



Sustainability Brochure

Woven Lable



What's the impact:

Dyeing with Twine vs. current industry processes

A life cycle analysis (LCA) assesses the environmental impacts and attributes associated with all the life cycle stages of a commercial product.

This LCA compares Twine's TS-1800 digital thread and yarn dyeing machine with current industry processes - from the moment the raw materials are excavated, up until the polyester thread is dyed.

This LCA was made in collaboration with Made2Flow, with a 3rd party validation by Quantis.



	Functional Unit	Benchmark
Thread	White 100% polyester threads	White 100% polyester threads
	50 Denier	50 Denier
Machine location	Guangdong province, China	Guangdong province, China
Dyeing color	Navy, Pantone 19-4030	Navy, Pantone 19-4030
Quantity	100 grams	MOQ 1 kg
Color development	18 grams (3 iterations)	
Boundary	Cradle - Dyed Thread	Cradle - Dyed Thread

Results

Avoided



- **14.19 kg of CO²**
- **Benchmark: 24.70 kg**
- **Savings: 42.57%**
- Greenhouse gases absorb and emit infrared radiation in the Earth's wavelength range
- Measured in CO² equivalent, it includes gases such as carbon dioxide, nitrous oxide & methane



81 km driven by car



- **0.20 m³ of water**
- **Benchmark: 1.42 m³**
- **Savings: 85.81%**
- All water used in the direct process or sub-processes (such as energy generation)



349 days of drinking water



- **69.41 MJ of energy**
- **Benchmark: 77.88 MJ**
- **Savings: 10.88%**
- The use of energy across all processes and sub-processes includes electricity and heat sources. It's measured in Megajoule (MJ)



6 hours of watching Netflix



- **0.17 m² of land use**
- **Benchmark: 0.33 m²**
- **Savings: 46.15%**
- The environmental impacts of occupying, Reshaping, and managing land for human purposes. It is measured in square meters (m²)



2.44 paper sheets of a size A4

About Twine

Twine's technology & solution presents a waterless, sustainable thread and yarn dyeing system, which can reduce time to market, and streamline inventory management while enabling an unlimited color palette.

With our zero water use technology, Twine's TS-1800 presents a sustainable thread and yarn dyeing system that addresses the serious water pollution and environmental issues that have been a part of the dyeing industry for decades.

Be Fast. Be Creative. Be Sustainable.



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