

## HISTORY

Marbling is the ancient art of floating paints on thickened water (known as **size**) and then transferring this floating painting onto paper or fabric. Hundreds of years after its invention, marbling was a closely guarded trade secret known only to initiated artisans. It was used most often on the inner covers of fine books as a stylish transition between cover and content. Its popularity began to wane in the late 1800's when books began being mass produced. Fortunately, a few master marblers decided it was better to write down instructions than risk losing the art of marbling forever. We are lucky they did, because now Jacquard is able to present a marbling system that is easy-to-use, fun and yields professional results.

### MATERIALS & TOOLS

- Jacquard Marbling Colors
- Carrageenan (marbling base or “size”)
- Alum (mordant)
- Shallow tray or pan 1" to 3"/2.5 cm to 7.62 cm deep & large enough to lay the item you wish to marble in without touching the sides
- Gallon container and whisk (or blender) for mixing carrageenan
- Newspaper or paper towels
- Various hair picks, combs, rakes, skewers or stylus for “combing” patterns
- Fabric or paper
- Synthetic Gall

*NOTE: Utensils and pot used for marbling should NOT be used for food.*

## 1. PRETREAT FABRIC OR PAPER WITH MORDANT

A mordant must be used on paper and fabric so that the marbled design will adhere to the fiber quickly and permanently. Alum-treated fabric or paper should be used within 2 days or placed in an airtight container or bag.

- **For Fabric:** Dissolve 2 teaspoons/10 grams of alum in one gallon/3.79 L of warm water. For best results, prewash or use PFD (prepared for dyeing) fabric. Do not use fabric softener. Submerge fabric in alum solution and soak for 20 min. Wring out and line dry. Iron fabric before marbling on a low heat setting. Be careful not to scorch the fabric. For hard water use Calgon water softener, one tablespoon per quart/15 grams per 0.95 L.
- **For Paper:** Dissolve 2 teaspoons/10 grams) of alum in one quart/0.95 L of warm water. Fill a marbling tray with the alum solution and submerge each piece of paper one at a time. Leave these pages for 20-30 min. in the alum solution and then line dry.

*Experiment with different types of paper and see which is best for you. Papers that work well are absorbent and contain little to no sizing. Rice papers as well as printmaking/blotter/drawing/charcoal/pastel papers seem to work particularly well. Some papers do not work for marbling at all. Color will not stick to them properly and will run off the page. Watercolor paper is not recommended.*

Wash the tray carefully if you plan to use the same tray for marbling. Alum will contaminate the carrageenan and prevent your paint from sticking to the paper.

## 2. PREPARE THE MARBLING BASE OR “SIZE”

Carrageenan is a natural seaweed derivative used to thicken water to create the marbling “size.” Mixed carrageenan will only keep for a few days at room temperature. If it gets moldy, smells bad, or becomes thin, discard it. Refrigeration will extend the life of carrageenan to a month or more. As it ages it thins, and paints that would normally float on the surface begin to sink.

Using a whisk or blender, slowly add 4 teaspoons/19 grams of carrageenan per gallon/3.79 L of warm tap water. Blend for about 10 minutes or until all carrageenan is dispersed. Carrageenan may be used immediately, but reaches optimum consistency after 12 hours. If you are hand mixing with a whisk, make sure there are no clumps of carrageenan left in your mixture. Clumps tend to disappear the longer you let the mixture rest, so if you get a stubborn lump leave it alone for a while. A closed one gallon/3.79 L container can be shaken instead of stirred. Using a blender is substantially easier and quicker than hand mixing carrageenan, but it does cause bubbles that need to be skimmed or allowed to settle before marbling. Fill marbling tray at least 1"/2.5 cm deep.

### 3. BEFORE YOU MARBLE

Just before you begin applying paint, clean the “size” of any air bubbles and dust by laying newspaper or a paper towel on the surface and dragging it towards you. Skimming is very important because it removes any “skin” that prevents the paint from spreading evenly. You can apply paint directly from the bottles. If you want to use brushes to flick smaller dots onto the surface, it can be helpful to have small open containers or a palette with wells. This also makes it easier to mix colors. You can get a nice pumpkin orange from mixing the red and yellow, and if you mix the blue and red, you get a different purple than the violet provided in the kit. White is great for mixing and making lighter pastel colors.

### 4. APPLYING THE PAINT TO THE SIZE

Begin by gently dropping the paint, one drop at a time onto the surface of the marbling base. Do this using an eye dropper, squeeze bottle, straw brush or stylus dipped in paint. Colors can be placed randomly or in patterns. Concentric circles are made by adding drops of different colors to the centers of previous circles (“bullseye” pattern). As you apply the colors you will see a concentrated dot in the middle of each expanding ring of color. If you wait for this concentrated dot to spread evenly before applying the next color, you will get better adhesion and better color separation, especially when making concentric rings.

Each color should spread to the same extent with the exception of black, which spreads the most and is traditionally applied first. This gives the rest of the colors definition and provides good contrast. You should be able to apply the colors in any sequence you want. Usually, the last color will be your dominant color. Experiment with how much paint is applied to the surface for different effects. When large amounts of paint are dripped directly from the bottle, the final colors are very bright and vibrant. When paint is flicked in tiny drops from a straw brush, the colors will be lighter and more pastel. Sometimes if too much paint is on the surface of the size, the print will run, even on paper that was treated with alum. Running color is rarely a problem on fabric.

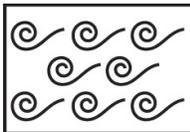
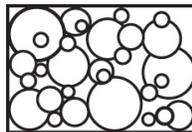
### 5. USING THE GALL

Gall is the clear liquid in the squeeze bottle. Rather than using Ox Gall, Jacquard’s gall is synthetic. Gall makes the paints float better and spread more on the carrageenan. Add it to the paint to make one color dominate over the others. Gall should not be added directly to any of the paint bottles, as you cannot decrease the amount a color spreads once the gall has been added. Add one drop at a time in a secondary jar or palette until the color spreads as desired. Gall may also be used to create clear holes in the design. The gall is powerful. Do not add it directly to the surface of the size, as it will cause a giant hole to appear in your design. Instead, dilute the gall by putting one or 2 drops into one teaspoon/5 ml of water (adjust concentration to your preference). Then you can add it to your marble to push the colors into tight veins or create little clear voids in the design. Flicking the diluted gall from a toothbrush causes a honeycomb-like effect called “Italian vein.” You can also use Gall to make your own marbling colors from regular acrylic paints. Thin the paint to milk consistency and add gall until that color spreads the same as the others. Unfortunately, for colors that spread too much there is nothing that makes them spread less. These colors are not suited for marbling.

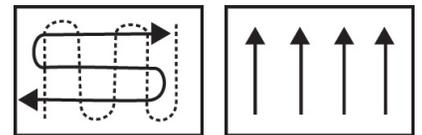
### 6. MAKING THE PATTERN

Typically, the design is achieved by combing the colors that are floating on the size. Here are some patterns to try:

- **Stone:** This is the pattern generated when spots of paint are spattered or dropped onto the size without any combing. This is a beautiful effect that may also be used as a beginning for the combed patterns. Try using different sized applicators, like an eyedropper or straw brush, to make “stones” of different sizes. Gall is very useful for making stones of different sizes from the same color.
- **Snail:** After making a stone pattern, use a stylus or rake to make a spiraled, snail-like pattern.



- **Get-gel (back and forth):** Start with a Stone pattern, then draw through the size with a stylus, up and down in one direction, then back and forth in the other.
- **Rake Nonpareil:** Start with a Get-gel, then use a rake or comb to draw across it.



Create other patterns by using variations of these basic patterns. Try varying the widths of the teeth in the combs or rakes. Use squiggly lines as you draw through the size instead of straight ones. Combine patterns, such as: Stone on top of Get-gel, Snail on top of nonpareil, etc.

## 7. PICKING UP THE COLOR

Hold the paper or fabric on opposite sides in a slight upward curve, and lay it down on the size. The middle of the paper or fabric should touch first; then gently let go of the sides. This will keep any air from getting trapped underneath. If the fabric seems too floppy, you can hold by two corners of a short end and lay down from the other short end. After a few seconds, lift the paper or fabric off from one edge. It helps to place the fabric or paper flat on a board paint side up once removed from the tray. Hang to dry or lay flat.

It is better to rinse the design after the paint has dried so that you lose zero pigment down the drain. There is carrageenan still on the surface even though it is not visible. Once the print is dry, run a small stream from the faucet and run your finger lightly over the print until it no longer feels slippery.

For fabric, heat set the paints by ironing once it has dried for at least 24 hours. Color permanence is significantly improved if allowed to cure for 2 weeks before washing. Paper does not need to be heat set.

Skim the surface of the size after each print to remove any residual paint. Once the surface is clean, start over and make another unique design. Skimming is not always necessary. Colors from the last design can be incorporated into the new one just by adding new paint.

## 8. CLEAN UP AND STORAGE

Unwanted size can be disposed of down a sink drain while running hot tap water. Even if colored by paint, size can be kept in the refrigerator for further use. Allow size to return to room temp before using it again. Unused paints and alum solution can also be disposed of in the sink.

Keep all paints and chemicals out of reach of small children.

*For more information, see the “Marbling\_Tips and Troubleshooting” document on our website: [www.jacquardproducts.com/marbling-color](http://www.jacquardproducts.com/marbling-color)*