COOL CHEMISTRY

Ready for a GREEN revolution?

Total ecological wash concept for a gentle but highly effective treatment of hospitality linen

- Spectacular whiteness
- Excellent stain removal
- Unparalleled results from 40°C onwards
- pH neutral process

The EU Ecolabel is the official European environmental label that is acknowledged by all countries of the European Union and by Norway, Liechtenstein and Iceland.

The EU Ecolabel helps you identify products and services that have a reduced environmental impact throughout their life cycle, from the extraction of raw material through to production, use and disposal. Recognised throughout Europe, EU Ecolabel is a voluntary label promoting environmental excellence which can be trusted.

The label has been introduced in 1992.

The Nordic Swan Ecolabel is the official Ecolabel of the Nordic countries, a voluntary and positive practical tool for consumers to help them actively choose environmentally sound products. The Nordic Swan Ecolabel is an ISO 14024 type 1 Ecolabelling system and is a third-party control organ.

Products carrying the Nordic Swan Ecolabel meet extremely high environmental and often climate requirements. A life-cycle perspective of the product is analysed, i.e., the product’s impact on the environment from raw material/source to waste. Criteria is also set with regard to quality, health aspects and performance/functionality. Each product group has overriding general criteria requirements as well as product-specific requirements.

The Nordic Swan Ecolabel was established in 1989 by the Nordic Council of Ministers.

1 http://ec.europa.eu/environment/ecolabel/
2 http://www.nordic-ecolabel.org/about/
Christeyns developed Cool Chemistry, a total wash concept that has an impact on nearly all laundry costs. Cool Chemistry is based on truly innovative chemicals, combined with an adapted and well-balanced wash process. Cool Chemistry offers the possibility to wash at lower temperatures, with excellent wash quality and bleaching results from 40°C onwards.

**Components**

- **Innovative chemicals**

  Innovative range of products that are EU Ecolabel or Nordic Swan certified.

**EU Ecolabel Range**

- **Cool Care Green**
  - Enzymatic detergent for low temperature processes with innovative surfactants and an enzymatic cocktail, active from 40°C onwards

- **Cool Extract Green**
  - Complexing builder booster - Liquid

- **Cool Brite / Cool Brite Blue**
  - High performance bleaching agent for low temperature processes
  - Great bleaching from 40°C
  - No smell
  - Excellent hygiene properties

- **Cool Neutra Green**
  - Neutracetic
  - Alkalinity neutraliser

**Nordic Swan Range**

- **Cool Care Blue**
  - Enzymatic detergent for low temperature processes
  - Innovative surfactants and an enzymatic cocktail, active from 40°C onwards

- **Power Extract Blue**
  - Complexing builder booster - Liquid

- **Cool Asepsis**

  High performance bleaching and disinfecting agent for low temperature processes

- **Neutracetic**

**Test results**

- **Wash quality of terry towels**

<table>
<thead>
<tr>
<th>Detergency</th>
<th>Bleaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference process (70°C)</td>
<td>Cool Chemistry (50°C)</td>
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<tr>
<td>45%</td>
<td>65%</td>
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</tbody>
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**Adapted wash process**

- Neutral pH
- Less salts
- Low temperature possible
- Can be used in all existing process set-ups

**Standard process set-up hospitality**

- Detergent
- Fresh water
- 20 l/ton
- 2.5-3 l/kg
- T ≥ 40°C
- pH 8.0-8.3

**Case studies**

**Customer France (Standard)**

- **Temperature**: 60°-70°C vs. 40°-50°C
- **Water Savings**: 41 l/kg
- **Energy Savings**: 0.1 kWh/kg linen
- **Whiteness Degree (DW)**: DW 228 vs. DW 233 (after 8 months)
- **Textile damage**: 10-12% vs. 5-6%
- **COD**: Reduced by 20-25%
- **Conductivity**: Increase < 600µS/cm

**Customer Sweden (Nordic Swan)**

- **Temperature**: 55°C vs. 40°C
- **Water Savings**: 3.1 l/kg
- **Energy Savings**: 0.08 kWh/kg linen
- **Whiteness Degree (DW)**: DW 225 vs. DW 220 (after 6 months*)
- **Textile damage**: 11% vs. 6%
- **Conductivity**: Increase < 400µS/cm
- **Other remarks**: Achieved Nordic Swan 3.5 label

(*) New textiles included OBA and were washed during 6 months without OBA

**Customer The Netherlands (EU Ecolabel)**

- **Temperature**: 75°C vs. 55°C
- **Water Savings**: 3.5 l/kg
- **Energy Savings**: 0.13 kWh/kg linen
- **Whiteness Degree (DW)**: DW 194 vs. DW 204
- **Textile damage**: 4.5% vs. 3.5%
- **Conductivity**: Increase < 385µS/cm
- **Other remarks**: Achieved EU Ecolabel