

# ECO Cap RAIN RFID Label

Stora Enso, Intelligent Packaging



## Sustainable RAIN RFID label for plastic bottle tagging and unmanned retail

Digitalization is changing the global food industry at a rapid pace, providing more opportunities in areas, such as food distribution and inventory control. Companies are also seeking new solutions and technologies, like unmanned retail services, to optimize operation and serve consumers in the changing retail landscape.

Stora Enso's ECO Cap UCODE 8 RFID label is specifically designed for item-level inventory management of plastic bottles, enabling visibility and management capability to supply-chains. Due to its size and performance, ECO Cap enables retailers to reliably identify and manage their items in various retail applications, including unmanned retail. With a fibre-based substrate, ECO Cap is the environmentally friendly choice with a natural anti-tamper feature.



ECO RFID  
Tag Technology  
by Stora Enso

### Applications



Retail



Unmanned  
retail

# Key features of ECO Cap

## Perfect for plastic bottle caps

ECO Cap label's compact form factor is the perfect match for most plastic bottle caps, such as caps of soda bottles. Normally conventional RFID labels do not work where liquids are involved because the liquid in the bottle absorbs the radio waves. With ECO Cap it is safe and easy to place the label directly on top of the plastic bottle cap and ensure reliable reading without the need for expensive and special foam tags.

## Maximized performance

ECO Cap uses NXP's UCODE 8 IC. The IC integrates Self Adjust, a feature that maximizes the product performance across a broad range of operating frequencies, dialects, and applications. ECO Cap offers excellent performance in close proximity cases which is a typical reading environment in unmanned or self-service sales. ECO Cap is a choice for retailers and brand owners globally, as it is compliant with current frequency regulations.

## Reliable choice

ECO Cap labels pass industry standard tests for temperature and humidity (IEC 60068-2-67), temperature cycling (JESD22-A104-B) as well as tag bending tests. These comprehensive tests ensure ECO Cap performs at all stages of the products life cycle and can safely be used to track items from source to the point of sale.

## About Stora Enso

Our aim is to replace non-renewable materials by innovating and developing new products and services based on renewable materials. And by transforming the world, we are transforming ourselves too; growing our expertise to meet the needs of our customers and overcome many of today's raw material challenges. As the leading global provider of renewable solutions in packaging, biomaterials, wooden constructions and paper, we employ around 26,000 people in 35 countries. Intelligent Packaging by Stora Enso is a leading global provider of products and services that enable our customers' digital transformation using the internet of things (IoT). We provide them with the means to connect physical items, gain efficiency, quality and visibility and exceed their customers' expectations.

Stora Enso's  
ECO Cap  
UHF label  
in natural size.



## Technical details

### Sales Code

500098

### IC & electrical details

NXP's UCODE 8  
128 bit EPC  
860 - 960 MHz  
EPC Class 1 Gen 2, ISO 18 000-6C

### Size

Paper Tag size Ø 30 mm / Ø 1.18 in

### Web width

40 mm

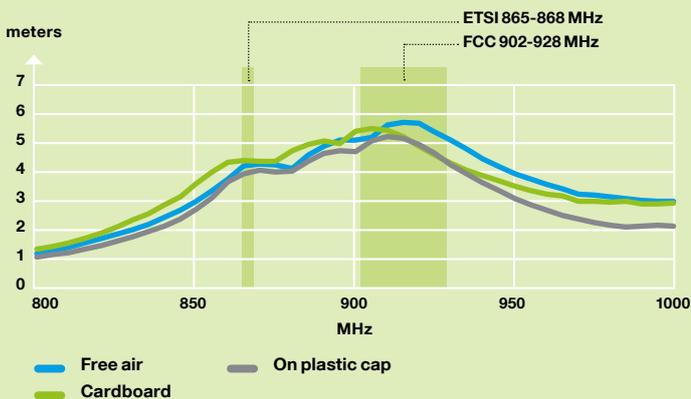
### Operating temperature

-20 °C...+80 °C / -4 °F...+176 °F

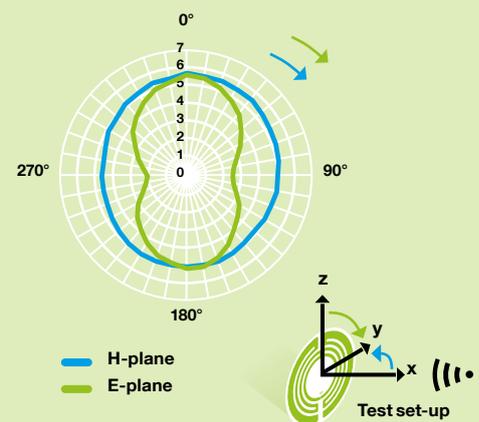
### Delivery details

76 mm / 3 in core  
3 500 pcs/reel, 28 000 pcs/box  
1 year shelf life in +20 °C / 68 °F, 50 % RH

## Theoretical read range forward



## Orientation sensitivity



## Contact us for more information:

[www.storaenso.com/intelligentpackaging](http://www.storaenso.com/intelligentpackaging)

The performance of the product should always be tested in the actual application conditions. Our recommendations are based on our most current knowledge and experience and the pictures and illustrations presented in this document are for illustration purposes only. As our products are used in conditions beyond our control, we cannot assume any liability for damage caused through their use. Stora Enso reserves the right to change its products and services at any time without notice.



THE RENEWABLE MATERIALS COMPANY