

COSA™ PUR 85

Liquid oxidising additive

Enhances the removal of persistent soils properties

Why COSA PUR 85?

Effective

COSA PUR 85 is a liquid oxidising additive for alkaline cleaners to enhance the removal of stubborn soils. It has excellent soil-suspending power with special surfactants to enhance performance. The product contains oxidising properties without chlorine and is added to the alkaline cleaning solutions in pharmaceutical and cosmetic processing equipment including piping, mixers, fluid beds, tanks and storage vessels.

Quality assurance

COSA PUR 85 is supported by a complete validation package including techniques for determining acceptable residual levels and analytical methods for residue quantitation.



Documentation package

- ▾ Certificates of Analysis (CoA)
- ▾ Analytical Method Descriptions Residue Analysis
- ▾ Ecological Assessment (EA)
- ▾ Toxicological and Limit Setting Information (PDE)
- ▾ Safety Data Sheet (SDS)

Subject to incoming goods control

Appearance	Clear, colourless liquid	pH	3.0 - 3.6 (1%, 20°C, deionised water)
Titration	Hydrogen Peroxide: 30.0 - 34.0% Use solution: 100 ml (0.1% solution) Titrant: 0.1 n sodium thiosulfate ($\text{Na}_2\text{S}_2\text{O}_3 = 0.1\text{mol/l}$) Indicator: sodium iodide/starch solution (1%) % Hydrogen Peroxide = amount of 0.1 n $\text{Na}_2\text{S}_2\text{O}_3$ *1.7		

Properties

Concentrate	Storage stability	-10 - 35°C
	Frost resistance	Short time of frost is possible, product has to be homogenised after thawing
	Density	1.10 - 1.14 g/cm ³
	TOC	2.47%
Application solution	Foam behaviour	Non foaming > 40°C
	Rinse behaviour	Final rinse with water of minimum drinking water quality, ensuring all soil and product residues are removed with cold preferably water
	Water quality	Minimum drinking water quality
Material compatibility	Metals	COSA PUR 85 is, under the application described below, compatible with: Steel, austenitic CrNi steels (quality at least DIN 1.4301 = AISI 304)
	Plastics	COSA PUR 85 is, under the application described below, compatible with: All oxidation-resistant plastics

COSA™ PUR 85

Application

Mode of application

COSA PUR 85 is an additive to alkaline cleaning solutions in the pharmaceutical and cosmetic industries. It is especially suitable for the removal of residues which can only be digested or decomposed oxidatively. The addition of COSA PUR 85 is carried out immediately before cleaning.

Concentration: 1.0 - 2.0% COSA CIP solution. 0.5 - 1.0% COSA PUR 85

Temperature: 50 - 85°C (circulating manner) Contact time: depending on degree and type of soiling

COSA PUR 85 only shows its full effectiveness at a temperature > 60°C by the separation of oxygen bubbles.

To achieve an optimum efficacy for a longer period, the product should be added in intervals.

Concentration, temperature and cleaning time can be optimised by evaluation of respective cleaning trials.

Final rinse with water of minimum drinking water quality, ensuring all product residues are removed.

COSA PUR 85 is not intended to be used in closed systems, due to the formation of pressure increase which is resulting from the oxygen separation.

Monitoring

Titration

Chemicals required:

- ▮ Sulphuric acid, 25%
- ▮ Potassium iodide or sodium iodide
- ▮ Sodium thiosulphate solution 0.1n
- ▮ Starch solution, 1%

Determination:

Add approx. 1 g potassium iodide or sodium iodide to 10 ml of the cleaning solution (20°C) and acidify it with approx. 25 ml sulphuric acid (25%). Possibly check with pH-paper, if the pH value is strongly acidic. At the presence of free peroxide (COSA PUR 85), the solution colours from yellow to brown. Titrate with 0.1 n sodium thiosulphate solution to light yellow.

The addition of approx. 1 ml starch solution changes the solution colour to blue. Titrate with sodium thiosulphate solution to colourless.

Calculation:

Volume added sodium thiosulphate in
ml x 0.06 = concentration of COSA PUR 85 in %

If low concentrations of COSA PUR 85 are expected, the receiving flask has to be increased; the calculation factor changes accordingly:

e.g. receiving flask 10 ml: factor = 0.06

25 ml: factor = 0.024

50 ml: factor = 0.012

Concentration control

In practice, it is suitable to determine the concentration of COSA PUR 85 by measuring the volume of the dosing pump and calculating the concentration used or perform time-proportional dosing (e.g. by means of Ecolab Elados EMP dosage pumps)

Ecological evaluation

Evaluation

- ▮ Very well biodegradable
- ▮ Phosphate-free
- ▮ EDTA - / NTA - free

P-content

0.18%

N-content

0.00%

COD

Not applicable

The complete ecological evaluation is available on the cleaning validation website www.ecolab-cleaning-validation.com

Safety

The relevant hazard identifications of COSA PUR 85 are given in the Safety Data Sheet available at safetydata.ecolab.eu. If any questions arise in this context please contact your Ecolab representative.

A Toxicological Hazard Assessment is also available on the cleaning validation website www.ecolab-cleaning-validation.com

**For product ordering information, please contact your
Ecolab Account Manager or email infoLS@ecolab.com**

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