

# ECO Bale RAIN RFID Label

Stora Enso, Intelligent Packaging



## ECO RFID label for tracking pulp bales

Stora Enso produces over 9 million tons of pulp in different grades every year. More than 2 million tons of market pulp is sold on an annual basis to serve the global paper industry. Stora Enso developed the ECO Bale tag as part of an integrated pulp tracking solution to efficiently identify and trace individual bales or units of pulp throughout the supply chain. ECO Bale works seamlessly with our RFID solutions and equipment, providing full traceability. Besides the ECO Bale tag Stora Enso's solution for the pulp and paper industry includes the Bridge™ Cloud platform and industrial equipment including applicators, forklift readers, gate readers, tunnel readers and handheld identification systems.

ECO Bale UCODE8 is designed and optimised for tagging pulp bales and complies with the special requirements of the pulping process. Applied to the pulp bale, ECO Bale enables end-to-end traceability until the bale including the tag enters the papermaking process and dissolves.



## Applications



Pulp & Paper



Industry



Supply chain  
management

# Key features of ECO Bale

## Repulpability

OBA-free paper substrate and other carefully selected materials ensure that ECO Bale will dissolve in the pulping process without causing any negative impacts in the papermaking process. The compatibility in pulping processes has been verified through third-party testing and conforms with certification processes according to industry standards and regulations of the European Economic Community (EEC) and the US Food and Drug Administration (FDA).

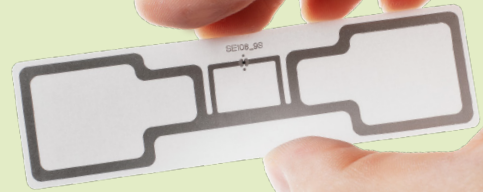
## High performance and reliability

ECO Bale features high performance and read reliability. ECO Bale tags have been designed for application on materials that contain moisture, such as pulp bales. This makes the tags easily trackable with handheld, fixed, and forklift-based RFID readers, enabling high-quality, reliable, real-time data for logistics and production management systems. The automatic application of this thin, flexible, paper-based label onto pulp bales ensures the highest levels of efficiency and automation. ECO Bale passes industry standard tests for temperature and humidity (IEC 60068-2-67) and temperature cycling (JESD22-A104-B), as well as tag bending tests. These comprehensive tests ensure ECO Bale performs at all stages of the pulp bales' life cycle and can safely be used to track items from source to the point of manufacture.

### 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 Bale UHF label in 60% of its natural size.



## Technical details

**Sales Code**  
500021

**IC & electrical details**  
NXP's UCODE 8  
128-bit EPC  
860–960 MHz  
EPC Gen2v2, ISO18 000-63

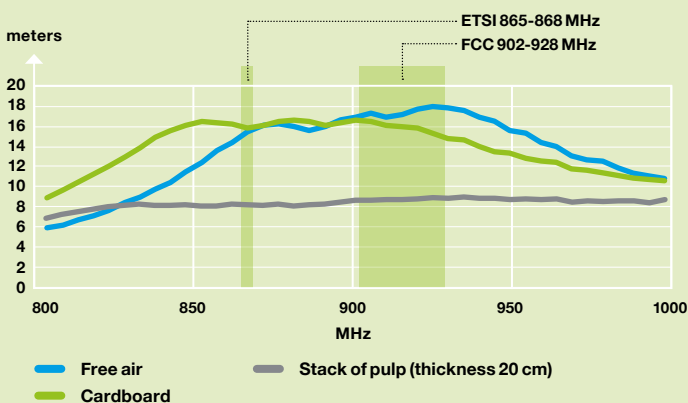
**Size**  
Paper Tag size 97 x 27 mm / 3.82 x 1.06 in

**Web width**  
100 mm

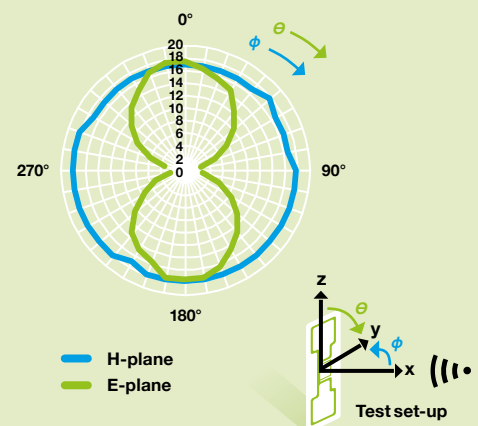
**Operating temperature**  
-5 °C...+60 °C / +23 °F...+140 °F

**Compliance**  
Directives 80/590/EEC and 89/109/EEC,  
FDA 21 CFR Ch. I § 176.170 (April 1, 2018 edition)

## Theoretical read range forward



## Orientation sensitivity



Contact us for more information:  
[www.storaenso.com/intelligentpackaging](http://www.storaenso.com/intelligentpackaging)

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