



**SOLVAY**

asking more from chemistry®

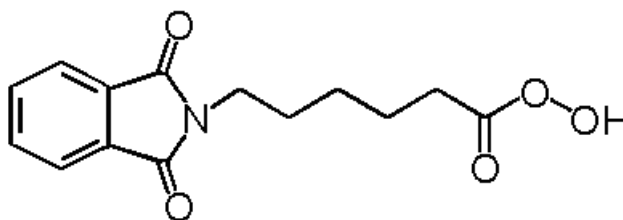
**EURECO™**

the easy active-oxygen source

Essential  
Chemicals

# EURECO™

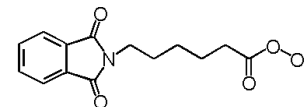
- **EURECO™** is the registered trade-mark of Solvay for its commercial preparations based upon “PAP”, a preformed peracid developed and patented by Solvay



*ε-phthalimido-peroxy-hexanoic acid (PAP)*

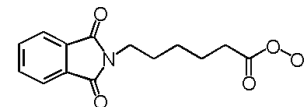
- **EURECO™** is a unique auxiliary material for detergents, which readily delivers superior bleaching performance and disinfection at low temperature and under mild conditions

# PAP



- **PAP belongs to the chemical family of *peroxycarboxylic acids* which Solvay produces in Italy with proprietary technology**
- **PAP main physical properties are:**
  - ✓ crystalline, solid phase with high melting point
  - ✓ odourless
  - ✓ white
- **PAP main chemical properties are:**
  - M = 277.28
  - 5.7% “AvOx”
  - Strong oxidant

# PAP



- **the eco/toxicological profile is exceptionally favourable**
  - no long-term/chronic effects
  - not toxic to humans
  - inherently biodegradable
- **the classification assigned to PAP is outstanding though its activity is very high**

**symbols:**



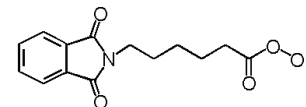
Example of labelling for any grade with PAP content higher than 25%

**phrases:**

**H318**

**H400**

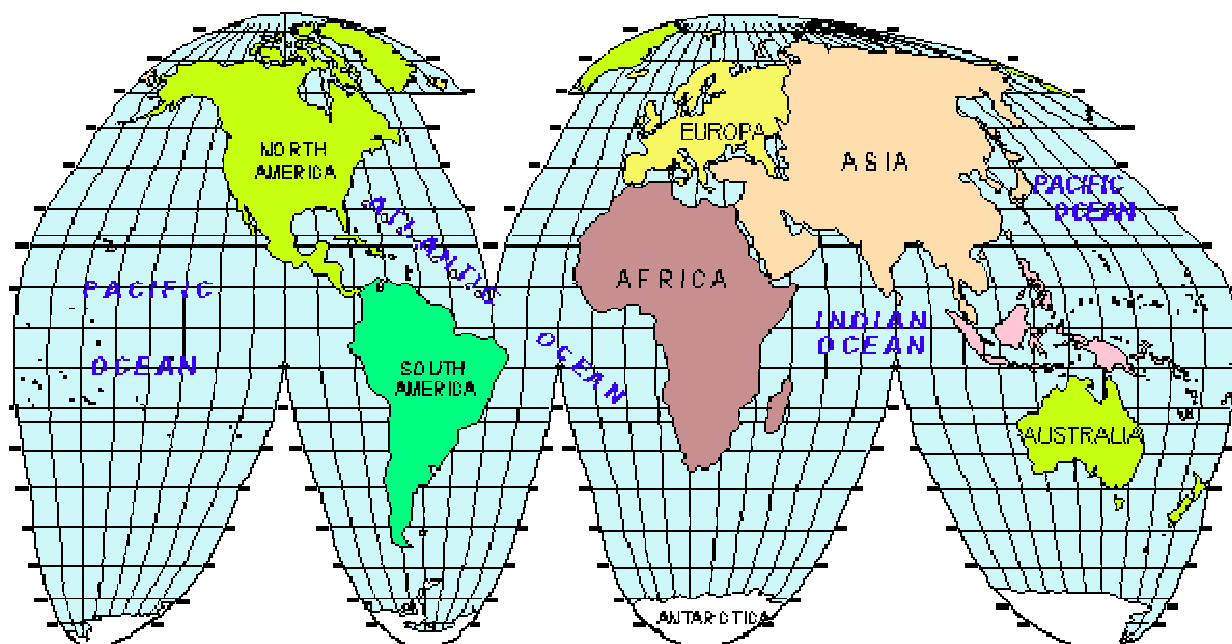
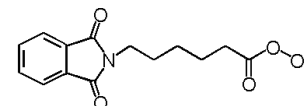
# PAP



PAP is notified and registered in the list of active ingredients of the *'Biocide Products Directive'* with relevance to the following Product Types:

- **PT1** - Human hygiene biocidal products
- **PT2** - Private area and public health area disinfectants and other biocidal products
- **PT3** - Veterinary hygiene biocidal products
- **PT4** - Food and feed area disinfectants

# PAP



✓ **PAP is registered in the official lists of the Chemical Products admitted **without limitations** to the markets of the main countries:**

European Union (**ELINCS/Level 2**), USA, China, Japan, South Korea, Australia and Canada

✓ **PAP is registered in Reach**

# EURECO™ LX17

EURECO™ LX17 is white milky aqueous suspension of PAP crystals, suitable for delivering *high PAP level* in total safety

EURECO LX17 contains 17% of active PAP

PAP crystals are micronized through a proprietary technology patented by Solvay, thus allowing quick dispersion and dissolution



# EURECO™ LX17 KEY FEATURES

## Performance

- High bleach efficiency
- Wide disinfection

## Processing

- Bleach @ mild pH
- Low dosage of alkalis

## Savings

- Low wearing out of textiles
- Low energy consumption
- Low rinsing water
- Low waste water treatment

## Safety

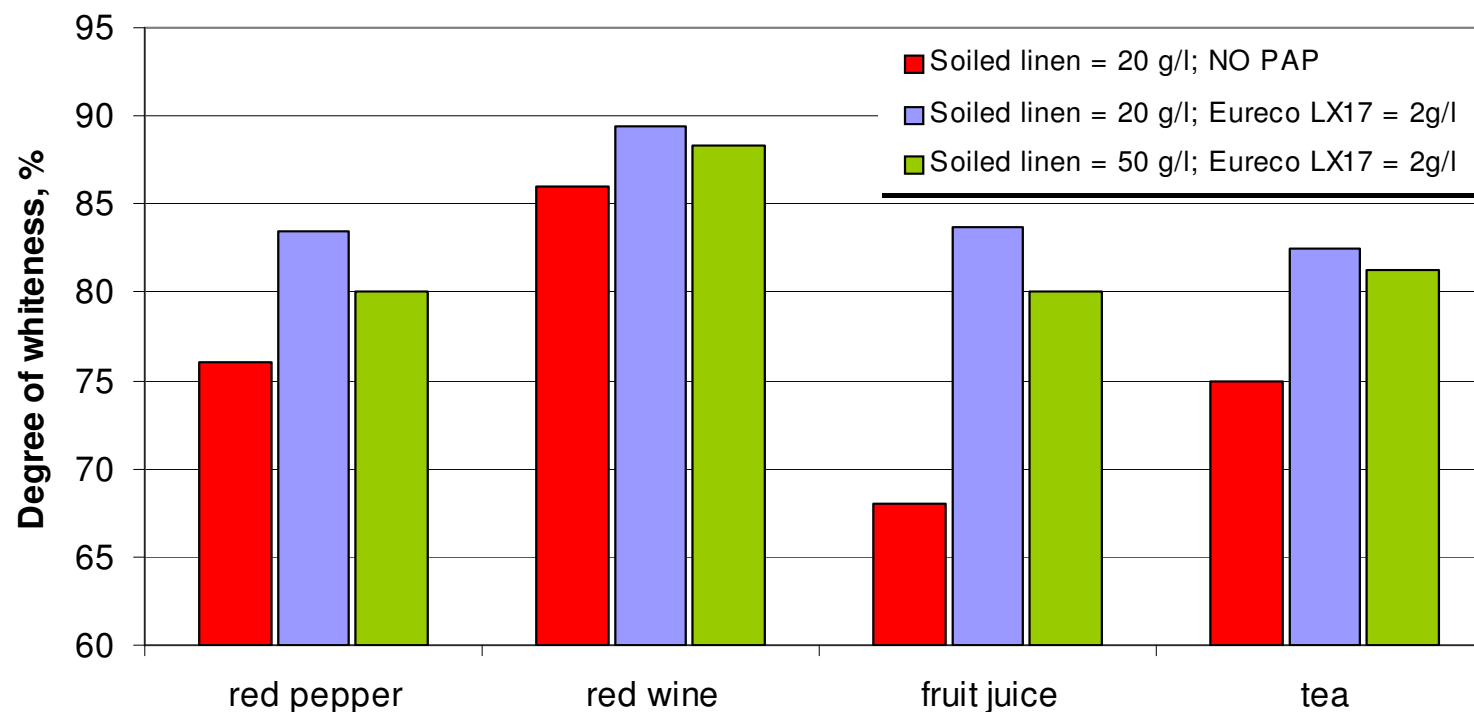
- Ease of use for non professional workers
- Low risk for the Company
- No VOC
- No Chlorine



# EURECO™ LX17 KEY FEATURES

Performance: **High bleach efficiency – Effect of 340 mg/l of PAP**

Washing conditions: **tap water; T = 55 °C; t = 30 minutes**



# EURECO™ LX17 KEY FEATURES

Performance: **wide disinfection**  
 (minimum level of PAP required for abatement of bacteria)  
 Tests carried out in compliance with EU protocols

| Abatement of microorganisms                                    |                         |                                     |   |                                   |                                       |
|--|-------------------------|-------------------------------------|---|-----------------------------------|---------------------------------------|
| Testing conditions: Temperature: 20°C; Contact time: 5 minutes |                         |                                     |   |                                   |                                       |
|  | PAP concentration, mg/l | Staphylococcus<br>Aerus<br>ATCC6538 | Pseudomonas<br>Aeruginosa<br>ATCC 15442 | Escherichia<br>Coli<br>ATCC 10536 | Enterococcus<br>Faecium<br>ATCC 10541 |
| Interfering<br>Substance<br>(EN 1276)                          | 1000                    | > 5 logs                            | > 5 logs                                | > 5 logs                          | > 5 logs                              |
| Surface test<br>(EN 13697)                                     | 1000                    | > 4 logs                            | > 4 logs                                | > 4 logs                          | > 4 logs                              |

# EURECO™ LX17 KEY FEATURES

Performance: **FUNGICIDAL activity EN1650**  
(minimum level of PAP required for an abatement of bacteria load >5 Logs)

Tests carried out in compliance with EU protocols

*Tested Micro-organism:* CANDIDA ALBICANS (ATCC 10231)  
*Measure:* VITALITY REDUCTION (LOG10)

Contact Time: 20min; T=40±1 °C; Bovine Albumine: 0.3%

| PAP in aqueous suspension, mg/litre | pH = 7 | pH = 9 |
|-------------------------------------|--------|--------|
| 600                                 | <4.11  | 5.04   |
| 800                                 | 4.41   | >5.11  |
| 1200                                | 5.04   | >5.11  |

# EURECO™ LX17 KEY FEATURES

## Performance: In use BACTERICIDAL activity

(minimum level of PAP required for an abatement of bacteria load >5 Logs)

**Bactericidal Activity in presence of INTERFERING SUBSTANCES (EN1276)**

**INTERFERING SUBSTANCE: Bovine Albumine at 0.3%**

**Measure: Vitality Reduction**

**Positive if  $\geq 10^5$**

| Tested Concentrated Solutions (ppm of PAP) at pH=8 |                    |                    |                    |                    |                    |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|
| CONTACT TIME:                                      | 15 min – T = 40 °C |                    |                    |                    | 5 min. T=20 °C     |
| Test Microorganisms                                | 250                | 500                | 1000               | 2000               | 5500               |
| Staphylococcus aureus ATCC 6538                    | $>4.1 \times 10^5$ | $>4.1 \times 10^5$ | $>4.1 \times 10^5$ | $>4.1 \times 10^5$ | $>4.1 \times 10^5$ |
| Pseudomonas aerugin. ATCC 15442                    | $<1.0 \times 10^4$ | $>2.0 \times 10^5$ | $>2.0 \times 10^5$ | $>2.0 \times 10^5$ | $>2.0 \times 10^5$ |
| Escherichia coli ATCC 10536                        | $<6.0 \times 10^3$ | $>1.2 \times 10^5$ | $>1.2 \times 10^5$ | $>1.2 \times 10^5$ | $>1.2 \times 10^5$ |
| Enterococcus faecium ATCC 10541                    | $1.9 \times 10^5$  | $>5.3 \times 10^5$ | $>5.3 \times 10^5$ | $>5.3 \times 10^5$ | $>5.3 \times 10^5$ |

The test is positive at 40 °C in 15 minutes for PAP concentrations equal or higher than 500 ppm that is equivalent to ~3.0 g/litre of Eureco LX17.

The test is positive at 20 °C in 5 minutes for PAP concentrations equal or higher than 5500 ppm that is equivalent to ~32.0 g/litre of Eureco LX17.

# EURECO™ LX17 KEY FEATURES

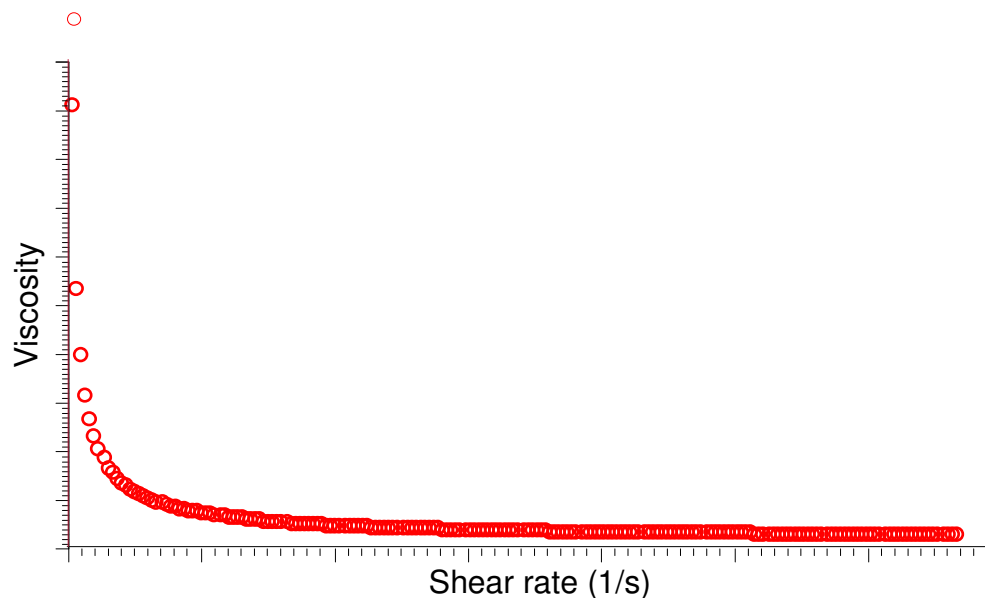
## Processing:

### Bleach @ mild pH

The best performance of PAP is displayed at a pH in the range of 7 to 9, but if required the bleach stage can even be carried out at a lower pH (f.e pH 5) for specific purposes.

### Ease of dosing

Standard peristaltic or Mohno pumps can be used for dosing; EURECO LX17 is a pseudoplastic liquid

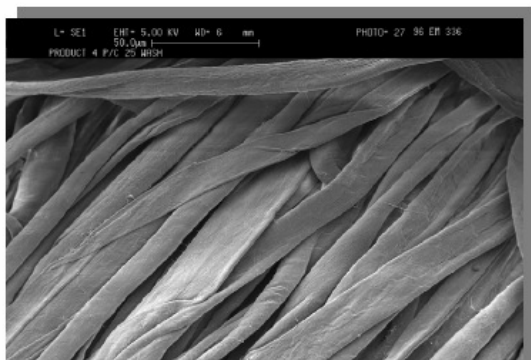


# EURECO™ LX17 KEY FEATURES

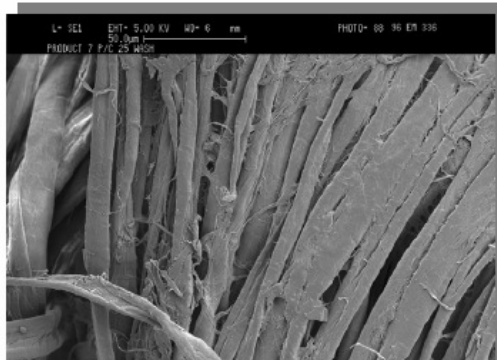
## Savings:

- Low wearing out of textiles: textiles lifespan can last even two times longer in comparison with Chlorine bleaches

PROCESS with PAP@50°C



PROCESS with HYPO@85°C



Damage to fibres  
after 25 washes

- Low energy consumption: the washing temperature can be lowered down
- Low rinsing water: less alkalis means less rinsing of textiles
- Low waste water treatment: the final pH triggering of the waste water can be avoided

# EURECO™ LX17 KEY FEATURES

## Appeal:

- EURECO LX17 is able to keep the original soft touch of textiles
- Textiles washed with Eureco LX17 have no bad smell



# EURECO™ LX17 USE

The moderate viscosity is designed to comply with the technical requirements of the automated dosage systems installed on the tunnel industrial laundries as well as on OPL (On-Premises Laundries).



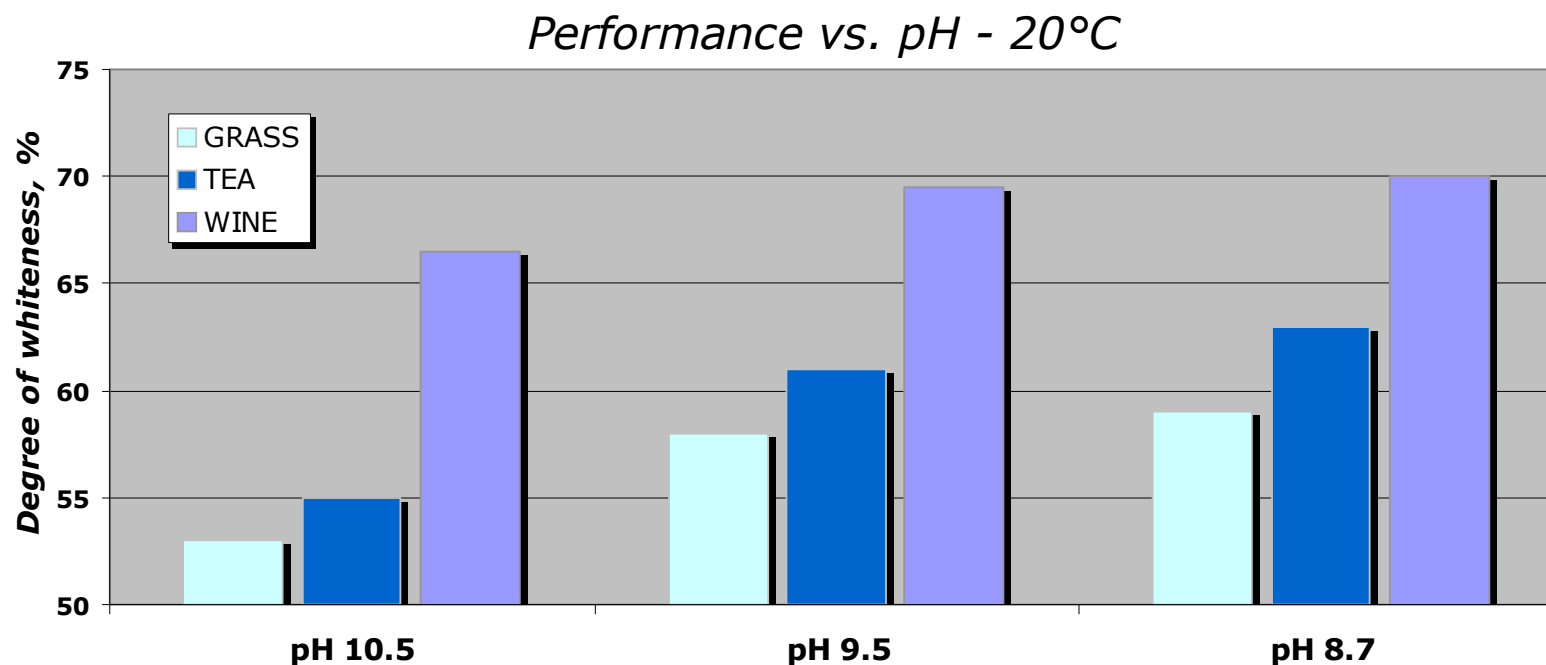
- Brookfield viscosity:  $\sim 550\text{mPa}\cdot\text{s}$





# EURECO™ LX17 USE

Sometimes the application requires the adjustment of the pH conditions of the wash to maximize the PAP performance. The best pH range for PAP is 7 to 9.7 or even better 8.0 to 9.0. In that respect EURECO™ LX17 should be suitably injected in the most convenient stage of the wash thus allowing to minimize the dosage.



# EURECO™ LX17 USE

Typically EURECO LX17 can be added either in the **main wash** or during the **first rinsing**

- The use of EURECOTM LX17 in the main wash requires that the detergents provide the right pH and possibly a buffering system.
- The use of EURECOTM LX17 in the first rinsing stage allows a lower dosage in spite of short contact time.

The use of Eureco LX17 in the main wash allows a degradation of the dirt with some effects:

- **Discharge of waste waters with lower chemical loads**
- **Abatement of the most part of bacterial load**
- **Eureco LX17 will not affect the detergent efficacy**

If Eureco™ LX17 is added during the rinsing stage the effects are:

- **Lower dosage is required**
- **Lower use of neutralizing chemicals**
- **Hygienization of the textiles and of the waste waters (\*)**
- **Quick dispersion of the bleach and specific action**

(\*) A specific assessment is required

# EURECO™ LX17 SUPPLY

|              |                       |  |
|--------------|-----------------------|--|
| EURECO™ LX17 | <b>Canisters</b>      | <b>24x20 kg = 480 kg<br/>arranged on a pallet 80x120cm</b> |
|              | <b>Drums</b>          | <b>2x202kg =404 kg<br/>arranged on pallet 60x120cm</b>     |
|              | <b>IBC</b>            | <b>1000 kg<br/>Steel cage with wooden pallet</b>           |
|              | <b>Tank container</b> | <b>Stainless steel<br/>24/28 t</b>                         |

# EURECO<sup>TM</sup> LX17 Regulatory aspects

|   |  |                    |
|---|--|--------------------|
| <p>EURECO<sup>®</sup> LX17<br/>is NOT a dangerous good<br/>as defined by the UN<br/>agreement for dangerous<br/>goods transportation<br/>(AvOx is &lt;1.0%)</p> |  <p><b>DANGER</b></p> | <p><b>H318</b></p> |
|---|--|--------------------|

|   |  |
|---|--|
| <p>EURECO<sup>®</sup> LX17<br/>Is NOT an oxidizer</p> | <p>Due to the recent implementation of CLP/GHS and for being a “mixture” Eureco LX17 can be labelled without the “Comburent” symbol.</p> <p><b>Eureco<sup>®</sup> LX17 can be handled out of the list and restrictions of Seveso chemicals</b></p> |
|---|--|

[www.solvay.com](http://www.solvay.com)



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