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What are Engravable Plastics by [Csiuk Epilog](#)

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In this article we look at Engraving on Engravable Plastics.

Standard engravable plastics include; cast acrylic plastic, acrylic plastic sheet, and other cast resins, which generally laser very well. A commonly engraved award is a cast acrylic shape designed to be lasered from the back side. Styrene (as in compact disc cases) and many of the thermoforming plastics will tend to melt around the edge of the engraving spot. The result is usually "soft" and has no "etch" contrast. The surface may actually deform or "ripple" at the lip areas. These plastics generally would not be considered to be Engravable Plastics however in some applications this is acceptable; for example date markings on 2-litre soda bottles do not need to be sharp.

For signage and faceplates, etc., special laser-engraving plastics were developed. These incorporate silicate or other materials, which conduct excess heat away from the material before it can deform. A silicate is a compound containing a silicon bearing anion. Silicates comprise the majority of the earth's crust. Sand, Portland cement, and thousands of minerals are examples of silicates. Silicate compounds, including the minerals, consist of silicate anions whose charge is balanced by various cations. Myriad silicate anions can exist, and each can form compounds with many different cations. Hence this class of compounds is very large. Both minerals and synthetic materials fit in this class. Outer laminates of this material vaporize easily to expose different colored material below. These materials would be considered to be specialist Engravable Plastics.

Other plastics may be successfully engraved, but orderly experimentation on a sample piece is recommended. Bakelite is said to be easily laser-engraved; some hard engineering plastics work well. Expanded plastics, foams and vinyls however are generally candidates for routing rather than laser engraving. Urethane and silicone plastics usually don't work well unless it is a formulation filled with cellulose, stone or some other stable insulator material.

Many light switch plates can be laser engraved. Again, experimentation may be necessary to develop the correct laser settings to result in engraving the surface rather than melting it. Often the laser engraving is followed by paint filling the engraved surface to produce more contrast between the engraved surface and the surrounding surface of the engravable plastic.

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To find out more about Engravable Plastic visit the CSI (UK) website at www.csiuk-epilog.co.uk. CSI (UK) are specialist supplier of Epilog Laser Machines, Materials including engravable plastics and support services to the UK market.

a [Part Marking](#)

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