

Schwerdtle





silicone rubber **dies**

Put Schwerdtle's experience and expertise to work for you. When it comes to making custom hot stamping dies, our image is perfect!

Did you know that ice is more thermally conductive than raw silicone rubber? At Schwerdtle, we transform silicone into an ideal hot stamping material by combining it with our proprietary line of rubber compounds. Our formulations add properties that allow your die to conduct and transfer heat, bond well to aluminum and steel backing, resist the tendency to tear and discourage any "memory" of the part impression. And, unlike rigid metal dies, our silicone rubber dies conform to surface irregularities or sinks without distorting the image or part. Schwerdtle engineers are always working with the latest technology to ensure our silicone rubber compound is the best product available.

Single Durometer Dies

Although most applications are best served with 80 to 85 durometer dies, we manufacture dies ranging from very soft (40 durometer) to very hard (95 durometer) to meet every need.

Dual Durometer Dies

At Schwerdtle, we offer dual durometer dies that are most often used for maintaining fine print detail on parts that have considerable surface irregularities. This type of die has a hard rubber face on the graphics and a soft layer of silicone underneath allowing the graphics to maintain their detail while conforming to the part.

We also offer dual durometer dies that use a soft durometer to stamp a bold graphics area

combined with a hard durometer for printing nearby fine graphics.

Contoured Silicone Rubber Dies

We offer two types of dies for hot stamping on contoured plastic parts. Where the contour is slight or an even radius, a silicone rubber die is bonded to dead soft aluminum, then bent and mounted on a matching contoured die block. These dies are relatively inexpensive and can be quickly produced.

For long running jobs, we recommend silicone rubber dies which are contour molded to fit the shape of the part and vulcanized directly onto contoured die blocks.

Schwerdtle's network of CAD stations make us well equipped to produce dies directly from your supplied files. Your 3D surface data can be uploaded to our FTP site. We can also work from your sample parts.

Dual Level Dies

Can we help you eliminate a stamping operation? Do you have parts that have copy at two levels? We may be able to engineer a dual level die for you that can stamp both surfaces in one operation.

For More Information

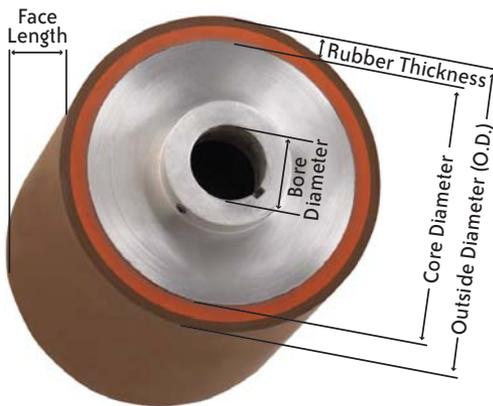
To find out more, please contact Bill Morey, VP Technical Sales, at (203) 330-2750 ext. 132 or bmorey@schwerdtle.com. ■

silicone rubber **rolls** & **sheets**

As silicone rubber specialists, Schwerdtle can supply rolls and sheet stock to meet almost every application.

Silicone Rubber Rolls

Schwerdtle manufactures silicone rubber rolls that can be used to apply foil to flat parts, conveyor carried tip stamped parts and curved and cylindrical surfaces. The small contact area of the rolls allows the application of decals, foil and multicolored heat transfers to large areas by conforming easily to the surface variations of the molded parts. Silicone rubber rolls can be used for applying decals, foil and multicolored heat transfers as well as laminating, banding, printing and other forms of decorating.



The rolls are ground to be exactly concentric O.D. to I.D. Schwerdtle can recoat your worn roll or make new rolls to your specifications.

Flat Silicone Rubber Sheet Stock

Our stock is made in a wide range of sizes, compounds, durometers and thicknesses. It can be bonded to aluminum or steel and used for applying foil to raised lettering or designs, for applying heat transfer decals or for other applications. Thin silicone rubber bonded to dead soft aluminum can be formed to fit contoured parts.

Textured Silicone Rubber

Assorted textures can be molded to the flat surface of a silicone die or sheet stock as a means of preventing air entrapment when applying foil or heat transfer decals.

For More Information

At Schwerdtle, we've been serving American industry for over a century. For information on how we can help your business, please contact Bill Morey, VP Technical Sales, at (203) 330-2750 ext. 132 or bmorey@schwerdtle.com. ■



metal dies

With over a century of experience as die makers to American industry, Schwerdtle is uniquely equipped to make the best die for your every need.

For cost effectiveness, let our specialists recommend the die that's best for you. Steel, brass, magnesium, copper or silicone rubber – we can handle them all.

Metal Hot Stamps

Unlike silicone rubber dies which can accommodate severe surface irregularities, metal dies work best on parts which are fairly consistent. However, if the parts are consistently irregular (i.e. if the sink mark is always in the same place), then it is possible to match a metal die to the part's surface.

- **Steel Hot Stamps** – Made of thoroughly hardened fine tool steel, these dies are ideal for long production runs on consistent parts. Deeply engraved, with long wear resistance, a steel die is your best choice for durability and cost effectiveness at high production rates.
- **Brass Hot Stamps** – Great for medium production runs and less expensive than steel. Brass is also excellent for contoured dies or dies to stamp blow molded bottles.
- **Magnesium Hot Stamps** – Good for short runs, such as advertising specialty work or pre-production sampling, magnesium is the least expensive and least durable die.

Capable of high-quality hot stamping, these dies are photoengraved from your artwork. The thin 16-gauge magnesium can be bent to fit moderate contours and mounted to the die block with heat bonding tape. Thicker dies can be fastened with screws.

Schwerdtle offers same day service on magnesium hot stamps if the artwork is received by 10:00 a.m.

- **Copper Hot Stamps** – For use in applications similar to magnesium dies, copper is usually preferable for longer runs or for printing on heavily textured or recycled papers.

Contoured Metal Dies

Steel or brass hot stamps can be made concave, convex or to match a contoured shape. Schwerdtle will make a matched set of tools – including the die and support fixture – to assure the highest quality in hot stamping contoured parts.

For More Information

Call us today at (203) 330-2750 or e-mail sales@schwerdtle.com. ■



tooling (hot stamp & heat transfer)

Our precise tools reduce your scrap.

We are skilled in manufacturing dies and fixtures that precisely match the contour of your part and ensure that your set-up goes smoothly. We begin the communication process with whatever information you have available such as art, CAD drawings, prototypes or actual molded parts (which are preferable). You'll work closely with our experienced technical and engineering staff so the job is done right the first time, on time.

It is critical to eliminate variables for repeatable, dependable results at the highest production rates possible. Schwerdtle designs and builds *perfectly aligned tooling* for the world's most discerning customers to decorate the products we all know and use. As independent die makers, we have close

working relationships with the top machinery manufacturers, foil suppliers and automation specialists in the industry. We engineer nesting fixtures and dies to support and hot stamp blow molded bottles as well as support mandrels with matching contoured dies for nearly any part configuration.

Tooling materials are dictated by mounting specifications, part size and shape, substrate and production requirements. Commonly used support materials include aluminum, urethane (cast), PVC, Delrin/Teflon/Nylon, epoxy and steel.

For More Information

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mold engraving (ours & yours)

We capture the most minute details of your artwork, project it onto the surface of your part and then engrave it into our molds...in reverse. The challenge of reproducing 2 pt. back copy for a mascara tube or serifs that are less than one thousandth of an inch wide keeps our engraving skills honed.

On a daily basis, our CNC machining centers are engraving and machining with precision

tools, designed and manufactured in-house, that can be as small as the diameter of a human hair (.002" to .003").

It should be no surprise that we are frequently asked by customers to engrave mold inserts and electrodes for them. Send us your 3D surface file, your customer's artwork and even your electrode set-up and we'll engrave an electrode for your mold. ■





engineering

For over a century we have committed ourselves to adopting new technology at every opportunity.

In a perfect world, product designers would start the design process by bringing in the molders, decorators and tool & die makers to brainstorm on the best way to bring their vision to reality. However, we live in the real world and perfect scenarios rarely happen.

In this real world, competitive pressures dictate that your production move quickly and precisely even when your customer's design pushes the entire production team to the limits of what is technically possible. Schwerdtle is your perfect partner because we excel at those seemingly impossible technical challenges.

As independent die makers, we have close working relationships with the top hot stamp machinery manufacturers, foil suppliers and automation specialists in the U.S. and Europe. Our philosophy is built on four generations of collaboration and our best customers value this aspect of our service above all else. We listen to understand your business and your challenges and then work with you to create unique solutions that will

enhance your product and save you time and money.

At A Glance

- CNC machining to +/- .0005" tolerances
- 3D surfacing
- Full 3D CAD/CAM capabilities
- File importation from most major software:
 - > IGES
 - > DWG
 - > DXF
 - > PRO-E
 - > AUTO CAD
 - > RHINO
 - > SOLID WORKS
- 3D engraving on surfaces including steel and graphite

For More Information

To find out more, please contact Bill Morey, VP Technical Sales, at (203) 330-2750 ext. 132 or bmorey@schwerdtle.com. ■

Pictured left: Our customer needed to manufacture oversized replicas of a Chambord Liqueur bottle for point of purchase displays. Their customer was not able to provide them with any art, drawings or CAD files. Schwerdtle reverse engineered all the gold detailing with only an actual size bottle for reference. Our art department created all the artwork from the crown to the collar and belt to duplicate the actual bottle. Next we created 3D files, engraved part of the molds directly and made electrodes to burn other parts.

art specs

Our goal is to produce dies that meet or exceed your expectations. In order to ensure that happens, the process must begin with high-quality artwork.

The Schwerdtle Art Department provides one stop shopping – from comprehensive graphic design to art “touch-ups” to make your project right. We can work with most formats of Macintosh or PC files. Our expert staff is trained in all of the popular art programs including Adobe Creative Suite, Corel Graphics Suite, QuarkXPress and Macromedia Freehand. Art files can be submitted via email, disk or uploaded to our **FTP** site. *(For our complete art submission guidelines, visit our website at www.schwerdtle.com.)*

Quick Tips

- **Vector vs. raster** – Vector artwork is our preferred file format. **Vector** graphics are made up of many individual objects. Each of these objects can have individual properties assigned to it such as color, fill and outline. Vector graphics are resolution independent because they can be output to the highest quality at any scale. Common vector formats include AI (Adobe Illustrator), CDR (CorelDRAW) and EPS (encapsulated postscript). **Raster** (bitmap) images have a fixed resolution and cannot be resized without losing image quality. Common raster-based formats are JPEG, GIF, TIFF, PNG, PICT and BMP.

- **Black and white** – Artwork should only be created with a 100% black fill to ensure sharp edges on your die. If the artwork contains color or a “screen” of black, the resulting foil stamp application will not be desirable.
- **Fonts** – With the plethora of fonts available today, it is preferred that all fonts be converted to “outlines” or “paths” before releasing the artwork to Schwerdtle. An alternate option is to make sure all fonts used are “collected” prior to release.

Did You Know?

Schwerdtle now supplies film positives for the silk-screening industry. We also offer raster to vector conversion services.

For More Information

Schwerdtle offers the most complete art service available today. Our in-house designers can typeset, design or “clean-up” your artwork. For more information, contact Erika McCarthy, Art Department Manager, at (203) 330-2750 ext. 123 or emccarthy@schwerdtle.com. ■





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