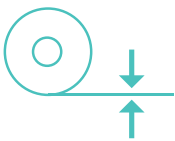


Thermal Transfer Ribbons – Environmental Performance¹⁾



Product Eco Design



Thinner PET base film

- AG6E extra long length 800 meter ribbons.
- Manufactured on a 4µm film.
- 12% plastic waste reduction vs. standard ribbons.
- Example: Every single 600 m ribbon switched to 4 µm film reduces the plastic used by the equivalence of one plastic bottle.²⁾

“Ribbons with lower environmental impact”



Solvent free ribbons

- AW6F is a 100% solvent free ribbon, even including its backcoat.
- Saves 365 g CO₂ compared to standard ribbons.
- Example: 2 tonnes of CO₂ is saved when 3,000 rolls are switched to the SolFree process. This corresponds to a person's flight from Los Angeles to Seoul (9,600km).³⁾



PEFC/FSC cardboard core

- 100% of the wood required for the ribbon cores is sourced from sustainably managed forests.

Waste Management



100% PET production waste recovered

- 0% waste goes to landfill.
- 100% is recovered as solid recovered fuel (SRF) in cement plants replacing fossil fuels or is recycled into new plastic.

“Reduced environmental footprint”

Manufacturing Process

“Lower impact operations”



58% electricity from renewable origin

- At the ribbon factory.



91% production solvents recovered into factory energy

- Solvents are treated with oxidizers to create energy used in the factory to reduce VOC emissions (Volatile Organic Compounds).
- Supporting the production site energy independence.

15% solvent reduction over the last 5 years

- For each square meter of thermal transfer film produced.

“Ribbons use non-harmful components”

Ribbon Composition

REACH - 1907/2006/EC

- No Substance of Very High Concern (14 June 2023 update)

Biocides free

- 528/2012/EC

Persistent Organic Pollutants free

- 2019/1021/EC



RoHS compliant

- 2011/65/EC

Phenol

- No BPA or BPS

Toxic Substances Control Act (TSCA)

- No persistent, bio-accumulative and toxic chemicals according to section 6 (h)

¹⁾ The environmental performance described in this document applies to specific grades of Toshiba ribbons. For further details contact your Toshiba sales representative.

²⁾ Source: co2.myclimate.org/

³⁾ Roll dimensions: 110 mm wide, 600 m long

