



## EMERALD REFLECTIONS

SIAMITE® GLASS-CERAMIC



Emerald is a distinctly green gem quality variety of the beryl mineral family, which is traditionally associated with the birthday month of May and 55th anniversary. Emerald is one of the most desirable, rare and expensive gemstones and it has been the standard for green among coloured stones for thousands of years.

### MATERIALS OVERVIEW

The trend of high demand, high cost, the lack of standard pricing and a limited supply of natural emeralds, has prompted a development of synthetic emeralds and the popularity of costume jewellery at low cost, which has encouraged the use of emerald imitations.

Hydrothermal synthetic emeralds and flux-grown synthetic emeralds share virtually all of the chemical, optical and physical characteristics of their natural counterparts, but lab-grown emeralds are relatively expensive compared to emerald imitations which only have a similar colour appearance, but are widely available and inexpensive, making it the only viable choice for costume jewellery.

Green glass, green cubic zirconia and green yttrium aluminum garnet (YAG), are manufactured specifically to serve as emerald substitutes, but generally lack hardness, density, refractive index, luster and heat resistance required for lost-wax casting, but more importantly, available in a limited colour range.

### OUR SOLUTION

SIAMITE® glass-ceramic has been exclusively manufactured for the Formica group. An advanced nano glass-ceramic composite engineered to give the impression of similarity to natural gemstones, which is now available in a completely revised palette of natural emerald colours.

SIAMITE® is recognized for its unique physical and optical properties, such as close to zero thermal expansion and homogeneous composition. This allows for even distribution of colour throughout the material, effectively eliminating common drawbacks of commonly used emerald imitations, such as colour zoning and excessively high refractive index.

### COMPARISON OF THE KEY PROPERTIES

	SIAMITE® Glass-Ceramic Emerald Imitation	Naturally Occurring Emerald	Hydrothermal Synthetic Emerald	YAG Emerald Imitation	Cubic Zirconia Emerald Imitation
<b>Reflective Index</b>	1.62-1.64	1.564-1.595	1.578-1.572	1.820	2.088-2.176
<b>Hardness</b>	7.5	7.5-8.0	7.5-8.0	8.0-8.5	8.0-8.5
<b>Density g/cm<sup>3</sup></b>	3.0-3.5	2.67-2.75	2.67-2.75	4.56	5.5-6.15
<b>Wax-Castable</b>	YES	NO	NO	YES	NO
<b>Cost</b>	Low	Very High	High	Medium	Low
<b>Availability</b>	High	Very Low	Low	High	High

**SIAMITE®**  
CREATED BY FORMICA

500+  
  
SIAMITE®  
COLORS

100  
  
ECO  
FRIENDLY

✓  
  
SIZE  
AND FIT

✓  
  
LOST-WAX  
CASTING

1500°C  
  
HEAT  
RESISTANT

7.5  
  
MOHS  
HARDNESS

1.62  
  
HIGH  
REFLECTION

✓  
  
ADVANCED  
APPLICATIONS

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## COLOR PALETTE

The 42-colour Emerald Reflections palette covers the most desirable Emerald colours, **from slightly yellowish green, pure green and slightly bluish green to a bluish-green** in a medium-dark tone with vivid colour saturation, evenly distributed colours and eye-visible colour zoning.

SIAMITE® Emerald Reflections is classified into groups that are each assigned a different hue from the color scheme to represent a range.



### 1100-1106 EMERALD SLIGHTLY YELLOWISH GREEN

	1100	VD Slightly Yellowish Green
	1101	VD/D Slightly Yellowish Green
	1102	D Slightly Yellowish Green
	1103	D/M Slightly Yellowish Green
	1104	M Slightly Yellowish Green
	1105	L Slightly Yellowish Green
	1106	VL Slightly Yellowish Green

### 1110-1116 EMERALD GREEN

	1110	VD Green
	1111	VD/D Green
	1112	D Green
	1113	D/M Green
	1114	M Green
	1115	L Green
	1116	VL Green

### 1120-1126 EMERALD SLIGHTLY BLUISH GREEN

	1120	VD Slightly Bluish Green
	1121	VD/D Slightly Bluish Green
	1122	D Slightly Bluish Green
	1123	D/M Slightly Bluish Green
	1124	M Slightly Bluish Green
	1125	L Slightly Bluish Green
	1126	VL Slightly Bluish Green

### 5310-5320 EMERALD BLUISH GREEN (COLOMBIAN EMERALD COLOUR)

	5310	VD Bluish Green
	5311	VD/D Bluish Green
	5312	D Bluish Green
	5313	D/M Slightly Bluish Green
	5314	D/M Bluish Green
	5315	M Bluish Green
	5316	M Slightly Bluish Green

### 1140-1146 EMERALD INTENSE BLUISH GREEN

	5317	M Very Slightly Bluish Green
	5318	M/L Bluish Green
	5319	L Bluish Green
	5320	VL Bluish Green
	1117	VD/D Slightly Bluish Green
	1118	D/M Slightly Bluish Green
	1119	M/L Slightly Bluish Green

	1140	VD Intense Bluish Green
	1141	VD/D Intense Bluish Green
	1142	D Intense Bluish Green
	1143	D/M Intense Bluish Green
	1144	M Intense Bluish Green
	1145	L Intense Bluish Green
	1146	VL Intense Bluish Green

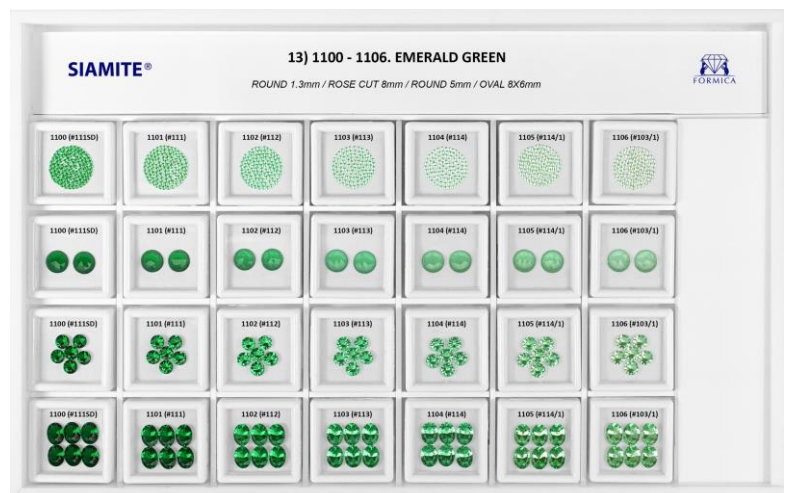
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## MATERIAL SAMPLER

The size, shape and cut of a stone affects the transmitted light modifying the value of transparent SIAMITE®, as well as affecting the saturation of color. There is a need for multiple samples of each color in order to visualize how the color will look in a particular stone size and shape.



Color depends on the stone size, shape and cut. For example, the darkest types of emerald color of SIAMITE®: 1100-1101 in size less than 2 mm have medium/dark tone and vivid saturation, that is, they correspond to the most expensive colors of natural emerald. And, for example in 8x6 mm ovals or 10 mm round, these same stones have very dark tones and moderately strong saturation.



## DO SOMETHING DIFFERENT

SIAMITE® Emerald Reflections can be used to create fantastic jewellery designs and fashion accessories, where you can add an immediate impact and wow factor with perfectly cut stones and matched colours. And while the Emerald Reflections palette features the most desirable emerald colours, the only real limit to what we can make is your imagination, since every piece of SIAMITE® glass-ceramic can actually be created in any size, shape, colour or design.

STANDARD AND CUSTOMIZATION SAMPLES AVAILABLE ON REQUEST.  
FOR MORE INFORMATION, PLEASE VISIT OUR WEBSITE OR CONTACT OUR SALES AND TECHNICAL TEAM.

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