

Brick Durability Standards

Our laser vitrification process was subjected to a simulated fifty-year weather resistance test. Independent Testing Laboratories, an independent company, conducted the test. Samples of our laser engraved bricks were placed in three weather climates: Freeze-thaw cycling (hot and cold), ultra violet rays (sun), and salt spray environment (snow, ice, rain). Even under the most extreme weather conditions, the laser engraved bricks will stand the test of time, ensuring that you will never need to replace your brick.

Independent Testing Laboratories - St. Louis, Missouri

Test Process Report #95-02-00405

A sample of each 3 styles of brick was selectively subjected to (1) freeze-thaw cycling, (2) continuous exposure to carbon arc light in an Atlas Fade-o-meter, and (3) continuous exposure to a salt spray environment. The results of each exposure is described below:



FREEZE-THAW CYCLING

A sample of each style or shade was subjected to freeze-thaw cycling which consisted of first completely soaking the brick in water and then placed into a cold box maintained at -20F. Subsequent to a six hour exposure in the cold box, they were then transferred directly into an oven, maintained at 160F, for a 15 hour period. This cycle was repeated daily with the exception that the heat cycle was continued over the weekend. The freeze-thaw cycle was repeated 51 times in the course of the exposure. It was noted that no visual change in the appearance of the engraving was detected in the bricks when compared to the control samples.



CARBON ARC EXPOSURE

A specimen of each style brick with laser engraving was subjected to direct ultra violet light exposure generated by a carbon arc in an Atlas Fade-o-meter. This stimulated exposure to direct sunlight similar to that experienced at high noon at the equator. The bricks were oriented in the chamber with the engraved surface facing the arc at a distance of 12 inches. The bricks were continually subjected to the carbon arc light for a 37 day period. No visual change in the appearance of the laser engraving was noted in any of the bricks following this exposure.



SALT SPRAY EXPOSURE

One specimen of each style of engraved brick was subjected to a salt spray cabinet exposure for a period of nine weeks (63 days). Upon removal from the cabinet, the bricks were rinsed in water and examined. Visual inspection at the conclusion of the exposure period revealed no change in the appearance of the surface etchings as compared to that of the control samples.

EVALUATION OF RESULTS

Based on the text results obtained in the course of this examination, it is our opinion that the engravings produced in the surfaces of the three styles of bricks submitted, were all comparable and were all resistant to the environmental extremes created during the test exposure. The laser engravings appeared quite durable and resistant to weathering under the conditions of testing.