	1/2	441-08
4	1/4	441-04	10	5/8	441-10
5	5/16	441-05	12	3/4	441-12
6	3/8	441-06	16	1	441-16

To order specify catalog number and quantity desired.

Master™ Marble Wax Fillet

This is a specialized blend of waxes formulated specifically for the cultured marble industry. It produces a smooth radius on sink tops, vanities, window sills, and other synthetic marble products. Under most normal working conditions the unique properties of this wax are such that it adheres to the cultured marble mold without the use of heated fillet tools. 24" strips.

Packaged in Two Pound Boxes

Size	Radius (Inches)	Catalog Number	Size	Radius (Inches)	Catalog Number
2	1/8	442-02	7	7/16	442-07
3	3/16	442-03	8	1/2	442-08
4	1/4	442-04	10	5/8	442-10
5	5/16	442-05	12	3/4	442-12
6	3/8	442-06	16	1	442-16



Master™ Wax Fillet Accessories

Master™ Steel Fillet Tools

Fillet Tools are designed for installing wax and leather fillets. These tools are accurately sized and produce a smooth radius when properly used. They are available individually or in sets of four. All tools are hard chromed for long wear and smoothness.

For best results when applying MASTER Regular Wax Fillet, we suggest that MASTER Steel Fillet Tools be heated with our MASTER Alcohol Lamp.



Tool Description	Radii (Inches)	Catalog Number
Set of 4 tools		663-5
No. 1	1/16 and 1/8	663-1
No. 2	3/16 and 1/4	663-2
No. 3	5/16 and 3/8	663-3
No. 4	1/2 and 5/8	663-4

To order please specify catalog number and quantity desired.

Alcohol Lamp

This chrome-plated lamp provides adequate heat for fillet tools, hard wax, and many other applications where low heat is required. The wide base reduces the possibility of tilting. The lamp comes complete with wick. Replacement wicks are available.



Description	Catalog Number
Alcohol Lamp with Wick	990-L02L
Wick Only	990-L02W

To order specify catalog number and quantity desired.

Master™ Fillet Scraper Set

After applying MASTER Wax Fillet with a MASTER Steel Fillet Tool, we suggest using a MASTER Fillet Scraper of the same radius to remove excess fillet wax while at the same time smoothing and feathering the fillet into the pattern.

The set of four scrapers (No. 1 through No. 4) will smooth radii from 1/16" up to and including 1/2".



Description	Catalog Number
Set of Four Fillet Scrapers	990-S02