

Artistone™



PROCEDURE MANUAL

ARTISTONE™ USAGE GUIDE

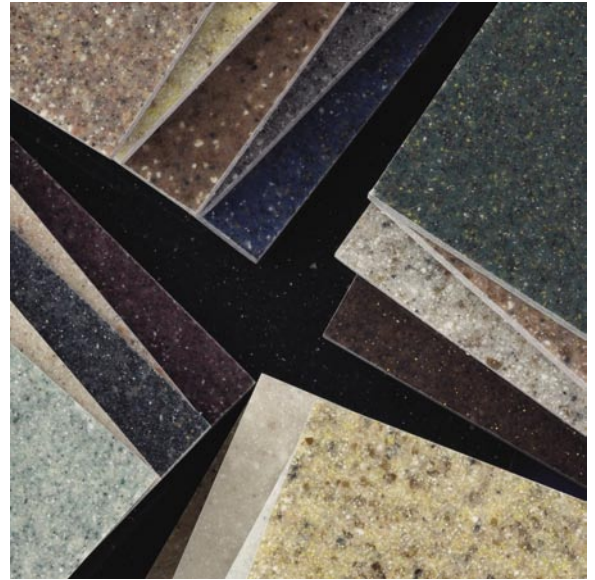
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INTRODUCTION TO ARTISTONE

This manual describes the general guidelines to be used for the manufacturing of **Artistone™** cultured granite. The materials required for the process are the same as those used for cultured marble. Each bag contains all of the necessary ingredients and is ready to be mixed with resin and catalyst. Outlined in this manual are the procedures for mixing, pouring, and repairing.

ACS International, Inc. does not assume responsibility for any injury or damages resulting from this product nor does it assume responsibility for the finished product. For further safety information consult the material safety data sheets contained in this manual.



ARTISTONE SETUP

Artistone does not shrink to the same extent as marble when cured. Therefore it is not necessary to allow for this as much when laying out panel molds. All other aspects of set up are identical to that of marble.

MIXING PROCEDURES FOR ARTISTONE



Since many different types of mixing equipment exist, the procedures outlined here should be used as a general guideline. Artistone is sold complete with filler already mixed in the bag so that resin and catalyst are the only ingredients that need to be added.

The correct amount of resin to add to the granite filler varies depending on the climate, type of resin used, and its viscosity. For this reason a resin ratio chart is supplied in this manual (see last page). The amount of resin required will range from 25% to 30% of the total matrix weight. Standard marble resin works well with

Artistone. The best results can be obtained by using a high centipoise resin with a fast gel time.

A good way to determine what percentage of resin works best for you is to start with a mixture of 25% resin (e.g. 100 pound mix would have 25 pounds resin and 75 pounds of Artistone), and add resin until the mix is thoroughly wet out. Resin floating to the surface of the matrix after the mixer has been shut off is an indication of too much resin. If the mixture is correct the granite texture should be visible on the backside of the finished part with no excessive resin.

Artistone colors may be mixed for any desired length of time so long as the matrix is completely wet out. It is important to be fairly consistent with the amount of time each matrix gets mixed from one batch to the next in order to ensure a perfect color match from batch to batch.

For best results, catalyst should be added to the resin before the resin is mixed with the filler. Catalyze Artistone the same as you would catalyze marble. For best results the gel time

should be less than twenty minutes.

Certain additives may be used to change the characteristics of the filler if desired. Materials used to reduce the weight of the material work well but alter the appearance of Artistone. Thickening agents such as CAB-O-SIL® or Aerosil® improve the suspension and adhesion characteristics the filler without altering the color. A thickening agent is recommended if the resin used is so thin that it allows particle separation in the product or if the matrix does not adhere to the vertical surfaces of the mold.

The most important thing to remember about mixing Artistone™ is to be consistent. This means always adding the same percentage of resin and catalyst and mixing for the same length of time. Changing any one of these factors may cause slight variations in the appearance of the finished product.

CASTING TECHNIQUES

Since no veining is required with granite the material may be poured using most any method. However, there are some rules you should follow for the best results.

1. Pour mix over the mold surface as evenly as possible so leveling is easier. Artistone is much thicker than marble so do not rely on vibrating alone to level.
2. When pouring into any mold, be sure to get an adequate skin coat over the entire mold surface before vibrating. This will prevent any resin that may vibrate to the surface from being pulled onto exposed surfaces of the mold.
3. When pouring into bathtub molds, fill cavity completely before vibrating. This prevents resin lines from forming between pours.
4. For vertical mold surfaces it may be necessary to pull material up the sides to ensure adequate coverage. If this is difficult remember that CAB-O-SIL® added to the mix greatly increases the adhesion characteristics of the matrix.
5. Vibration time should be limited to one to two minutes.
6. If excessive resin appears on the back surface after vibrating and the granite texture is no longer visible, there is too much resin in the mix. This should be corrected by reducing the ratio of resin, using higher centipoise resin or adding a thickening agent (such as CAB-O-SIL®) to the mix.

FINISHING

Finishing **Artistone™** requires the same methods as finishing cultured marble. Repairs are easily done and hard to find with granite textures. Clear gel coat is usually a sufficient patch for minor repair work. A small granite mixture can be surface applied for major repairs.



TROUBLE SHOOTING

PROBLEM: CLOUDY APPEARANCE

This may be the result of air entrapment in the gel coat and may not be as noticeable with cultured marble. Reducing air pressure to the spray gun may resolve the issue. Water in the air line may also be a contributing factor.

PROBLEM:

WHITE BLOTCHES OR INCONSISTENT COLOR

This may be the result of uneven resin distribution or under mixing. If two or more batches of mix go into the same mold it is very important that each batch have identical resin ratios and mix for the same length of time. A white blotch may also be the result of scraping unmixed material from the side of the bucket and applying it directly to the mold surface.

PROBLEM:

RING AROUND VERTICAL EDGES IN BOWL

This happens if the batch is poured too thin. The vertical areas of the bowl may appear lighter than the deck when this happens. Some ways to solve this problem are:

- Use less resin in the mix. The mix has the correct amount of resin when the backside of the part retains a granite appearance with very little resin on top.
- Add a thickening agent to the resin. CAB-O-SIL® or Aerosil® greatly improves the suspension of particles in the mix.
- Using a higher viscosity resin also may keep this from occurring. A good range is 2000–3000 centipoise.
- It is also important that the mixture goes into a gel within a short period of time after being poured. This will give the mix less time to settle out.
- Vibration time should be only one to two minutes as air passes through the granite mixture very quickly.

PROBLEM: WARPING

This is normally the result of excessive resin build up on the back side of the part. The resin contracts more than the granite matrix and tends to pull the edges up. This can always be solved by thickening the mixture either by reducing the resin content or adding a thickening agent.

PROBLEM: THERMAL SHOCK

There are many factors that can lead to thermal shock failure. **Artistone™** passes thermal shock when it is used correctly. A failure in thermal shock is usually the result insufficient gel coat in the drain area. The recommended thickness of gel coat is 18 mils.

PROBLEM: RIPPLES IN SURFACE

Slight ripples in the gel coat surface are inevitable with granite filler. These ripples can be minimized by having a thick layer of gel coat and waiting until it is mostly or fully cured before pouring. If you have any questions that are not answered in this manual please call your sales representative at (800)669-9214.

TRADE NAME USAGE

1. **Artistone™** is trade marked by ACS International Inc.
2. **Aerosil®** is a registered trade name of Degussa.
3. **CAB-O-SIL®** is a registered trade name of Cabot Corp.

RECOMMENDED MIXING RATIOS

Due to the different formulas of each Artistone color, the consistency will differ when using a standard resin ratio for each color. If a consistent texture is desired, it is recommended to use the following resin percentages for each color. This will achieve close to a 162,100 cP, which is considered the average Artisone viscosity.

RECOMMENDED RESIN PERCENTAGE BY ARTISTONE™ COLOR

<u>Artistone Mix</u>	<u>Resin %</u>	<u>Artistone Mix</u>	<u>Resin %</u>
Beach Sand	28	Hematite	28
Cactus	28	Hickory	29
Canvas	26	Olympus	29
Chestnut	26	Porcelain	26
Chocolate	29	River	26
Chromium	28	Salmon	28
Constellation	28	Smoked Almond	28
Cranberry	28	Spruce Ridge	29
Desert Sand	29	Starlight	28
Diamond Ore	26	Sunflower	28
Flagstone	26	Tumbleweed	28
Frosted Glass	28	Winter Sky	29

ARTISTONE MIXING RATIO CHART

Pounds of Total Mix	Artistone lbs.	Resin (numbers rounded)				
		26%	27%	28%	29%	30%
10	7	2	3	3	3	3.0 lbs.
20	15	5	5	6	6	6
30	22	8	8	8	9	9
40	30	10	11	11	12	12
50	37	13	14	14	15	15
60	44	16	16	17	17	18
70	52	18	19	20	20	21
80	59	21	22	22	23	24
90	67	23	24	25	26	27
100	74	26	27	28	29	30
110	81	29	30	31	32	33
120	89	31	32	34	35	36
130	96	34	35	36	38	39
140	104	36	38	39	41	42
150	111	39	41	42	44	45
160	118	42	43	45	46	48
170	126	44	46	48	49	51
180	133	47	49	50	52	54
190	141	49	51	53	55	57
200	148	52	54	56	58	60

CATALYST CONCENTRATION CHART

<u>lbs. of Resin</u>	<u>1.5%</u>	<u>1.75%</u>	<u>2%</u>
3 lbs.	20	24	27 grams
6	41	48	55
9	61	72	82
12	82	95	109
15	102	119	136
18	123	143	163
21	143	167	191
24	163	191	218
27	184	215	245