

MATERIALS SELECTION GUIDE



Rotary Engraving

What engraving method will be used to make the product?



Laser Engraving



YAG Laser

What will be the final application of the product?

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- Tactile Braille-legislation compliant signage
- Other signage, badges, or identification for flat surfaces
- Product identification or labeling for curved or flexible surfaces
- Award plaques or trophy plates

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INDOOR



ROTARY



LASER



YAG LASER

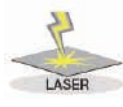
BRILLE	PLASTIC	METAL	PLASTIC	METAL	PLAQUES
GravoTac Gravoglas 2 (matte)	Gravoply 1 Metallex Gravoply Ultra Gravoply 2 Gravoply 3C Gravoglas 2 GravoTac Gravostrat Gravoply Laser Gravoglas 1	Gravometal Gravostrat Gravoxal	Gravoply Ultra Gravolase Gravofoil Gravoply Laser	Gravoxal	Gravoply Ultra Colored and Marbled Steel Colored Aluminum and Trophy Brass Gravostrat Gravoxal Gravolase Gravometal

BRILLE	PLASTIC	METAL	PLASTIC	METAL	PLAQUES
GravoTac (exterior)	Gravoply Ultra Gravoply Laser Gravolase Metallex	Gravoxal AlumaMark Gravometal (Black) Colored & Marbled Steel	Gravoply Ultra Gravolase Gravoply Laser Stickalase	AlumaMARK	Gravoply Ultra Colored and Marbled Steel Gravoxal Gravolase Gravometal (Black)

OUTDOOR



ROTARY



LASER



YAG LASER

BRILLE	PLASTIC	METAL	PLASTIC	PLAQUES
GravoTac Exterior	Gravoply Ultra Gravoglas 1		Gravoply Ultra	Gravoply Ultra

BRILLE	PLASTIC	METAL	PLASTIC	PLAQUES
GravoTac Exterior Gravoglas 2-Plex	Gravoply Ultra Gravoglas 2 Gravoglas 1	Gravobrass Exterior	Gravoply Ultra Gravofoil	Gravoply Ultra Gravobrass Exterior

KNOW YOUR PLASTICS

GRAVOPLY ULTRA (p. 17)

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. This cap is so durable, in fact, it can be used indoor or outdoor. Even better, this fully UV stable 2-ply product can be engraved with a rotary or laser engraver. This product is available in a variety of overall thicknesses .020", .062", .090" (0.5 mm, 1.6 mm, 2.4 mm) 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.

GRAVOLASE (p. 18)

Similar in appearance to the Metallex product line, Gravalase uses many of the same foil cap layers. However, Gravalase 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" (0.5 mm) or a sturdy .062" (1.6 mm) overall thickness.

GRAVOPLY LASER (p. 19)

An indoor laserable product at a lower price. Construction of material is an acrylic core and a foil cap designed for detailed engraving. This product is offered in a wide range of colors which are laser and rotary engravable. Excellent for interior signage.

FLEXILASE (p. 20)

Flexilase™ is a high-resolution material that is flexible and engraves on rotary and CO2 laser systems. Just 0.25mm (0.01 inches) thick, Flexilase™ is ultra-flexible and an ideal solution for all your engraving needs on curved and flat surfaces. Whatever technology you use—laser or mechanical engraving—Flexilase™ offers outstanding cutting and engraving results.

GRAVOPLY 1 (p. 21)

Still our most popular product, GravoPLY 1 is constructed with a standard .010" (0.25 mm) cap layer and perfect for almost any indoor application.

GRAVOPLY 2 (p. 24)

The microthin .001" (0.025 mm) 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 we now have GravoPLY 2 Gloss available which has a glossy clear protective cap layer.

GRAVOPLY 3C (p. 26)

3-ply "double-faced" 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 "double-faced" material is constructed with 3 layers to be engraved from one side. The unique composition allows you to create a 3-color interior sign with your engraver. Engrave to .004" (0.1 mm) to expose the first core, and to .012" (0.3 mm) to expose the second core.

METALLEX (p. 27)

It's the plastic that looks like metal. Save weight and expense for 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. Metallex Gloss has an added glossy clear protective cap layer over the metallic foil – designed for the ultimate in scratch resistance.

METALLEX 2 (p. 27)

See Metallex. Metallex 2 has an extra clear coating that is applied to add more protection to the surface.

STICKALASE (p. 28)

Available in black/white or silver/black. This .004" (0.09 mm) thick, adhesive backed laserable plastic is perfect for bar-codes, cylindrical labeling, ID plates or trophy plates. Sold in 4.72" x 32.8' rolls (120 mm x 10 m rolls.)

RUBBALASE (p. 28)

A natural rubber product sold in sheets is perfect for creating high quality rubber stamps with your laser machine.

GRAVOSTRAT (p. 29)

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

GRAVOTAC (p. 37)

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 compliant with Braille ADA regulations. The raised letter process is also a great way to create multi-colored signage with your engraving machine.

GRAVOGLAS 1 (p. 39)

This acrylic 2-ply is designed exclusively for subsurface engraving, and is suitable for outdoor applications. GravoGlas 1 has a thin micro-cap on a very rigid clear solid acrylic core. The thin cap offers fine detailed engraving – and it is laserable too!

GRAVOGLAS 2-PLEX (p. 40)

Designed with the same .01" (0.25 mm) cap thickness as our standard indoor plastic GravoPLY 1, the UV stability of GravoGlas 2-Plex makes it perfect for all outdoor applications. Available in matte, glossy or textured surface finishes for surface or subsurface engraving.

GRAVOFOIL (p. 43)

Sold in sheet form, this .008" (0.2 mm) thick adhesive backed product is for use with a rotary engraver. It creates an industrial strength, permanently engraved sticker. The very flexible PVC construction allows it to conform to many product applications. This material is not suitable for laser engraving.

ACRYLIC (p. 43)

Available in clear, white, and black. Colors are often used for back plating, where you take acrylic and glue and add another material to the surface. This thickness adds to the appearance. Clear acrylic can be subsurface engraved.

VINYL (p. 44)

Used to create vinyl lettering that appears on banners, windows, autos, etc. Typically cut with a vinyl plotter machine, this single-ply adhesive backing material is perfect for almost any outdoor application. Available in .0032" (3.2 mil) thick calendared vinyl, or .0055" (5.5 mil) thick reflective vinyl. Sold in full rolls only.

Go online for the most up-to-date catalogs - Materials, Engravables, Fonts...

KNOW YOUR METALS

GRAVOMETAL PREMIUM BRASS (p. 30)



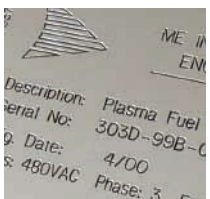
Now available for a variety of applications. Gravometal has a thin protective lacquer coating to protect the surface from oxidizing over time, but is only suitable for indoor environments.

GRAVOBRASS PREMIUM EXTERIOR BRASS (p. 31)



Gravobrace Exterior is a solid 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 necessary to coat the final engraved (and likely paint-filled) product with an exterior-grade clear lacquer before or soon after mounting.

GRAVOSTRAL (p. 32)



The cap is metal, the core is Phenolic. Perfect for quality interior metal signage. The .010" (0.25 mm) 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.

GRAVOXAL (p. 33)



This solid sheet of aluminum has an anodized surface. The anodization colors the actual metal to a depth of .001" to .002" (0.025 mm to 0.05mm) and is typically more durable than a painted surface. 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 anodizing. The silver version has a clear anodization.

ALUMAMARK (p. 34)



This special line of anodized aluminum produces black characters when lasered with any standard CO2 laser engraver. No oxidation or paint fill needed. Available in matte silver, satin silver and satin gold in thicknesses .005" (0.127 mm) and .020" (0.508 mm). Also available with adhesive backing.

COLORED STEEL (p. 35)



Colored Steel is actually a brass-plated steel product designed for use with a laser machine. This product returns a brilliant gold lettering when engraved with a laser engraver. The clear layer of lacquer under the polyester-based top coat or paint protects the brass from oxidizing for years to come. The great appearance and low price have made Colored Steel a favorite of trophy shops using laser engravers. Since the top coating is painted with a polyester-based paint, the surface is sublimation-receptive for dye-sublimation transfers. 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.

MARBLED STEEL (p. 35)



Built just like our Colored Steel (above), the final layer of paint on marbled steel is a faux marbled pattern. All the other great properties of Colored Steel remain the same on this version of Colored Steel.

COLORED ALUMINUM (p. 36)



This aluminum has been painted with a polyester-based paint. It is the preferred choice 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. 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.

TROPHY BRASS (p. 36)



An economical brass alternative for signs, trophy plates, awards and plaques designed for use with a rotary engraving machine. Trophy Brass can provide you the rich appeal of engraved brass without the associated cost.

Within the continental US call +1.800.843.7637

Outside the continental US call +1.770.623.0331

MATERIAL SPECIFICATIONS

GRAVOLASE METALLICS

GRAVOPLY LASER

FLEXILASE

GRAVOPLY 1

GRAVOPLY 2

GRAVOPLY 3C

METALLEX

STICKALASE

GRAVOSTRAT

GRAVOTAC

GRAVOMETAL

GRAVOSTRAL

GRAVOXAL

ALUMAMARK

COLORED STEEL

MARbled STEEL

COLORED ALUMINUM

TROPHY BRASS

GRAVOTAC EXTERIOR

METALLEX 2

GRAVOBRASS EXTERIOR

GRAVOPLY ULTRA

GRAVOGLAS 1

GRAVOGLAS 2-PLEX

GRAVOFOIL

ACRYLIC

VINYL

Use	Material	Surface	Method of engraving	Engraving depth
Indoor	Modified Acrylic	Brushed/Glossy/Matte	Rotary/Laser	.002" / 0.01mm
Indoor	Modified Acrylic	Matte	Rotary/Laser	.002" / 0.01mm
Indoor	Modified Acrylic	Matte/Brushed/Glossy	Rotary/Laser	.002" / 0.01mm
Indoor	ABS	Satin/Matte/Textured	Rotary	.012" / 0.03mm
Indoor	ABS	Matte/Glossy	Rotary	.002" / 0.01mm
Indoor	ABS	Matte	Rotary	.002"/.014" 0.1mm/0.3mm
Indoor	ABS	Matte/Glossy	Rotary/Laser	.001" / 0.01mm
Indoor	Plastic	Matte	Laser	.001" / 0.025mm
Indoor	Phenolic	Low Glare	Rotary	.012" / 0.03mm
Indoor	Modified Acrylic	Matte	Rotary	.032"/.064" 0.1mm/1.63mm
Indoor	Brass	Matte/Satin/Glossy	Rotary/Burnish/Diamond/Laser	Rotary .003" 0.1mm
Indoor	Phenolic	Matte/Satin	Rotary	.011" / 0.03mm
Indoor	Aluminum	Matte/Glossy	Rotary/Diamond/Laser	Rotary .003" 0.1mm
Indoor	Aluminum	Matte/Satin	Laser	.001" / 0.025mm
Indoor	Steel	Satin/Glossy	Burnish/Diamond/Laser	Burnish .002" 0.1mm
Indoor	Steel	Glossy	Burnish/Diamond/Laser	Burnish .002" 0.1mm
Indoor	Aluminum	Satin/Glossy	Rotary/Diamond	Rotary .001" 0.1mm
Indoor	Brass	Satin/Glossy	Rotary/Burnish/Diamond	Rotary .006" 0.1mm
Indoor/ Outdoor	Modified Acrylic	Matte	Rotary/Laser	.032"/.064" 0.1mm/1.63mm
Indoor	ABS	Matte/Glossy	Rotary/Laser	.001" / 0.01mm
Indoor/ Outdoor	Brass	Glossy/Satin	Rotary	.003" / 0.01mm
Indoor/ Outdoor	Modified Acrylic	Matte	Rotary/Laser	.003" / 0.01mm
Indoor/ Outdoor	Acrylic	Glossy	Rotary/Laser	.008" / 0.02mm
Indoor/ Outdoor	Modified Acrylic	Matte/Glossy/Textured	Rotary	.012" / 0.03mm
Indoor/ Outdoor	PVC	Matte	Rotary	.001" / 0.025mm
Indoor/ Outdoor	Acrylic	Glossy	Rotary	Varies
Indoor/ Outdoor	Vinyl	Glossy/Reflective	Cutting	.005" / 0.01mm

Due to print variations, material colors represented in this catalog may vary slightly from actual colors.

Recommended cutter	Grinding angles clearance/cutting		Cutter type	Needs lubrication	Saw	Shear	Bend	Stamp	Screen	Sublimatable
34108	40	30	Carbide	N	■	■	■	■	■	
34108-34117	40	30	Carbide	N						
34108-34117	40	30	Carbide	N		■	■	■	■	
34012-34022	40	30	Carbide	N	■	■	■	■	■	
34012-34022	40	30	Carbide	N	■	■	■	■	■	
34012-34022	40	30	Carbide	N	■	■	■	■	■	
34012-34022	38	30	Carbide	N	■	■	■	■	■	
Laser	Laser		Laser	N/A		■		■	■	
33989-33998	38	30	Carbide	N	■					
45704	40	30	Carbide	N	■	■	■	■	■	
34024-34033	40	30	Carbide	Y		■		■	■	
33989-33998	38	30	Carbide	Y	■					
34024-34033	40	30	Carbide	Y		■			■	
Laser	Laser		Laser			■		■	■	■
34024-34033	N/A	N/A	Carbide	N		■			■	
34024-34033	N/A	N/A	Carbide	N		■			■	■
34024-34033	40	30	Carbide	Y		■			■	
34024-34033	40	30	Carbide	N		■			■	
45704	40	30	Carbide	N	■	■	■	■	■	
34012-34022	38	30	Carbide	N	■	■	■	■	■	
34024-34033	40	30	Carbide	Y	■			■	■	
34108-34117	40	35	Steel	N	■		■	■	■	
34108-34117	40	35	Steel	N*	■		■	■	■	
34108-34117	40	35	Steel	N	■		■	■	■	
33989-33998	38	30	Carbide	N		■			■	
34036-34044	N/A	N/A	Steel	N	■		■	■	■	
34036-34044	N/A	N/A	Vinyl Knife	N		■			■	