



# Sustainability Brochure

## Sock

### 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	Israel	Slovakia
Dyeing color	Navy, Pantone 19-4030	Navy, Pantone 19-4030
Quantity	32 grams	MOQ 4 kg
Boundary	Cradle - Dyed Thread	Cradle - Dyed Thread

#### Results

#### Avoided



- **3.84 kg of CO<sup>2</sup>**
- **Benchmark: 92.48 kg**
- **Savings: 95.84%**
- Greenhouse gases absorb and emit infrared radiation in the Earth's wavelength range
- Measured in CO<sup>2</sup> equivalent, it includes gases such as carbon dioxide, nitrous oxide & methane



**682 km** driven by car



- **0.05 m<sup>3</sup> of water**
- **Benchmark: 5.81 m<sup>3</sup>**
- **Savings: 99.06%**
- All water used in the direct process or sub-processes (such as energy generation)



**1645 days** of drinking water



- **18.82 MJ of energy**
- **Benchmark: 311.53 MJ**
- **Savings: 93.96%**
- The use of energy across all processes and sub-processes includes electricity and heat sources. It's measured in Megajoule (MJ)



**219 hours** of watching Netflix



- **0.04 m<sup>2</sup> of land use**
- **Benchmark: 1.05 m<sup>2</sup>**
- **Savings: 95.43%**
- The environmental impacts of occupying, Reshaping, and managing land for human purposes. It is measured in square meters (m<sup>2</sup>)



**16.13 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.**