Physical Properties

Ultra-Mattes Reverse Physical Properties

Ultra-Mattes™ Reverse Engravable

Physical Properties	Typical Values	ASTM Method
IZOD Impact Strength		
Notched at 73°F (22.78°C)	1.10 ft lbs/in	D-256
Tensile Strength		
To break	5,500 psi	D-638
Elongation before break	50%	D-638
Flexural Strength		
Loan to stretch outer surface 5%	10,300 psi	D-790
Specific Gravity	1.15	D-792
Rockwell Hardness	M45	D-785
Deflection Temperature		
Temperature at which material deflects .010" (.254mm) at 264 psi	175°F (79.44°C)	D-648
Coefficient of Thermal Expansion		
Inch/inch/°F	5.6×10^{-5}	D-696
Vicat Softening Point		
Temperature for needle to penetrate 1mm (90°F/hr, 2.2 lbs)	208°F (97.78°C)	D-1525
Temperature for needle to penetrate 1mm (90°F/hr, 11.0 lbs)	187°F (86.11°C)	D-1525

ULTRA-MATTES (REVERSE) engraving material softens at about 200°F (93.33°C) sufficiently so that it can be bent as needed. It can be sawed, drilled and bonded, but not sheared. For best appearance, sawed edges should be buffed on material 1/8" (3.0mm) and thicker.

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The base and cap materials, as well as the foils, were tested for flammability by Underwriters Laboratories. The base and cap materials are rated 94 HB on the UL 94 test. The foil was judged as not contributing to the combustion of the base material.

Under the ASTM Standard G-155, Ultra-mattes (reverse) engraving material was tested with a Xenon Arc Light Apparatus under specific, reproducible conditions. Testing resulted in no noticeable change in color after 300 hours of exposure to the Xenon Arc. Exposure to the Xenon Arc for 300 hours is supposedly the equivalent of approximately 3 years of exposure in a normal, mild climate, such as the Midwestern States of the United States.

This is not intended as a statement of warranty, rather a statement of general comparison.

NOTE: *The above information is given in good faith, but no warranty, express or implied, is given*