

deconex® DEROUGE System

Derouging system of neutral pH value

Rapidly and effectively removes rouge deposits from stainless steel water systems and process vessels



Application

The deconex® DEROUGE System rapidly and effectively removes rouge from the surfaces made from stainless steel. The new process works in neutral pH conditions and therefore meets the ever more stringent requirements for plant maintenance and environmental protection.

The deconex® DEROUGE System is suitable for controlled derouging operations mostly in the pharmaceutical industry, at biotechnical production, the cosmetics industry but also for the production of pure water at hospitals.

The deconex® DEROUGE System is especially suited for derouging of:

- production systems, storage tanks and distribution systems for water (PW or WFI)
- pure steam systems
- process vessels e.g. in vaccine production
- autoclaves, lyophilizers etc.

The advantages of using the deconex® DEROUGE System are:

Advantages	Benefits to you
Short process times	Shorter downtimes, longer duty cycles for production equipment
pH-neutral process	Solutions and rinsing water do not require neutralising. Waste disposal is simple and cost-effective.
Increased safety at work	High concentrations of aggressive acids are not required.
Simple in-process control	Monitoring of derouging solution effectiveness does not require expensive analytical equipment.
Rapid results	Short derouging cycle times. Improved efficiency.
Proven process	Safe to use thanks to our process descriptions. These allows a perfect documentation of derouging operations.
Highly effective	The low concentrations lead to a cost-effective application.
Excellent material compatibility	Longer life cycles for process equipment.
Does not contain halogenides	No chemical attack on surfaces.
Validated analytical methods	Allow a residue-free process. Well established analytical procedures enable a rapid transfer of the derouging process.

Properties

As the natural passive layer on stainless steel surfaces ages, a rust-red deposit known as rouge can form. Rouging is generally considered to be unacceptable because there is the risk that rouge particles from the layer could be released.

Rouge deposits also make difficult to control the process parameters since the specified surface state must be maintained.

Your solution for removing rouge

The deconex® DEROUGE System is a patented derouging process which shows excellent and rapid results at neutral pH value.

The system consists of deconex® DEROUGE liquid and deconex® DEROUGE P powder. These two components are mixed shortly before use.

The addition of deconex® DEROUGE Z at the end of the derouging process improves rinsing characteristics.

deconex® DEROUGE System

A surface passivation is recommended after the derouging to build a protective layer on derouged surfaces. We recommend a passivation with deconex® CIP protect or deconex® CIP boost (available only in continental Europe). Contact us for more information about surface passivation with deconex® CIP protect or deconex® CIP boost.

Ingredients

deconex® DEROUGE: complexing agent, corrosion inhibitor
deconex® DEROUGE P: reducing agent
deconex® DEROUGE Z: alkalis, complexing agents

Dosage

Process parameters for the derouging process	
Temperature	> 70 °C
Atmosphere	anaerobic (residual oxygen < 0.5 % v/v)
Duration	0.5 hour to 4 hours depending on type and composition of deposits

Application (standard process)	
deconex® DEROUGE	2.0 % (v/v)
deconex® DEROUGE P	0.6 % (w/v)
deconex® DEROUGE Z	0.3 % to 0.5 % (v/v)

Information on use

Please, contact us for detailed operating procedures about the following:

- Flooding processes (preparation tanks, piping, etc.)
- Spraying in closed systems (CIP spray process)
- Testing the activity of derouging solutions
- Monitoring of the effectiveness of the derouging process
- Testing for possible traces of residues from the derouging process

Neutralization

Neutralization is not necessary. Process and rinsing water can be disposed of without the need for further treatment. Dispose of process and rinsing water in accordance with your local waste water regulations.

Residue analysis/cleaning validation

Analytical methods for testing the absence of process chemical residues are available.

Material compatibility

Suitable for:
Stainless steel 1.4301, 1.4401, 1.4404, 1.4435, 1.4571, 1.4539, PP, PVC, PE, PTFE, PVDF, EPDM, silicone, PEEK

For materials not mentioned please make your own specific compatibility tests or consult Borer Chemie AG.

Chemical/physical data

deconex® DEROUGE	pH value	1 % in DI-water	approx. 4.5
	Density	concentrate	1.07
	Appearance	concentrate	clear, colourless to yellow
deconex® DEROUGE P	pH value	1 % in DI-water	approx. 8.0
	Appearance	concentrate	powder, white
	deconex® DEROUGE Z	pH value	1 % in DI-water
	Density	concentrate	1.25
	Appearance	concentrate	clear, colourless to yellow

The ready-to-use solution of deconex® DEROUGE System is pH-neutral.

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Availability

The deconex® DEROUGE System is available as a practical set.

DEROUGING SET 250 L - Art. No. 21358

For the preparation of 250 litres of a ready-to-use solution

deconex® DEROUGE	5 L
deconex® DEROUGE P	1.5 kg
deconex® DEROUGE Z	1 kg

DEROUGING SET 1000 L - Art. No. 21359

For the preparation of 1000 litres of a ready-to-use solution

deconex® DEROUGE	20 L
deconex® DEROUGE P	4 x 1.5 kg
deconex® DEROUGE Z	6 kg

Containers, screw caps and labels are made of recyclable polyethylene.

Additional information

For information concerning safety at work, storage and waste/effluent disposal, please consult the corresponding safety data sheet.

Take advantage of our vast know-how! Please, contact us for further information regarding your specific application.

deconex® for the highest standards of quality

deconex® products have been developed specially for validated cleaning.

Our products and services allow individual, optimally adapted and efficient cleaning processes. You can obtain further information on this directly from Borer Chemie AG.

Process control - Activity test

Check the activity of the derouging solution at regular intervals. The quick and easy way to do this is by adding an ACDS tablet to 200 mL of solution.

Simply order

Item no	Description
521500.10-CA04	ACDS Activity Check for Derouging System 1 box with 20 individually packed tablets

Detailed instructions on how to use ACDS can be obtained from Borer Chemie AG.

Simply ask us for further information - derouging@borer.ch

Manufacturer:

Borer Chemie AG

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