



FRIENDLY PLASTIC® BIBLE

Part I, Tools & Materials

By Jana Ewy & Her Designing Friends



Friendly Plastic® is an addictive modeling medium that has hundreds of fans on-line! Join Jana Ewy, Linda Peterson, Liz Welch and many more craft designers in our Web 2.0 community on Facebook and Yahoo. In the meantime, they have compiled a 'bible' of the most recommended tools and materials to help get you started.

If you have any questions, just find Jana, Linda and friends on-line!

For up-to-date tips, read the blog

The Art of Friendly Plastic

<http://networkedblogs.com/p9825856>

(800) 374-1600



amaco.com

GETTING TO KNOW FRIENDLY PLASTIC®

For most of us, it is the physical attraction to the vibrant metallic colors that draws us in for a closer look. Then comes the excitement of design possibilities, followed by the resistance to try something new. But with “Friendly” as part of its name, how can we say No to this much fun!

Friendly Plastic® is a durable nontoxic plastic that once heated becomes a soft pliable medium that can be blended and manipulated into beautiful two-dimensional or free form designs. Friendly Plastic® cools and becomes hard in just a few minutes. Use it to create exciting and innovative accessories, home décor, jewelry, and wearable art.

Friendly Plastic® can be recycled, repurposed and reused by reheating.



THE BASICS

As with all art and craft mediums there is a bit of a learning curve when it comes to working with Friendly Plastic®, not everyone enjoys immediate success. Once you have a basic understanding of the heating methods and of the pliable nature of softened Friendly Plastic®, you will find that proficiency is soon to follow.

You will learn about the heating methods used to work with Friendly Plastic®, the various tool and materials, design techniques, finishes and adhesives. A Bible of ever growing tips and tricks.



PURCHASING, STORING AND RECONDITIONING

Friendly Plastic® has a shelf life if not properly stored. Exactly what that shelf life is, is unknown, with so many determining factors to be considered. The main point of this section is to help you purchase fresh Friendly Plastic®, suggest a few storing options, and share a little trick for reconditioning old Friendly Plastic®.

WARNING: With the renewed interest in Friendly Plastic®, a lot of old product is re-surfacing like buried treasure and being put up for auction. Buyers Beware!

Purchasing - When purchasing Friendly Plastic®, you want to make sure the plastic is fresh. You do this by giving it the flex-test, simply give the stick a little bend, it should flex quite easily and then straighten back out. If it snaps in half, you guessed it... a SNAPPER (old plastic). This is where ordering on-line can be a problem. My suggestion is to make sure you are ordering from a reputable dealer. Try to resist de-stash bargains and auctions. You want a guarantee that the plastic is fresh, be sure the dealer offers this.

Storing - Keep your plastic in a closed container or zip-lock bag, when not in use. This seems to be the trick to longevity.

Reconditioning - If you have SNAPPERS (old plastic), all is not lost. Old Friendly Plastic® can be reconditioned. Place the sticks on a nonstick pan and either place the pan onto a griddle or into an oven, temperature set at 200°F (no, a heat tool will not work). Allow the plastic sticks to soften completely. Remove the pan from the heat and allow the sticks to cool completely on their own, do not run them under cold water. Once they have cooled, remove them from the pan and check the flexibility. Hopefully this has done the trick. It is not fool proof but it does work most of the time.

BEAD MAKING TOOLS



Making Friendly Plastic® beads can be quite a feat, as there is a bit of a learning curve to this process. I have to admit, I have not yet mastered them all. For more information and project ideas; see Bead Making technique.

Bead Rollers – Bead rollers, intended for use with polymer clay, work nicely with Friendly Plastic® as well. You can form perfectly shaped and uniform beads in a variety of shapes and sizes.

Your Hands – These are my preferred tools when it comes to making beads and free form designs. You don't always get perfection, but the process is very organic. Just like when we were kids.

- Dip your hands in water before handling the plastic so that it doesn't stick to you.
- If you wear polish or acrylic nails, you may want to apply a light coat of oil to your hands as well.



BLENDING AND MARBLING TOOLS

Blending and intermingling the colors of Friendly Plastic® gives such a dramatic, yet harmonious movement to your designs. It is also a thrilling process to watch. For more information and project ideas see *Blending and Marbling techniques*.



Needle tool – Needle tools of all sizes are perfect for pulling and blending the colors of softened plastic into beautiful feathered and freeform designs. The smaller the needle, like those used for beading, the more intricate the design. Try using different sizes to create swirl and spiral patterns in the plastic. See Blending Techniques for more information.



Marbling Comb - The marbling comb, with its evenly spaced needles (teeth) was designed so that traditional marbling patterns could be re-created using strips of Friendly Plastic®. Using the marbling comb is a much better option than a single needle tool when it comes to blending the softened plastic into more uniform free flowing designs. See Marbling Techniques for more information.

- Even the pronged hair picks make a unique marbling tool to try.

CUTTING TOOLS

Scissors - Scissors are used most frequently to cut Friendly Plastic®, but because of the thickness of the plastic I would recommend finding a pair that is easy on the hands, like those from Fiskars, with a spring loaded handle.

- Tim Holtz scissors by Tonic is another recommendation.

Cutting Mat, Ruler and Utility Knife - A cutting mat, thick acrylic ruler and a mat knife or utility knife are great when making straight cuts or when you are cutting uniform strips of different widths. It is important to use a strong rigid blade for this type of cutting.

- The thin blade of a craft knife is not recommended.

Die Cutting Tools – Die cutting machines and dies are also a wonderful way to cut the plastic into fun and unusual shapes.

- Ellison “originals” or “thick cut” dies will cut through cold plastic sticks.
- Spellbinders dies will give you a lovely deep line that you can then cut out by hand with scissors.
- The Accucut die cutters can cut through cold Friendly Plastic® sticks
- If you don't have your own die cutting tools, try your local scrapbook store.





Shaped Cutters – Used on softened Friendly Plastic®, shape cutters are a must-have when it comes to cutting out uniform shapes in a hurry. They come in many shapes and sizes, and from several different manufacturers. Metal cookie cutters are ideal while some are made of plastic. All work in the same manner, being pressed into the softened plastic, although there are a few tricks to keep in mind.

- Keep the cutters in a dish of ice water with a few drops of oil added for lubrication.
- If you are using plastic cutters, it is best to spray them with an acrylic sealer before using. This gives them a protective barrier against sticking (plastic to plastic may cause some problems).

Craft knife - As you know a craft knife is useful in so many ways, When working with Friendly Plastic®, I use mine most often for cutting around shapes made with my cutters that don't pop out on their own.

Easy Cutters – Easy cutters by Midwest Products are wonderful tools to add to your toolbox. They come in different sizes and were developed for cutting balsa wood. I have found them to be very useful for making perfect cuts through my cylinders. They come with measured markings to make perfect angle cuts if you need them. Find them in your local Hobby store.

GLUES AND ADHESIVES

This is a topic that is brought up quite often. First you need to determine what your finished Friendly Plastic® design is being used for. This is major factor in what type of glue is needed. And of course we can't leave out personal preference.

Craft Glue - For paper crafting, if you are just adding a Friendly Plastic® embellishment, white glue that is designed to adhere plastic will work fine.

Double-sided Tape – Double-sided tape (my choice) is also great for paper crafting and many other applications.

E 6000 – Is great for use with almost all of your Friendly Plastic® projects. For jewelry, you will want to use a silicone-based glue, like E-6000 (my choice) or Goop. The thick consistency makes it easy to pick up small amounts on the end of a needle tool for precise placement. It is self-leveling and will not rust metal components that are being used along with your plastic.

Epoxy - A two-part epoxy is also a good choice when working with small jewelry components. It is fast drying and won't rust metal components.

Jewelry Cements - There are also several jewelry cements available that are worth a try. You really have to find what works best for you.



HEATING METHODS



Each method of heating and softening Friendly Plastic® has its own unique properties and affects the plastic in different ways. It is important to try them all so you have an understanding of these effects and know which method is right for the technique you have chosen. This is a bit of a trial and error game.

Electrical appliances may differ from one manufacturer to another. Your altitude and your geographic location (country of residence) are also factors to consider. The temperatures given are just a guideline, you may need to make some adjustments.

Griddle – The griddle method of heating and softening Friendly Plastic® is my favorite and is the one that I use the most. This method provides you with an open work time. You can continue working with the softened plastic until your desired design is achieved. Once your design is complete, simply remove the baking sheet from the griddle and allow the plastic to cool. Another important aspect to this method is that the plastic is being heated from bottom to top, leaving the metallic finish virtually unchanged. With the temperature set at a low 200°F to 250°F, a non-stick baking sheet (pan or silicone mat) is placed onto the griddle and the plastic is then placed onto the baking sheet to soften.

- Griddles can be found in many sizes. Extra large (8 pancake), standard (6 pancake) and the Liddle Griddle by Presto (4 pancake), which is perfect for the studio.
- Try a test piece of plastic on your griddle, if it begins to form bubbles the temperature is too high and you need to turn it down a bit.
- The temperature may even need to be adjusted, depending on the work surface you are using (pan or silicone mat) and your chosen technique
- At a higher altitude, you may want to set your griddle at 180° to keep the air bubbles out.



Heat Gun - The heat gun is a great tool to use on small projects and for finishing techniques. As with the griddle method, the plastic needs to be placed on a heat resistant non-stick surface before heating. It is very important to keep in mind, that the strong concentration of heat and air flow, being applied from above can cause the plastic to move around, become sticky and may cause the metallic finish to crackle, so take care and caution as you master this heating method.

Hot Water Bath - The method of heating and softening the plastic in hot water was the main stay several years ago. It is one of the primary methods still being used in the UK and Australia. It is quickly becoming popular again here in the US with the re-introduction of the Friendly Plastic® pellets. The ability to control the temperature of the water to just under a simmer (140°-150°F) in an electric skillet or wok, allows you to soften the plastic into a malleable state that can then be manipulated by hand into free form designs.



Oven - The oven method for heating and softening the plastic, like the hot water, has been an option since the introduction of Friendly Plastic®. With the oven set at 250°F to 300°F, the plastic is placed onto a non-stick baking sheet and then placed into the oven to soften. It was the drawbacks to this method (in and out of the oven, trying to work as quickly as possible) that sparked the pursuit for a better way. From that pursuit came the griddle method. But don't leave the oven out as one of your heating options. If you don't have a griddle to use, this is my recommendation to achieve the same type of effects.

- The AMACO® Craft Oven is perfect for use in your studio.

Melting Pot – a melting pot with a lid can also be used in place of a griddle for very small projects/pieces. Set the temperature to 180°F, put the plastic on a non-stick craft sheet, and put the lid on.

LUBRICANTS AND RELEASE AGENT



Softened Friendly Plastic® can make for a sticky situation. Using a lubricant or release agent on your hands and tools may be necessary. Here are a few to try. Cooking oil, baby oil, Vaseline, badger balm, clear embossing ink works great on rubber stamps and rubber texture sheets or mats. You may also want to try some of the misting release agents on the market for use with polymer clay and silver metal clay.

PIERCING AND DRILLING TOOLS



When you make Friendly Plastic® beads you can use a needle tool to pierce the hole through the bead while the plastic is still soft. You can also use them to pierce holes for jump rings.

Hole Punch – A 1/16" hole punch will punch through Friendly Plastic® quite easily. You do have to put a little muscle behind it, but the result of that perfect little hole is worth it.



Drill – A drill is a must have when you need to make a hole through your plastic pieces that have been coated with Envirotex. Also, drilling the holes through beads after the plastic has hardened means your beads are less likely to become distorted. Any type of drill fitted with the right size drill bit will work fine.

Holding your piece or bead secure is very important while drilling. A Dremel tool is very handy for this process. And if you are planning on drilling a lot of holes, you may want to look into getting a drill press. It is important to keep in mind that centrifugal force creates heat and heat melts the plastic, so if you have a variable speed drill, try using a low speed.

SANDING TOOLS



Fingernail Files – Fingernail files are great for rounding off sharp edges. Use them for sanding or buffing out rough spots, like the ones you get when you accidentally stick your finger in the softened plastic.

- Buffing blocks and sand paper work in the same way

SEALERS AND PROTECTIVE COATINGS



Acrylic Sealers – Water based acrylic sealers like Amaco® all-Purpose Sealer add a nice light coat of protection to your finished pieces. Painted on or sprayed on, it comes in different finishes such as gloss, satin or mat. Several coats can be applied to achieve your desired finish.

EnviroTex Lite – Envirotex Lite is a two-part epoxy resin and polyamine hardener that can be painted on or poured on. It gives a high gloss finish that is heat resistant and down right glorious. It is my favorite sealer. If you are looking for the depth and dimension of glass, this is the sealer for that type of finish. There is a bit of a learning curve to using this product and it also has a 24hour cure time.

Casting Resin – Like Envirotex Lite, is a two-part mixture that can be applied with a brush or poured on. The high gloss finish gives the depth and dimension like that of glass. It also gives your finished piece protection and durability. It also has a bit of a learning curve to the application process, and has a 24hour cure time. But it is well worth your learning efforts.

Polyurethane – Polyurethane is a thermoplastic polymer that can be painted on or sprayed on. Like the acrylic sealers, it comes in different finishes (gloss, satin, mat) and adds a nice protection to your finished pieces from normal wear and tear.

TEXTURE AND IMPRESSION TOOLS

Softened Friendly Plastic® accepts textures and impressions very nicely, and it is an easy way to create very interesting surface effects. For more information and project ideas see Impression and Mold techniques.

Rubber Stamps – Being one of the most popular and easiest to use, rubber stamps can be found in any number of sizes and designs and are a perfect way to make an impression or add texture to Friendly Plastic®.

- Apply a release to your stamp before pressing it into the plastic. It can be anything... water, inks, release agents, Vaseline, badger balm. Your choice depending on your project.
- If using the griddle method to soften the plastic, be sure to remove the plastic from the heat before stamping.
- The stamp must be left in the plastic until it has hardened before removing.

Rubber Texture Sheets – Rubber texture sheets are nothing more than un-mounted rubber stamps, and for the most part were created for use with polymer clay and metal clay. The patterns are more of a motif (repeated design), rather than a single image or vignette. Some have smaller patterns, making them more suitable for jewelry, where others have larger motifs, perfect for paper crafting, home decor and other accessories. Much like rubber stamps, they can be found in several designs styles and they are used in the same manner.

- See tips under Rubber Stamps as the same tips apply to texture sheets.



Plastic Texture Plates – The clear plastic texture plates designed for use in a pasta machine with clay and ArtEmboss® soft embossing metal can also be used. I do have to CAUTION you, if you choose to give these plates a try, as plastic to plastic may cause a sticky situation. NOT one of my recommendations.

- These plates are better used with plastic that has been softened in a hot water bath.
- A release agent must be applied to the plates.



Manufactured Molds – The flexible manufactured molds used with polymer clay also work well with Friendly Plastic®. Softened Friendly Plastic® can be pressed into molds, recreating an image of the original design. This is also a great way to use small scraps of Friendly Plastic® you have been saving. The depth of the mold and the intricacy of the design, will determine which heating method will work best. The Hot Water method would be my choice, as it will give you a much more malleable piece of plastic, perfect for pressing into a mold.

- A release agent may need to be applied on some of the deeper more intricate molds.

Silicone Putty Molds – The silicone putty molds that you can make yourself of your own design are one of my favorites. They work well with plastic softened using any of the heating methods. I have had great success using these molds and have never had to use a release agent.

WORK SURFACES

Your work surface is one of the most important aspects to consider when working with Friendly Plastic®. The surfaces we will be talking about are surfaces to heat the plastic on and surfaces to work on. The heating method, technique and the type of finished design you are trying to achieve, will determine what type of work surface you will need to use (see techniques for more information on suggested work surfaces).

Little Gold Pans - They are one of the most important tools you can have, if you ask me. Made by Nordic Ware for use in toaster ovens, these little pans measure 8" x 10", with a 6½" x 8½" work surface. They are coated with a durable non-stick finish that can stand up to years of use. One pan fits perfectly onto the Presto Liddle Griddle, where two fit nicely onto a standard size griddle. You can never have too many of these little gems. Perfect for use with all heating methods except the Hot Water.

- Find them at Bed Bath and Beyond, by the toaster ovens.

Silicone mats - Flexible non-stick silicone baking sheet liners (Silpat) are the perfect work surface when using any of the heating methods. The flexible nature of these non-stick sheets allows you to form the plastic into dimensional shapes.

- Cut them to project size for easier use.
- Great for use with the Friendly Plastic® pellets.
- 3"x 9" is the perfect size for creating cuff bracelets.

Cookie sheets – Good quality standard size cookie sheets are great for use when designing larger projects.

- If you use one on the griddle make sure it fits flat on the cooking surface.
- They are also the perfect work surface when applying sealers.

Aluminum Foil – Heavy weight aluminum foil brushed with a light coat of oil, to prevent sticking, is another work surface that provides some interesting design possibilities.

- Plastic softened on aluminum foil can also be molded and shaped into 3 dimensional designs.
- This is also a good surface to use for large classes.

Teflon Sheets - A Teflon coated craft sheet such as a quilter's appliqué sheet or Ranger's craft sheet are great for use with all of the heating methods.

- Attach one of these sheets using double-sided tape to an acrylic cutting board, great surface to work on when using the heat tool, water bath or applying sealers.



Work Mat – Amaco's rubber work mat is a great surface to use when working with plastic softened in hot water.

- Be sure to apply water to the mat to prevent the plastic from sticking to it.

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