QuantumPure™

The Choice for High-Performance Ion Exchange Resins

NANOH2O

Turning Water into New Possibilities

The Future of Water Starts Here

NanoH2O is redefining the future of water. As a global leader in advanced water technologies — covering RO, UF, NF membranes and IX resins — we unlock the infinite potential of water to address the most urgent challenges facing humanity. We deliver solutions capable of removing even the smallest impurities, helping to solve global water scarcity and produce the purest water to support industrial advancement.

A New Era in Water Innovation

In December 2025, NanoH2O begins a bold new chapter as an independent company, evolving from LG Water Solutions. This transformation reflects our commitment to agility, innovation, and customer-centric excellence. Clear, refreshing, and fluid — we adapt like water to meet global challenges and create meaningful impact for communities, industries, and the planet.

NANOH2O

QuantumPure™

The Choice for High-Performance Ion Exchange Resins

QuantumPure™ offers a comprehensive selection of high-performance ion exchange (IX) resins, including SAC, SBA, WAC, WBA, and mixed bed resins in various ionic forms, designed for a wide range of water treatment needs from deionization softening to selective ion removal.

Manufactured with state-of-the-art processes, QuantumPure™ IX resins ensure consistent quality, excellent chemical resistance, and extended service life, reducing the frequency of replacements and maintenance.

Why Choose **QuantumPure™** IX Resins?

Unparalleled Quantum Performance

01

HIGHLY DURABLE

A Wider Operational pH Range of 0–14*

02

INDUSTRY'S HIGHEST UNIFORMITY

Uniformity Coefficient Below 1.1

03

EXCEPTIONAL ION EXCHANGE EFFICIENCY

- Wider Operational pH Range of 0-14*
- Uniformity Coefficient Below 1.1 : ΔTOC: <1 ppb

* The pH range is varied by product type.

Premium IX Resins with Uniform Particle Size

Exceptional Uniformity
Uniformity coefficient below 1.1 (WBA: ≤1.2) for reliable performance.

Enhanced System Performance
Engineered to enhance system performance with superior exchange capacity and extended service cycles, ensuring long-term reliability and reduced operational costs.

Rigorous Quality Control
Meets the highest quality control standards to maximize efficiency and durability.

Flexible Applications
Available in SAC, SBA, and WBA resin types, designed for versatile applications across a wide array of water treatment needs.

Product Name	QuantumPure™ UC-08	QuantumPure™ UC-08H	QuantumPure™ UC-10	QuantumPure™ UC-10H
Resin Type	SAC			
Matrix	Styrene-divinylbenzene, Gel			
Functional Group	Sulfonic Acid			
Ionic Form	Na^+	H^+	Na^+	H^+
Total Capacity, min. (eq/ℓ)	2.00	1.80	2.20	2.00
Uniformity Coefficient	≤1.1			
Average Diameter (μm)	600±50	620±50	650±50	660±50
Specific Gravity*	1.28	1.20	1.32	1.22
Shipping Weight (g/ℓ)*	840	800	830	800
Max. Operating Temperature	120°C / 248°F			
Operating pH Range	0-14			
Moisture Retention (%)	43–49	50–56	38–44	45–51
Swelling Rate*	9% ($Na^+ \rightarrow H^+$)		8% ($Na^+ \rightarrow H^+$)	

Product Name	QuantumPure™ UA-10	QuantumPure™ UA-10 OH	QuantumPure™ UA-12	QuantumPure™ UA-12 OH	QuantumPure™ UC-20	QuantumPure™ UWA-80
Resin Type	SBA					WBA
Matrix	Styrene-divinylbenzene, Gel					Styrene-divinylbenzene, Porous
Functional Group	Trimethyl Ammonium (Type 1)				Dimethylethanol Ammonium (Type 2)	Tertiary Amine
Ionic Form	Cl^-	OH^-	Cl^-	OH^-	Cl^-	Free Base
Total Capacity, min. (eq/ℓ)	1.35	1.10	1.30	1.00	1.30	1.60
Uniformity Coefficient	≤1.1	≤1.1	≤1.1	≤1.1	≤1.1	≤1.2
Average Diameter (μm)	550±50	590±50	575±50	620±50	575±50	500±100
Specific Gravity*	1.08	1.07	1.08	1.07	1.11	1.04
Shipping Weight (g/ℓ)*	670	655	670	660	690	615
Max. Operating Temperature	80°C / 176°F (Cl^-); 60°C / 140°F (OH^-)				60°C / 140°F (Cl^-); 40°C / 104°F (OH^-)	60°C / 140°F
Operating pH Range	0-14					0–9
Moisture Retention (%)	43–49	59–65	49–55	62–70	45–51	55–60
Swelling Rate*	23% ($Cl^- \rightarrow OH^-$)		24% ($Cl^- \rightarrow OH^-$)		14% ($Cl^- \rightarrow OH^-$)	23% (FB→ Cl^-)

*The values specified are for reference only and do not guarantee performance.

IX Resins with Gaussian Distribution

Reliable Quality

Uniformity coefficient below 1.6 ensures consistent performance across various applications.

Cost-Effective Solution

Maintains high performance while reducing costs across diverse water treatment needs.

Flexible Applications

Available in SAC, SBA, and WBA resin types for versatile applications across a broad range of water.

Product Name	QuantumPure™ GC-07	QuantumPure™ GC-08	QuantumPure™ GC-08 H	QuantumPure™ GC-70	QuantumPure™ GC-80
Resin Type	SAC				
Matrix	Styrene-divinylbenzene, Gel				
Functional Group	Sulfonic Acid				
Ionic Form	Na^+	Na^+	H^+	Na^+	Na^+
Total Capacity, min. (eq/ℓ)	1.90	2.00	1.80	1.90	2.00
Uniformity Coefficient	≤1.6				
Average Diameter (µm)	300–1200				
Specific Gravity*	1.25	1.25	1.25	1.25	1.25
Shipping Weight (g/ℓ)*	800	800	800	800	800
Max. Operating Temperature	120°C / 248°F				
Operating pH Range	0-14				
Moisture Retention (%)	45–50	43–50	45–55	45–50	43–55
Swelling Rate*	9% ($Na^+ \rightarrow H^+$)	8% ($Na^+ \rightarrow H^+$)		8-9% ($Na^+ \rightarrow H^+$)	8-9% ($Na^+ \rightarrow H^+$)

Product Name	QuantumPure™ GA-10	QuantumPure™ GA-20	QuantumPure™ GWC-10L	QuantumPure™ GWC-30
Resin Type	SBA		WAC	WBA
Matrix	Styrene-divinylbenzene, Gel		Acrylic Acid-divinylbenzene, Porous	Styrene-divinylbenzene, Porous
Functional Group	Trimethyl Ammonium (Type 1)	Dimethylethanol Ammonium (Type 2)	Carboxylic Acid	Tertiary Amine
Ionic Form	Cl^-	Cl^-	H^+	Free Base
Total Capacity, min. (eq/ℓ)	1.35	1.30	4.50	1.50
Uniformity Coefficient	≤1.6	≤1.6	≤1.6	≤1.6
Average Diameter (µm)	300–1200	300–1200	425–1200	300–1200
Specific Gravity*	1.11	1.13	1.19	1.05
Shipping Weight (g/ℓ)*	670	700	720	635
Max. Operating Temperature	80°C / 176°F (Cl^-); 60°C / 140°F (OH^-)	60°C / 140°F (Cl^-); 40°C / 104° (OH^-)	120°C / 248°F	60°C / 140°F
Operating pH Range	0–14	0–14	4–14	0–9
Moisture Retention (%)	42–48	40–50	45–55	48–58
Swelling Rate*	24% ($Cl^- \rightarrow OH^-$)	15% ($Cl^- \rightarrow OH^-$)	10% ($H^+ \rightarrow Ca^{2+}$)	20% (FB → Cl^-)

*The values specified are for reference only and do not guarantee performance.

IX Resins for Mixed Bed

Ready-to-Use

Mixed resins engineered for efficient, convenient production of high-purity water.

Flexible Resin Size Options

Available in both uniform particle size and Gaussian distribution types to meet diverse treatment needs.

Optimized for Ultrapure Water Applications

UPS type optimized as a final polisher in ultrapure water applications, ensuring the highest levels of water purity.

Product Name		QuantumPure™ UPW-100		QuantumPure™ UPW-200		QuantumPure™ UPW-300		QuantumPure™ UPW-400	
Matrix		Styrene-divinylbenzene, Gel							
Functional Group		Sulfonic Acid	Type 1 (Trimethylammonium)	Sulfonic Acid	Type 1 (Trimethylammonium)	Sulfonic Acid	Type 1 (Trimethylammonium)	Sulfonic Acid	Type 1 (Trimethylammonium)
Ionic Form		H^+	OH^-	H^+	OH^-	H^+	OH^-	H^+	OH^-
Total Capacity, min. (eq/ℓ)		1.9	1.0	1.9	1.0	1.9	1.0	1.9	1.0
Average Diameter (μm)		620±50	620±50	620±50	620±50	620±50	620±50	620±50	620±50
Uniformity Coefficient		≤1.1	≤1.1	≤1.1	≤1.1	≤1.1	≤1.1	≤1.1	≤1.1
Ionic Conversion (%)	H^+	99.0 Min	-	99.0 Min	-	99.0 Min	-	99.0 Min	-
	OH^-	-	95.0 Min	-	95.0 Min	-	95.0 Min	-	95.0 Min
	Cl^-	-	1.0 Max	-	1.0 Max	-	1.0 Max	-	1.0 Max
Mixed Ratio		1:1 (by equivalents) Cation : Anion		1:1 (by equivalents) Cation : Anion		1:1 (by equivalents) Cation : Anion		1:1 (by equivalents) Cation : Anion	
Inlet Condition	Specific Flow Rate	SV30		SV30		SV30		SV30	
	Resistivity	>17.5 MΩ·cm		>17.5 MΩ·cm		>17.5 MΩ·cm		>17.5 MΩ·cm	
	TOC	-		<2 ppb		<2 ppb		<2 ppb	
Outlet Condition	Resistivity	Guaranteed ≥18.0 MΩ·cm(in 30 min.)		Guaranteed ≥18.1 MΩ·cm(in 30 min.)		Guaranteed ≥18.2 MΩ·cm(in 30 min.)		Guaranteed ≥18.2 MΩ·cm(in 30 min.)	
	△TOC	-		<5 ppb (in 120min.)		<1 ppb(in 180min.)		<1 ppb (in 180min.)	

Product Name		QuantumPure™ GMB-200		QuantumPure™ GMB-210		QuantumPure™ GMB-300	
Matrix		Styrene-divinylbenzene, Gel					
Functional Group		Sulfonic Acid	Type 1 (Trimethylammonium)	Sulfonic Acid	Type 1 (Trimethylammonium)	Sulfonic Acid	Type 1 (Trimethylammonium)
Ionic Form		H^+	OH^-	H^+	OH^-	H^+	OH^-
Average Diameter (μm)		300–1,200	300–1,200	300–1,200	300–1,200	300–1,200	300–1,200
Uniformity Coefficient		≤1.6	≤1.6	≤1.6	≤1.6	≤1.6	≤1.6
Ionic Conversion (%)	H^+	99.0 Min	-	99.0 Min	-	99.0 Min	-
	OH^-	-	90.0 Min	-	95.0 Min	-	95.0 Min
	Cl^-	-	1.0 Max	-	1.0 Max	-	1.0 Max
Mixed Ratio		1:1 (by equivalents) Cation : Anion		1:1 (by equivalents) Cation : Anion		1:1 (by equivalents) Cation : Anion	
Inlet Condition	Specific Flow Rate	SV36		SV36		SV36	
	Conductivity	150 μs/cm		150 μs/cm		10 μs/cm	
Outlet Condition	Resistivity	Guaranteed: ≥10.0 MΩ·cm (in 10min.) Actual: ≥15.0 MΩ·cm (in 10min.)		Guaranteed: ≥10.0 MΩ·cm (in 10min.) Actual: ≥15.0 MΩ·cm (in 10min.)		Guaranteed: ≥15.0 MΩ·cm (in 10min.) Actual: ≥17.0 MΩ·cm (in 10min.)	

Product Name	QuantumPure™ IR-30	QuantumPure™ IR-70
Resin Type	Inert	Inert
Matrix	Methyl Methacrylate-divinylbenzene	Polyethylene
Average Diameter (μm)	700–900	≥1,200
Specific Gravity*	1.13–1.15	0.85–0.95
Shipping Weight (g/ℓ)*	670–720	500–600
Max. Operating Temperature	100°C / 212°F	90°C / 194°F
Operating pH Range	0–14	0–14
Application	Boundary layer in a mixed bed system for resin layer separation.	Top layer in packed bed system for resin leakage prevention and regenerant chemicals dispersion.

*The values specified are for reference only and do not guarantee performance.

What Makes **QuantumPure™ IX** Special?

01

Industry-leading Uniformity & Performance

UPS Resins Engineered for Optimal Ion Exchange Capacity and OPEX Savings.

02

Extended Range of Products

Diversified Solutions Tailored for Water Softening, Deionization, and Industrial Water Treatment.

03

Unmatched Global Support

Supported by NanoH2O™ Well-organized Technical and Sales Network Worldwide.

04

Quality You Can Trust

Rigorous Quality Control Standards Driven by NanoH2O's Industry-leading Expertise.

NANOH2O

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