



Ceramic Barcode Labels

SECURITY/DESTRUCTIBLE/SPECIALTY LABEL LINE

For extreme environments, only the strongest will do. That's when you call in Metalcraft Ceramic Labels and Nameplates.

This series of products is ideal for customers who require permanent identification products to stand up in environments where exposure to high temperatures as well as extreme caustics and acids may be an issue. These nameplates and labels provide excellent chemical resistance as well as the ability to withstand extreme temperatures up to 2,400 °F depending on the product.

These highly specialized products are ideal for work-in-process applications for manufacturers or other fixed asset tracking applications that are unsuitable for other label types due to demanding environmental conditions. Possible uses range from pharmaceutical laboratories and glass manufacturing to food processing and long-term outdoor storage.

Material and Design Specifications

- Material: Alumina (Al₂O₃) ceramic material
- Serialization: All alphanumeric barcodes are printed with a human-readable equivalent. Guaranteed no skips in sequence. Code 39 is standard. CPIs range from high to low densities. Other options include Code 128, I2 of 5 and 2D symbologies.
- Sizes: Contact Metalcraft for details
- Optional holes for mechanical fasteners. Standard hole diameters include 3/32", 3/16" and 1/8" (2.39, 4.77 and 3.18 mm). Contact Metalcraft for additional dimensions. A 1/4" (6.35 mm) quiet zone must be allowed at the beginning and end of the barcode inside the mechanical fastener area.

Test Results

These tests were conducted for a limited period in strict laboratory conditions. To achieve maximum satisfaction, we highly recommend any customer considering use of this product test the tags in the environment in which they will be used.

Weather Resistance Test: No effect on ceramic layer after 30 cycles salt spray test under conditions indicated.

Conditions	Temperature	Humidity	Time
5% salt water spray	35° +/- 1 °C	Over 95%	2 hrs.
Dry hot air	60° +/- 2 °C	---	4 hrs.
Wetting	50° +/- 2 °C	Over 95%	2 hrs.

Key Features

- Entire line of products resist extreme caustics and acids
- Ceramic Barcode Labels can withstand temperatures up to 2,400 °F depending on the product.
- Withstands exposure to high temperatures

Applications

- Asset Tracking
- Manufacturing
- Work-in-Process Tracking
- Product Identification

Environmental Specifications

- Chemical Resistance: Excellent resistance to chemicals, extreme caustics and acids.

Chemical Resistance Test

Properties	Type 100	Type 200	Type 300
Hydrochloride (20%, 20 °C)	NE after 7 days	NE after 180 days	NE after 180 days
Sulfuric Acid (20%, 20 °C)	NE after 2 days	NE after 180 days	NE after 180 days
Nitric Acid (20%, 20 °C)	NE after 2 days	NE after 180 days	NE after 180 days
Sodium Hydroxide (20%, 20 °C)	NE after 7 days	NE after 48 days	NE after 180 days
Solvent	NE	NE	NE

Key: NE - No Effect

Heat Test

Properties	Type 100	Type 200	Type 300
Maximum Heat Resistance	800 °C (1,470 °F)	1,100 °C (2,010 °F)	1300 °C (2400 °F)