



# DURABLE ELEGANCE

## Physical Durability Protocol

Extraction and explanation of our technical document  
QC-SP-10050

05.06.2023



# 01. Key points

05.06.23



## Lacoste Polo Quality Survey 2018

The Marketing Team launched in 2018 a quality survey of French, English, American and Korean consumers.

The key point was our consumer, overall, are very satisfied.

Motives for end of life expressed by our customers were :

- Discoloration
- Distortion
- Shrinkage

This study allowed us to estimate the number of washes expected by our consumers.

## Customer Claims K.P.I.

To complete the marketing studies, we used also the data from our customer claim service in Troyes to identify the other causes not raised by the Polo Quality Survey.

## P.E.F.C.R. Regulation

In parallel, the European Authorities decided to work on P.E.F.C.R. (Product Environmental Footprint Category Rules)

The target is to define a methodology to measure the environmental impacts of each stage of product's life (Manufacturing, Consumption, Post consumption)

The physical durability is an important lever to reduce the environmental impact.



# 02. Lab test selection

05.06.23



# End of service & Lab test correlation

## Discoloration

The discoloration causes can be multiple :

- After washes
- After light exposure
- Perspiration
- Wet rubbing

## Holes

The holes can be simulated through several tests:

- Appearance after wash
- Bursting strength

## Distortion

Spirality after wash

## Shrinkage

Shrinkage after washes.

## Pilling -Fuzzing

The modification of surface fabric appearance can be tried through

- Pilling test
- Appearance after wash

# Domestic Washing

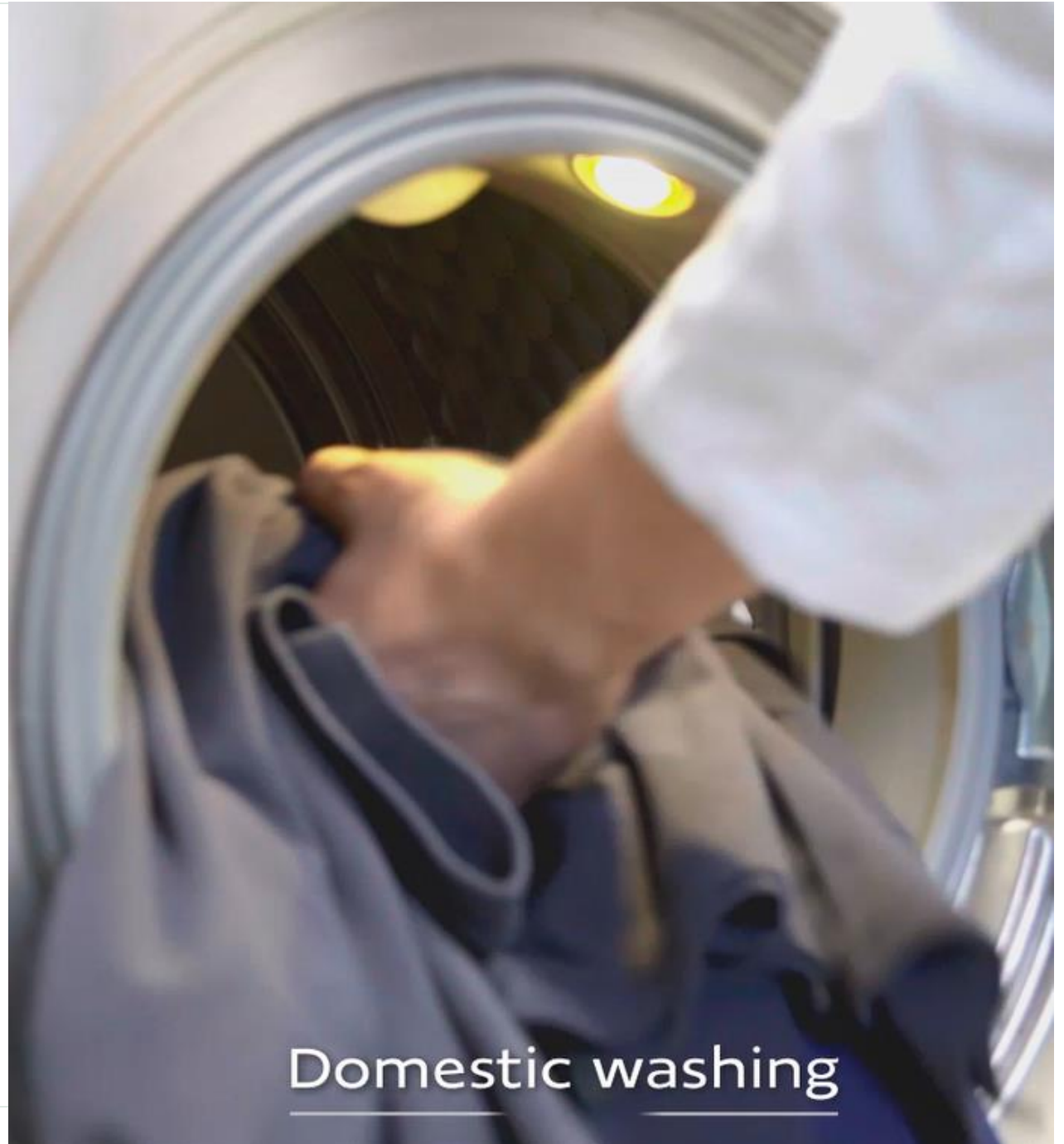
ISO 6330

The domestic washing can simulate **several causes** of end of service

- **Shrinkage**
- **Spirality**
- **Holes** (when the fibres are damaged chemically by the detergent and the repeated mechanical action)
- **Color change** wash after wash
- **Pilling and fuzzing** due to the rubbing in the drum during the washes.

To follow the P.E.F.C.R., we decided to use the ISO standard 6330 to ensure a reproducibility between lab.

For highest level (Aspirational) the P.E.F.C.R. recommends to wash 60 times.



Domestic washing

# Bursting strength

ISO 13938-1

The bursting strength to assess the knit fabric resistance

## Holes

# Exposure at light

ISO 105 B02

The color fastness to artificial light

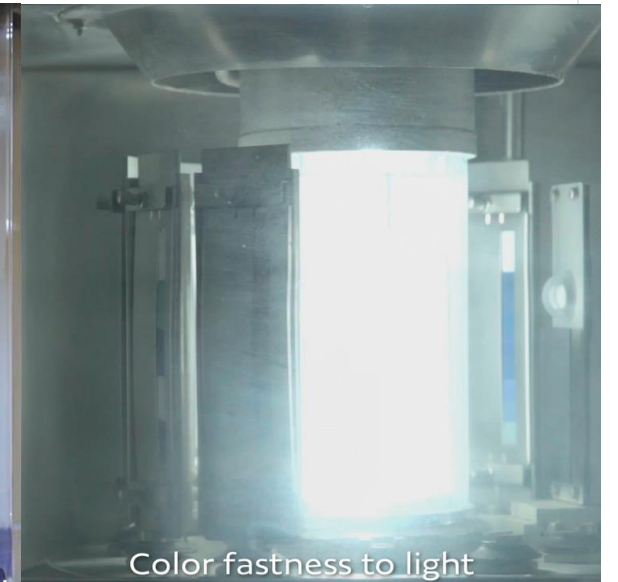
Color change after light

# Pilling and Fuzzing

ISO 12945-1

Pilling box method

## Pilling and fuzzing





# Color fastness

ISO 105

The color fastness to perspiration

The color fastness to wet rubbing

Color Change





# 03. Continuous Improvement

05.06.23



# Discoloration

Improvement for discoloration by changing the black (031) and blue navy (166) recipe



Original recipe



New recipe

# Discoloration

Placket improvement to avoid the lustering



Old version

New version