



## Chemical Testing—Guardian Extreme™ Signs and Tags

Master Lock has tested the Guardian Extreme Signs and Tags using the industry standard Liquid Penetrant Inspection process.

The Liquid Penetrant Inspection test is used to test a variety of materials in a manner that replicates common field situations. Liquid Penetrant Inspection is capable of revealing surface discontinuities (variations in material composition) in a variety of environmental exposures making it an effective tool for determining the suitability of a material for use in environments where exposure to chemicals may occur.

### TEST PROCEDURE:

Tags & Signs shall not exhibit any loss of gloss, color, or legibility when exposed to five drops of the chemical agents/fluids listed below. Full exposure time of the labels to the fluids shall be 1 minute. Then the exposed surface shall be rubbed in a back and forth motion with a cloth.

### PRODUCT EVALUATION:

The exposed product is then evaluated for visual and structural integrity. The graphics must retain visual acuity and the tag or sign must not delaminate or become structurally unsound.

### TEST RESULTS:

Master Lock Guardian Extreme Tags & Signs with graphics permanently embedded in solid injection molded Polypropylene using our patent pending process have successfully passed the Liquid Penetrant Inspection test for the following chemical agents:

Acetone	Lead Tetraacetate
Aliphatic Solvents	Ketone
Alkaline Cleaners	Methanol
Ammonia	Methyl Polysilicone
Anionic Surfactants	Mineral Oil
2-Butoxyethanol	Naphtha
Benzene	Phosphoric Acid < 10%
Benzyl Ammonium Chlorides	Potassium Hydroxide
Butanol	Potassium Hypochlorite
Chlorinated Alkaline Cleaners	Propylene Oxide
Chlorine Bleach	Quaternary Ammonium Chlorides
Cryogenic Liquids	Sodium Hydroxides
Dimethyl Benzyl Ammonium Chloride	Sodium Hypochlorite
Ethylene Oxide	Sodium Metasilicate
Formaldehyde	Synthetic Wetting Agents
Glycol	Tetraacetate
Glycol Ether DPM	Trisodium Phosphates
Glycol Ether Solvents	Toluene
Hydrochloric Acid < 10%	Vinegar
Isopropanol	Xylene
	Wash solvents