Technical Data Sheet

TRILITE® UPRC220U

Uniform Particle Size Acid Cation Exchange Resin

Rev.3 Feb 2023

TRILITE® UPRC220U is a UPS, SAC gel-type exchange resin designed for ultrapure water applications with excellent ion removal capacity, allowing for the economical production of high-purity water. TRILITE® UPRC220U has outstanding physical and chemical strength, resulting in a low resin attrition rate over long-term use. It has a conversion rate of 99% or higher to its H+ form and is supplied in its H+ form.

Physical and Chemical Properties			
Matrix	Polystyrene+DVB, Gel	Functional Group	Sulfonic acid
Ionic Form	H^+	Total Capacity(eq/ℓ)	2.00 ↑
Shipping Density(g/ℓ)	805	Moisture Retention(%)	45~51
Particle Density	1.22	Uniformity Coefficient	1.1 ↓
Particle Size(μm)	660±50	Swelling Rate(Na^+→H^+, %)	8
Whole Beads(%)	95 ↑	Ionic Conversion Rate(%)	H^+ 99 ↑

Recommended Operating Conditions			
Operating Temp(℃)	120 ↓	pH Range	0~14
Bed Depth(mm)	800	Service Flow Rate(m/h)	5~120

Applications

TRILITE® UPRC220U is used for producing ultrapure water with very high resistivity and demanding control of TOC of less than 5ppb, in fields such as semiconductor, display, electronics, pharmaceuticals, power plants, and chemical manufacturing.

Hydraulic Characteristics

Figure 1 and 2 show the backwash expansion of TRILITE® UPRC220U as a function of flow rate and temperature.

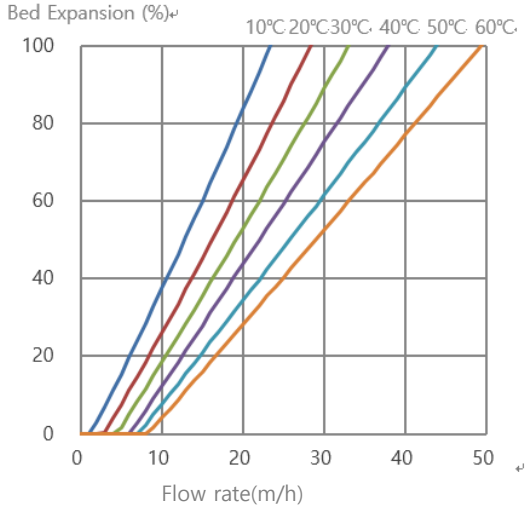

Figure 1. TRILITE® UPRC220U Bed Expansion

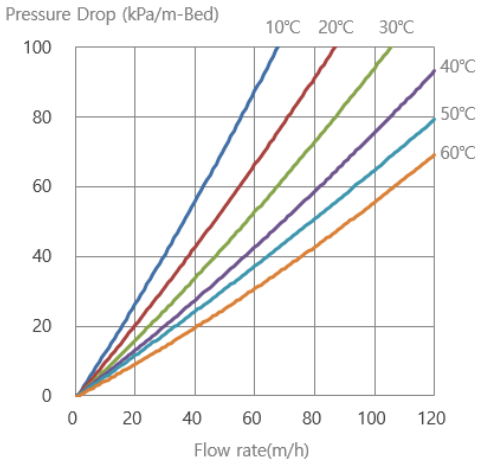

Figure 2. TRILITE® UPRC220U Pressure Drop

Resistivity and TOC Performance

Resistivity > 12.0 MΩ.cm (in 30min)

ΔTOC < 20ppb (in 120min)

Operation Condition (Feed Water) : Resistivity > 17.5 MΩ.cm, TOC < 2ppb, SV = 30

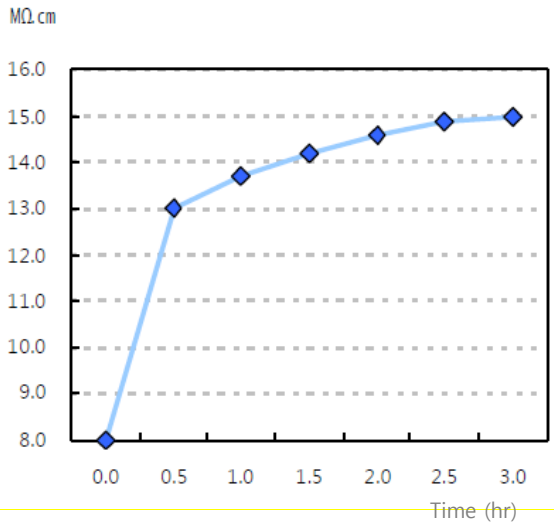

Figure 3. TRILITE® UPRC220U Resistivity

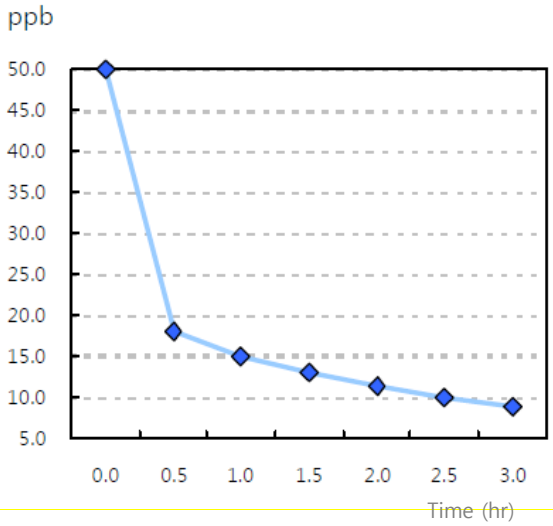

Figure 4. TRILITE® UPRC220U ΔTOC

Samyang's TRILITE Ion exchange resins are produced based on the ISO 9001, ISO 14001 certification.

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Ion Exchange Resin

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