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**Gravograph**  
Materials Selection Chart

Application	Material	Product (click for description)	Use	Gravostore	Specifications				Recommended Cutter (click for Gravostore)		Grinding Angles		Needs lubrication	Fabrication					
					Type	Surface	Method of engraving	Engraving depth	Type	Material	Clearance	Cutting		Laser	Saw	Shear ****	Bend	Stamp	Screen
ADA Signage	Plastic	<a href="#">Gravotac Interior</a>	Indoor	<a href="#">Click</a>	ABS	Matte	Rotary	.032"-.035"	<a href="#">Braille</a>	Carbide	40	30	N	✓	✓	✓	✓	✓	✓
		<a href="#">Gravoglas 2-Plex</a>	Indoor / Outdoor	<a href="#">Click</a>	Modified Acrylic	Matte/Glossy/Textured	Rotary/Laser *	.012"-.015"	<a href="#">11/64 Acrylic</a>	Steel	40	35	N	✓	✓	✓	✓	✓	✓
		<a href="#">Gravotac Exterior</a>	Indoor / Outdoor	<a href="#">Click</a>	Modified Acrylic	Matte	Rotary	.032"-.035"	<a href="#">Braille</a>	Carbide	40	30	N	✓	✓	✓	✓	✓	✓
Signage, Badges & Flat Surface Identification	Plastic	<a href="#">Acrylic</a>	Indoor	<a href="#">Click</a>	Acrylic	Matte/Glossy	Rotary	varies	<a href="#">11/64 Acrylic</a>	Steel	40	35	N***	✓	✓	✓	✓	✓	✓
		<a href="#">Gravoglas 1</a>	Indoor / Outdoor	<a href="#">Click</a>	Acrylic	Glossy	Rotary/Laser	.004"-.006"	<a href="#">11/64 Acrylic</a>	Steel	40	35	N***	✓	✓	✓	✓	✓	✓
		<a href="#">Gravoglas 2-Plex</a>	Indoor / Outdoor	<a href="#">Click</a>	Modified Acrylic	Matte/Glossy/Textured	Rotary/Laser *	.012"-.015"	<a href="#">11/64 Acrylic</a>	Steel	40	35	N	✓	✓	✓	✓	✓	✓
		<a href="#">Gravoply 1</a>	Indoor	<a href="#">Click</a>	ABS	Satin/Matte/Textured	Rotary	.012"-.014"	<a href="#">11/64 Carbide</a>	Carbide	40	30	N	✓	✓	✓	✓	✓	✓
		<a href="#">Gravoply 2</a>	Indoor	<a href="#">Click</a>	ABS	Matte / Glossy	Rotary	.002"-.003"	<a href="#">11/64 Carbide</a>	Carbide	40	30	N	✓	✓	✓	✓	✓	✓
		<a href="#">Gravoply 3C</a>	Indoor	<a href="#">Click</a>	ABS	Matte	Rotary	.002"-.012"	<a href="#">11/64 Carbide</a>	Carbide	40	30	N	✓	✓	✓	✓	✓	✓
		<a href="#">Gravoply Ultra</a>	Indoor / Outdoor	<a href="#">Click</a>	Modified Acrylic	Matte	Rotary/Laser	.003"-.004"	<a href="#">11/64 Acrylic</a>	Steel	40	35	N	✓	✓	✓	✓	✓	✓
		<a href="#">Gravostrat Phenolic</a>	Indoor	<a href="#">Click</a>	Phenolic	Low Glare	Rotary	.005"-.015"	<a href="#">11/64 Carbide</a>	Carbide	38	30	N	✓	✓	✓	✓	✓	✓
		<a href="#">Gravotac Exterior</a>	Indoor / Outdoor	<a href="#">Click</a>	Modified Acrylic	Matte	Rotary/Laser	.032"-.035"	<a href="#">Braille</a>	Carbide	40	30	N	✓	✓	✓	✓	✓	✓
		<a href="#">Gravotac Interior</a>	Indoor	<a href="#">Click</a>	ABS	Matte	Rotary	.032"-.035"	<a href="#">Braille</a>	Carbide	40	30	N	✓	✓	✓	✓	✓	✓
		<a href="#">Grovolase Metallics</a>	Indoor	<a href="#">Click</a>	Modified Acrylic	Brushed Matte	Rotary/Laser	.002"-.003"	<a href="#">11/64 Acrylic</a>	Carbide	40	30	N	✓	✓	✓	✓	✓	✓
		<a href="#">Metallex</a>	Indoor	<a href="#">Click</a>	ABS	Matte/Glossy	Rotary/Laser	.002"-.003"	<a href="#">11/64 Carbide</a>	Carbide	38	30	N	✓	✓	✓	✓	✓	✓
		<a href="#">Vinyl</a>	Indoor / Outdoor	<a href="#">Click</a>	Vinyl	Glossy/Reflective	Cutting	.055"	<a href="#">11/64 Stencil</a>	Steel	N/A	N/A	N	✓	✓	✓	✓	✓	✓
		<a href="#">AlumaMARK (Alumilaz)</a>	Indoor / Outdoor	<a href="#">Click</a>	Aluminum	Matte/Satin	Laser	N/A	N/A	N/A	N/A	N/A	N/A	✓	✓	✓	✓	✓	✓
<a href="#">Colored &amp; Marbled Steel</a>	Indoor	<a href="#">Click</a>	Steel	Satin/Glossy	Burnish/Diamond/Laser	Burnish .002"	<a href="#">11/64 Burnishing</a>	Carbide	N/A	N/A	N	✓	✓	✓	✓	✓	✓		
<a href="#">Gravobras Solid</a>	Indoor / Outdoor	<a href="#">Click</a>	Brass	Matte/Satin/Glossy	Rotary/Burnish/Diamond/Laser	Rotary .006"-.010"	<a href="#">11/64 Aluminum</a>	Carbide	40	30	Y	✓	✓	✓	✓	✓	✓		
<a href="#">Gravostrat</a>	Indoor	<a href="#">Click</a>	Phenolic	Matte/Satin	Rotary	.012"-.014"	<a href="#">11/64 Phenolic</a>	Carbide	38	30	Y	✓	✓	✓	✓	✓	✓		
<a href="#">Gravoxal Anodized Aluminum</a>	Indoor	<a href="#">Click</a>	Aluminum	Matte / Glossy	Rotary/Diamond/Laser	Rotary .004"-.006"	<a href="#">11/64 Aluminum</a>	Carbide	40	30	Y	✓	✓	✓	✓	✓	✓		
Product Identification & Labeling for Curved or Flexible Surfaces	Plastic	<a href="#">Gravofoil</a>	Indoor / Outdoor	<a href="#">Click</a>	PVC	Matte	Rotary	.001"	<a href="#">11/64 Phenolic</a>	Carbide	38	30	N	✓	✓	✓	✓	✓	
		<a href="#">Gravoply Ultra</a>	Indoor / Outdoor	<a href="#">Click</a>	Modified Acrylic	Matte	Rotary/Laser	.003"-.004"	<a href="#">11/64 Acrylic</a>	Steel	40	35	N	✓	✓	✓	✓	✓	
		<a href="#">Grovolase Metallics</a>	Indoor	<a href="#">Click</a>	Modified Acrylic	Brushed Matte	Rotary/Laser	.002"-.003"	<a href="#">11/64 Acrylic</a>	Carbide	40	30	N	✓	✓	✓	✓	✓	
		<a href="#">Metallex</a>	Indoor	<a href="#">Click</a>	ABS	Matte/Glossy	Rotary/Laser	.002"-.003"	<a href="#">11/64 Carbide</a>	Carbide	38	30	N	✓	✓	✓	✓	✓	
		<a href="#">Stickalase</a>	Indoor	<a href="#">Click</a>	Adhesive Backed	Matte	Laser	.001"	N/A	N/A	N/A	N/A	N/A	✓	✓	✓	✓	✓	
	<a href="#">AlumaMARK (Alumilaz)</a>	Indoor / Outdoor	<a href="#">Click</a>	Aluminum	Matte/Satin	Laser	N/A	N/A	N/A	N/A	N/A	N/A	✓	✓	✓	✓	✓		
<a href="#">Colored &amp; Marbled Steel</a>	Indoor	<a href="#">Click</a>	Steel	Satin/Glossy	Burnish/Diamond/Laser	Burnish .002"	<a href="#">11/64 Burnishing</a>	Carbide	N/A	N/A	N	✓	✓	✓	✓	✓			
Award Plaques & Trophy Plates	Plastic	<a href="#">Gravoply Ultra</a>	Indoor / Outdoor	<a href="#">Click</a>	Modified Acrylic	Matte	Rotary/Laser	.003"-.004"	<a href="#">11/64 Acrylic</a>	Steel	40	35	N	✓	✓	✓	✓	✓	
		<a href="#">Grovolase Metallics</a>	Indoor	<a href="#">Click</a>	Modified Acrylic	Brushed Matte	Rotary/Laser	.002"-.003"	<a href="#">11/64 Acrylic</a>	Carbide	40	30	N	✓	✓	✓	✓	✓	
		<a href="#">Metallex</a>	Indoor	<a href="#">Click</a>	ABS	Matte/Glossy	Rotary/Laser	.002"-.003"	<a href="#">11/64 Carbide</a>	Carbide	38	30	N	✓	✓	✓	✓	✓	
	Metal	<a href="#">Colored &amp; Marbled Steel</a>	Indoor	<a href="#">Click</a>	Steel	Satin/Glossy	Burnish/Diamond/Laser	Burnish .002"	<a href="#">11/64 Burnishing</a>	Carbide	N/A	N/A	N	✓	✓	✓	✓	✓	
		<a href="#">Colored Aluminum</a>	Indoor	<a href="#">Click</a>	Aluminum	Satin/Glossy	Rotary/Diamond	Rotary .000"-.003"	<a href="#">11/64 Aluminum</a>	Carbide	40	30	Y	✓	✓	✓	✓	✓	
		<a href="#">Gravobras Premium</a>	Indoor	<a href="#">Click</a>	Brass	Matte/Satin/Glossy	Rotary/Burnish/Diamond/Laser **	Rotary .006"-.010"	<a href="#">11/64 Aluminum</a>	Carbide	40	30	Y	✓	✓	✓	✓	✓	
		<a href="#">Gravobras Solid</a>	Indoor / Outdoor	<a href="#">Click</a>	Brass	Glossy/Satin	Rotary	.004"-.006"	<a href="#">11/64 Aluminum</a>	Carbide	40	30	Y	✓	✓	✓	✓	✓	
<a href="#">Trophy Brass</a>	Indoor	<a href="#">Click</a>	Brass	Satin/Glossy	Rotary/Burnish/Diamond	Rotary .006"-.010"	<a href="#">11/64 Aluminum</a>	Carbide	40	30	N	✓	✓	✓	✓	✓			

\* May be laser marked at slow speeds with power adjustments  
\*\* Laser engraving on black-surfaced product only

\*\*\* Lubrication may be required for deeper engraving applications  
\*\*\*\* Not recommended to shear Plastic thicker than 1/16" thick

# Plastics

## Acrylic

- ◆ Used most often in the engraving industry as a back-plate to add overall thickness to a thinner (and typically more expensive) product. For wall mounting, this thickness adds to the perceived value and the aesthetic appearance.

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*Forever*



- ◆ Our most versatile product yet. This micro-cap product allows fine detailed engraving similar to a foil cap product (like Gravoply 2), but the non-foil solid plastic cap offers more overall durability- a trait traditionally limited to the standard .010" laminated caps (like Gravoply 1). In fact, this cap is so durable it can be used indoors or outdoors. Even better, this fully UV stable 2-Ply product can be engraved with a rotary engraver or a laser engraver. And now this product is available in a variety of overall thicknesses (.020", 1/16", 3/32") and offers many matte and satin surface finishes to choose from. Reduce your overall inventory value by stocking just one product line for all your 2-Ply needs.





- ◆ This acrylic 2-Ply is designed exclusively for sub-surface engraving, and is suitable for outdoor applications. Different from Gravoglas 2-Plex, Gravoglas 1 has a thin micro-cap on a more rigid clear solid acrylic core. The thin cap offers fine detailed engraving - and it is laserable, too!



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- ◆ This acrylic 2-Ply is designed exclusively for sub-surface engraving, and is suitable for outdoor applications. Different from GravoGlas 2-Plex, GravoGlas 1 has a thin micro-cap on a more rigid clear solid acrylic core. The thin cap offers fine detailed engraving - and it is laserable, too!



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# Plastics Gravolase Metallics

- ◆ Similar in appearance to the Metallex product line, Gravolase Metallics uses many of the same foil cap layers, but uses a core of laserable solid DR plastic instead of ABS plastic. DR is a special formulation of a modified acrylic known best for its laserability. Available in either a flexible .020" or a sturdy 1/16" overall thickness.



*Forever*

- ◆ Still our most popular product, Gravoply 1 is constructed with a standard .010" cap layer and is perfect for most any indoor application. Coming standard with a satin surface finish, Gravoply 1 now has many matte and textured color options available as well.





- ◆ The micro thin .001" foil cap of Gravoply 2 allows for very fine detailed engraving. While this is perfect for small text and/or intricate logos required of many indoor applications, the thicker cap of Gravoply 1 may be better for many industrial applications where long-term cap durability may be put to the test. Gravoply 2 comes standard with a matte surface finish, but a Gloss finish is also available, which has a glossy clear protective cap layer.



*Forever*

- ◆ 3-Ply materials typically have a cap on either side of the core, so you can engrave on either side of the material. However, this 3-Ply material is constructed with 3 layers to be forward engraved from one side. The unique composition allows you to create a 3-color interior sign with your engraver. Engrave to .002" to expose the first core, and to .012" to expose the second core.





- ◆ Our most versatile product yet. This micro-cap product allows fine detailed engraving similar to a foil cap product (like Gravoply 2), but the non-foil solid plastic cap offers more overall durability- a trait traditionally limited to the standard .010" laminated caps (like Gravoply 1). In fact, this cap is so durable it can be used indoors or outdoors. Even better, this fully UV stable 2-Ply product can be engraved with a rotary engraver or a laser engraver. And now this product is available in a variety of overall thicknesses (.020", 1/16", 3/32") and offers many matte and satin surface finishes to choose from. Reduce your overall inventory value by stocking just one product line for all your 2-Ply needs.



# Plastics Gravostrat Phenolic

- ◆ Phenolic is a very rigid fibrous product that can be very susceptible to humidity, but is usually chosen for its non-flammable fire retardant qualities.



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- ◆ This acrylic 2-Ply is designed exclusively for sub-surface engraving, and is suitable for outdoor applications. Different from Gravoglas 2-Plex, Gravoglas 1 has a thin micro-cap on a more rigid clear solid acrylic core. The thin cap offers fine detailed engraving - and it is laserable, too!



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**CONFERENCE  
ROOM**

STEEL - PINK - BROWN

- ◆ A growing favorite for indoor signage, the design of Gravotac provides the core (substrate) and cap (profile) layers separately. By outlining the desired images or text in the adhesive-backed profile layer, and peeling away the excess material, Gravotac creates raised-letter signage capable of complying with all ADA raised-letter regulations. The Gravograph-patented raised-letter process is also a great way to create multi-colored signage with your engraving machine.



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- ◆ It's the plastic that looks like metal. Save weight and expense on all your indoor metallic applications! Most popular for creating badges. Available in a variety of colors and 3 surface styles: The original Metallex is constructed with a laminated metallic foil cap. Metallex 2 has a special surface treatment to add scratch resistance to the beautiful yet sensitive metallic foil cap. And Metallex Gloss has an added glossy clear protective cap layer over the metallic foil - designed for the ultimate in scratch resistance.

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- ◆ Available in black/white or silver/black, this .004" thick, adhesive-backed, laserable plastic is perfect for bar-codes, cylindrical labeling, ID plates or trophy plates. Sold in convenient 4.75" x 32' rolls.



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- ◆ For use on rigid or flexible signage to provide lettering or graphics. Typically cut with a vinyl plotter machine, this single-ply adhesive backed material is perfect for most any outdoor application. Available in 3.2 mil thick Calendared Vinyl or 5.5 mil thick Reflective vinyl. Sold in full rolls only.





- ◆ This special line of gold anodized aluminum returns black characters when lasered with any standard CO2 laser engraver. No oxidation or paint fill needed - and it only requires 5-10 watts of power! Now available in silver or gold, and suitable for most outdoor environments. May require a clear lacquer coat after engraving for harsh outdoor environments.

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# Metals

## Colored Aluminum

- ◆ This aluminum has been painted with a polyester-based paint. The process is very economical and is historically one of the preferred choices for economical trophy plates. Since top coating of colored aluminum is painted with a polyester-based paint, the surface is sublimation-receptive for dye-sublimation transfers. And the masking on this product is clear, so you can print your dyes directly through the masking for easier clean-up. Sublimation images work best with white, silver or gold colors.



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# Metals

## Colored & Marbled Steel

- ◆ Colored Steel is actually a brass-plated steel product. Designed for use with a laser machine, this product returns brilliant gold lettering when engraved with a laser engraver. And the clear layer of lacquer under the polyester-based topcoat of paint protects the brass from oxidizing for years to come. The great appearance and low price have made Colored Steel a recent favorite of trophy shops using laser engravers. Since top coating of colored steel is painted with a polyester-based paint, the surface is sublimation-receptive for dye-sublimation transfers. And the masking on this product is clear, so you can print your dyes directly through the masking for easier clean-up. Sublimation images work best with white, silver or gold colors.



# Metals Gravobrace Premium

- ◆ Premium Gravobrace has a thin protective lacquer coating to protect the surface from oxidizing over time, but is only suitable for indoor environments.



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- ◆ Gravobrass Solid is a raw brass typically used for office building exteriors, commonly called "Doctor Plates". If you do not want the appearance of aging or oxidizing brass, it will be required to coat the final engraved (and likely paint-filled) product with an exterior-grade clear lacquer before or soon after mounting.



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*Forever*

AMERICAN DENTAL A



AMY N  
D.D.S.

- ◆ While the cap is metal, the core is Phenolic. Perfect for upscale interior metal signage. And because the .010" aluminum caps cover a black Phenolic core, you will never need to paint fill this metal product after engraving. This product can save you time and money.

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- ◆ This solid sheet of aluminum has an anodized surface. The anodization colors the actual metal to a depth of .001" to .002" and is typically more durable than a paint that is applied to the surface of the metal. For this reason, anodized aluminum is often used for industrial applications requiring a durable surface finish. While anodized aluminum can be engraved with a laser engraver, an engraved contrast will only be realized with gold, black, or colored aluminum. The silver version has a clear anodization.



- ◆ Created with economy in mind, Trophy Brass consists of a more economical brass-coated layer of solid paint. Designed for use with a rotary engraver, Trophy Brass can provide you the rich appeal of engraved brass without the cost of Premium Brass.

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PLATE  
ENGRAVING

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