Energy savings 2021
New Label and Ecodesign Washing Machines

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Introduction

- Ecodesign and energy labelling framework – two key instruments
- Energy label is recognised and used by 85% of Europeans
- Review: Ecodesign working plan 2016-2019
- Draft texts are available – publication OJ expected for December 2019
- March 2021 is the final schedule, transition starts in 2020
Label: All about Cotton
1995: Cotton 60
2010: Cotton 60 + Cotton 40
2019: “eco 40-60”
Key content of the new EU label

- Energy class – A...G scale
- Energy consumption per 100 cycles [kWh]
- Load size – rated capacity
- Programme duration in h:min at rated capacity
- Water consumption per cycle [L]
- Spin-drying efficiency classification – A....G scale
- Airborne acoustic noise emissions
  A...D scale (refers to spinning phase)
This new programme is to be introduced for all washing machines and all washer dryers in Europe.

A washing cycle called ‘eco 40-60’, which is able to clean normally soiled cotton laundry declared to be washable at 40 °C or 60 °C together in the same cycle.
Ecodesign Requirements

• Programme Requirements: Washing cycle called Eco 40-60 & and 20°C
• Energy Efficiency Requirements – minimum requirements:
  2021: Energy Efficiency Index (EEIW) < 105
  2024: Energy Efficiency Index (EEIW) < 91
• Functional Requirements: Washing Efficiency Index / Rinsing Effectiveness: minimum requirements
• Requirement on duration: Programme time is limited – a time cap is introduced
• Weighted water consumption requirement
• Low power modes
• Ressource Efficiency requirements
• Information requirements
### Ecodesign Requirements: Time Cap

<table>
<thead>
<tr>
<th>Load Capacity (kg)</th>
<th>Time Cap (min) for Full Load</th>
<th>Time Cap (min) for Half Load</th>
<th>Time Cap (min) for Quarter Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 kg</td>
<td>3:18</td>
<td>2:36</td>
<td>2:36</td>
</tr>
<tr>
<td>8 kg</td>
<td>3:39</td>
<td>2:48</td>
<td>2:48</td>
</tr>
<tr>
<td>10 kg</td>
<td>3:59</td>
<td>3:00</td>
<td>3:00</td>
</tr>
</tbody>
</table>

\[ t_{\text{cap}}(\text{in min}) = 137 + c \times 10.2 \]

for full load max. 4 hours

\[ t_{\text{cap}}(\text{in min}) = 120 + c \times 6 \]

for half and quarter load max. 3 hours
Rinsing Effectiveness
Temperature Measurement
Test scenario – number of repetitions
CENELEC TC59X WG 01-08 has developed TS 50677

LAS Method
Linear Alkylbenzene Sulfonate Surfactant
Key ingredient of the detergent
CENELEC TC59X WG 01-06 develops a new TS

Measurement and evaluation method
to determine a representative maximum temperature
reached inside the load during the washing cycle
CENELEC TC59X WG 01-06 reworks ANNEX ZA of EN60456

10 test runs are required for the test washing machine:
- 3 test runs with treatment full;
- 4 test runs with treatment half;
- 3 test runs with treatment quarter.
Outlook and Summary

Questions?

- Detergent
- Temperature
- Mechanics
- Time

Eco 40-60
Thank you!

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