



TECHNICAL DATA SHEET

RESINS

CatOX™

General information

CatOX

PURPOSE

- Ultrapure premium grade ion exchange resin. Palladium-doped and strong base anion resin specially conditioned and rinsed for the removal of hydrogen peroxide (H₂O₂) traces from water, which is generated as a by-product by UV oxidation in the production of Ultrapure water.
- The premium quality of the CatOX allows a reduction of H₂O₂ to less than 1 ppb at a flowrate up to 150 BV/h and temperatures up to 40 °C.

TYPE

Palladium-doped / Strong base anion exchange resin

MATRIX

Styrene-DVB copolymer, gel

PHYSICAL FORM

Translucent and black spherical beads

INSTALLATION

- The optimum performance from any ion exchange resin can only be achieved if the resin is loaded, commissioned, and operated correctly.
- All equipment has to be thoroughly decontaminated using the highest quality ultrapure rinse water to avoid contamination of the resin by either foreign matter or different resin types.
- Ensure the resin level conforms to the plant design and always use Ultrapure water for the filling, commissioning and rinsing steps.
- We recommend using a hydraulic ejector or manual loading through the top manway or top nozzles.
- Initiate flow and monitor palladium, TOC, and resistivity rinse down until the ultimate water quality has been achieved and water quality has stabilized.
- Resin is delivered from the factory in an ultrapure and clean condition therefore only small rinse water volume is necessary during the installation to rinse to quality. Once resin packaging is open and resin is exposed to ambient air conditions, ensure to limit the exposure time to avoid resin saturation with carbon dioxide (CO₂)

OPERATION

- One way resin, non-regenerable.
- CatOX ion exchange resin can't be stored for a long time in a service vessel as bacterial growth could occur during stand-still conditions. Thus, the resin should at least (and permanently if possible) be kept in a rinsing step.



CatOX (continued)

STORAGE

- CatOX resin is sensitive to temperature. Protect from frost and store away from direct sun light, in a cool and dry place.
- Keep product in its original closed packaging until use and away from incompatible materials such as strong oxidizing agents.
- Recommended maximal storage time is 1 year after manufacturing.

Specifications

EFFECTIVE SIZE	mm in	0.55 – 0.70 0.022 – 0.028
UNIFORMITY COEFFICIENT		≤ 1.1
BULK DENSITY	g/l lb/ft ³	± 645 – 735 ± 40 – 46
ΔTOC (MIXED BED) ^{1) 2)}	ppb	≤ 1
PD LEACH	ppt	≤ 5

1) Detailed reports of analysis for all batches of CatOX resins are available for each delivery, thus to insure that the delivered product meet stringent UPW performance requirements and is of the highest quality.

2) TOC and Pd rinse performance measured after 500BV at 15BV/h with ≥ 17.5 MΩ·cm rinse water.

Typical properties

FUNCTIONAL GROUP		Quaternary Ammonium, Type I
COLOUR		Yellow and Black
WATER CONTENT	%	56 – 66
ION EXCHANGE CAPACITY	eq/l	≥ 1.1 (OH form)
IONIC FORM	eq%	≥ 95% OH ⁻

Operating parameters

MAXIMUM H ₂ O ₂ CONCENTRATION IN FEED	100 ppb	
MAXIMUM OPERATING TEMPERATURE	40 °C	104 °F
SERVICE FLOW RATE	20 – 90 m/h	8 – 37 gpm/ft ²
MINIMUM BED DEPTH	400 mm	16 in
MAXIMUM PRESSURE DROP	1.5 bar	21 psig

Quality

ISO 9001:2015

- The production of the ScalExit 7272 is certified according to ISO 9001:2015.

ISO 14001:2015

- The manufacturing site of the ScalExit 7272 is certified according to ISO 14001:2015 for environmental management systems.

Other information

DISPOSAL	<ul style="list-style-type: none">• Disposal must be in accordance with the appropriate local regulations.• If possible, recycling is preferred to disposal or incineration.
SAFETY ADVICE	<ul style="list-style-type: none">• Eye contact can cause serious irritation.• High risk of slipping due to spillage of the product.
GLOBAL KNOWLEDGE CENTRE	Ovivo Switzerland AG Benkenstrasse 262 4108 Witterswil Switzerland

