Technical Data Sheet

TRILITE® UPRC400U

Uniform Particle Size Acid Cation Exchange Resin

Rev.3 Feb 2023

TRILITE® UPRC400U 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® UPRC400U 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)	1.90 ↑
Shipping Density(g/ℓ)	800	Moisture Retention(%)	50~56
Particle Density	1.2	Uniformity Coefficient	1.1 ↓
Particle Size(μm)	620±50	Swelling Rate(Na^+→H^+, %)	9
Whole Beads(%)	95 ↑	Ionic Conversion rate (%)	H^+ 99.9 ↑

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

Applications

TRILITE® UPRC400U is used for production of ultrapure water, where very high resistivity, less than 1ppb of TOC control, and less than 0.1ppt of metal leakage are required, such as in the fields of semiconductor, display, household appliances, pharmaceuticals, power plants, and chemicals.

Hydraulic Characteristics

Figure 1 and 2 show the backwash expansion of TRILITE® UPRC400U as a function of flow rate and temperature.

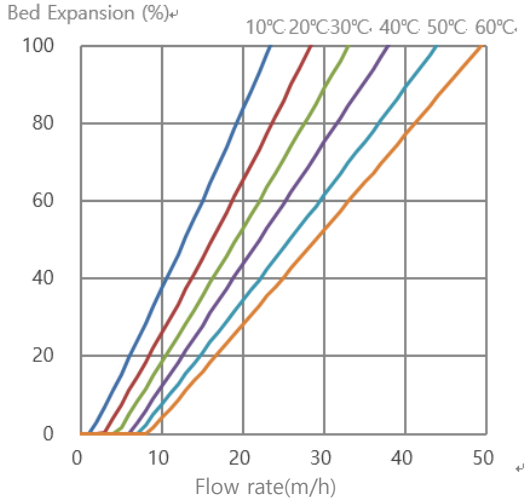

Figure 1. TRILITE® UPRC400U 역세전개율

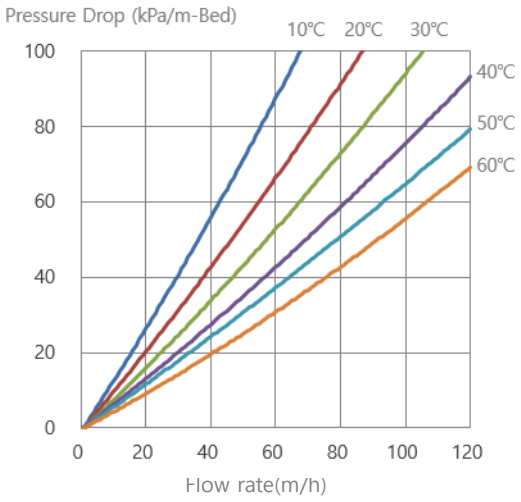

Figure 2. TRILITE® UPRC400U 압손실

Resistivity and TOC Performance

- Resistivity > 15 MΩ.cm (in 30min)
- ΔTOC < 5ppb (in 180min)
- Operation Condition (Feed Water) : Resistivity > 17.5 MΩ·cm, TOC < 2ppb, SV = 30

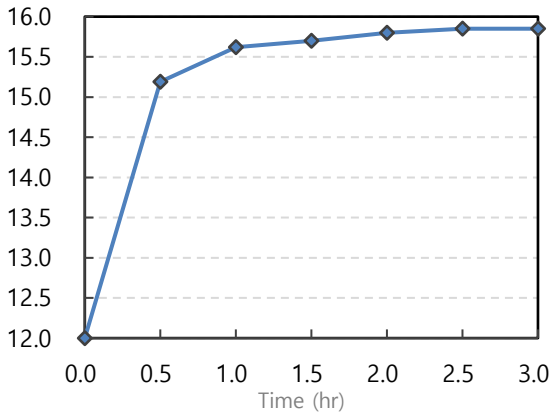

Figure 3. TRILITE® UPRC400U Resistivity

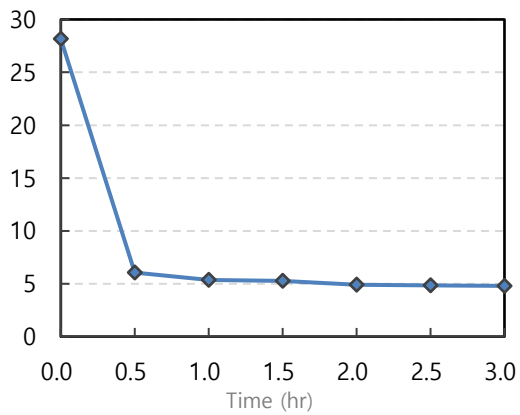

Figure 4. TRILITE® UPRC400U ΔTOC

Samyang's TRILITE Ion exchange resins are produced based on the ISO 9001, ISO 14001 certification.
Samyang Corporation, 31 Jong-ro 33-gil, Jongno-gu, Seoul, Korea Tel: (02)740-7732~7, Fax: (02)740-7140

TRILITE
삼양 트리라이트
Ion Exchange Resin

http://samyangtrilite.com