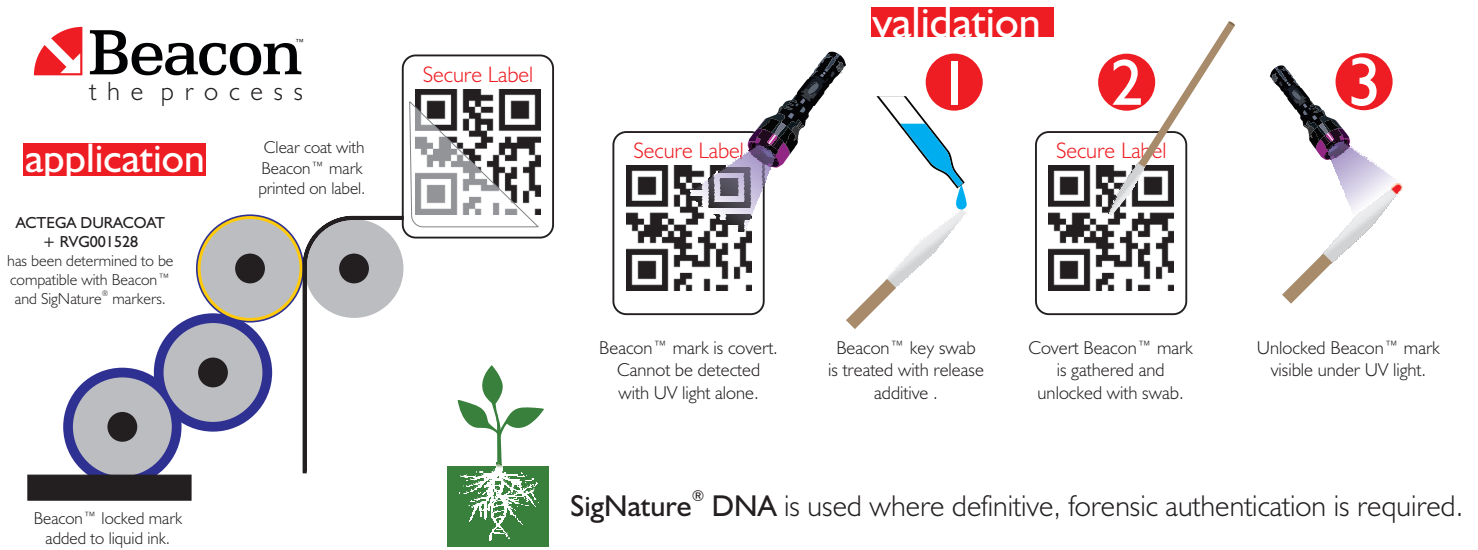


Beacon™ secure in-field validation system

Overview

Beacon™ locked optical markers deliver secure real-time validation inspection capabilities. A unique, encrypted fluorescing signal (patent-pending) acts as a covert screening tool that can be easily adapted to packaging and labels through inks, varnishes and coatings. When Beacon locked optical markers are combined with SigNature® DNA markers, a strong and flexible end-to-end security solution is created where authenticity and provenance can be determined with confidence.

Developing a secure method for real-time, in-field screening of DNA-marked items has long been a priority for Applied DNA Sciences. Standard fluorophores, up-converting phosphors, holograms and other more-traditional screening tools provide little to no defense against counterfeiting. Secure in-field inspection, backed with forensic-level DNA authentication is the key to maintaining a well-defended supply chain or asset management program.



Beacon™ Locked Marker

General Note - All Beacon marker specifications listed below are dependent on the properties of the host carrier. ADNAS can recommend a carrier or adapt the Beacon marker to a customer's carrier.

Activation - "Lock and key" chemical interaction requiring a matching locked mark and activation key swab.

Host Carrier Compatibility - Ink, Varnish, Lacquer. Do not use in conjunction with optical brighteners.

Optical Characteristic - Covert, no color or luminescence under an ambient or UV light. Upon unlocking, a red luminescence will appear under a Labino UVG 365nm light.

Temperature Range - 0°C to 1000°C

Shelf Life (Prior to use) - will be determined at certification of host carrier. Based on current certified application range from 6months – 100 years.

Application Life - The combination between the properties of the host carrier and environmental conditions will dictate the life span of the Beacon mark.

Stability - Lightfast, UV and thermal exposure resistant and resistant to a variety of common chemical treatments.

Beacon™ Key Activator

Activator Applicator - Pre-Treated Swab

Optical Characteristic - Covert with no color or luminescence under an ambient or UV light source. Red luminescence under UV light source shows up only when in contact with Beacon mark.

Storage Temperature - 4°C to 25°C

Shelf Life - 3 to 6 months. Dependent on environment and storage temperature.

Application Use - One swab per unit being inspected

Beacon™ Release Additive

Application - dropper

Storage Temperature - 4°C to 25°C

Shelf Life - 3 to 6 months. Dependent on environment and storage temperature.

Application Use - One drop per unit being inspected