EUROTROL®
WATER TREATMENT COMPONENTS

Ion exchange resins, filtering media

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Pure Resin PC002

- Gel Strong Acid Cation Exchange Resin;
- Light coloured;
- Gel type sulfonated polystyrene cation resin supplied in the sodium form as moist, tough uniform spherical beads.
- Well suited for industrial, commercial or residential softening applications;
- High capacity and good physical stability;
- Shipped in 25 liter bags.

Ref	Description	Fam.	Subfam.		
RA300	STRONG CATION GEL PURE RESIN PC002 (Na)	65	300		

Polymer Matrix Structure	Polystyrene crosslinked with 7% DVB
Functional Group	R-(SO3)-M+
Ionic Form, as shipped	Sodium (Na+)
Physical Form and Appearance	Clear Spherical Beads
Sphericity	95% min
Screen Size Range - U.S. Standard Screen	16 ÷ 50 mesh, wet
Particle Size Range	+1,2 mm < 5%, - 0,3 mm < 1%
Uniformity Coefficient	1,6 max
Water Retention, Na+ form	45 ÷ 50%
Swelling Na+ → H+	10% max
Ca2+→ Na+	5% max
Shipping Weight, Na+ form	770 ÷ 870 g/l (50 lbs/cu.ft, approx.)
Total Exchange Capacity, Na+ form	1,9 eq/l min.
pH Range	0 ÷ 14

Suggested Operating Conditions	
Maximum Temperature Na+ form	120°C (248°F)
Maximum Temperature H+ form	100°C (212°F)
Minimum Bed Depth	0,6 m (24”)
Minimum Bed Depth	8 ÷ 20% NaCl or saturated salt water
Regeneration	
Regenerant Concentration	8 ÷ 20% NaCl or saturated salt water
Flow Rate	2 ÷ 4 BV/h (0,25 ÷ 0,50 gpm/cu.ft)
Flow Rate	At least 30 Minutes
Displacement Rinse Rate	Same as Regenerant Flow Rate
Displacement Rinse Volume	Same as Service Flow Rate
Fast Rinse Rate	Same as Service Flow Rate
Fast Rinse Volume	3 ÷ 4 BV (22,5 ÷ 30 gallons/cu.ft)
Service Flow Rate	10 ÷ 50 BV/h (1,25 ÷ 6,25 gpm/cu.ft)

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
DM174-2004 ACS NSF44 NSF61	Pure Resin	Domestic, Commercial, Industrial

Pure Resin PC003

- Gel Strong Acid Cation Exchange Resin;
- High capacity premium grade bead form, conventional gel polystyrene sulphonate cation exchange resin supplied in the sodium or hydrogen form;
- Intended for use in all water softening, dealcalisation, deionization and chemical processing applications, such as the following:
- In H form (PC003H), can be used in multiple and mixed bed demineralizers with strong base;
- Anion exchangers such as Pure PA101, PA102 and PA103 in OH- form.
- Well suited for industrial, commercial or residential softening applications because of its high capacity and good physical stability;
- Shipped in 25 liter bags.

Ref	Description	Fam.	Subfam.		
RA310	STRONG CATION GEL PURE RESIN PC003 (Na) HIGH CAPACITY	65	300		

Polymer Matrix Structure	Clear Spherical Beads
Functional Group	R-(SO3)¯M+
Ionic Form, as shipped	Na+ / H+
Physical Form and Appearance	Clear Spherical Beads
Sphericity	95% min
Screen Size Range US Standard Screen	16 ÷ 50 mesh, wet
Particle Size Range	+1,2 mm < 5%, - 0,3 mm < 1%
Uniformity Coefficient	1,6 max
Water Retention, Na+ form - H form	43 ÷ 48% - 50 ÷ 56%
Swelling Na+ → H+	10% max
Swelling Ca^{2+}→Na+	5% max
Shipping Weight, Na+ form	780 ÷ 880 g/l (51 lbs/cu.ft, approx.)
Shipping Weight, Ca^{2+}→Na+	770 ÷ 870 g/l (50 lbs/cu.ft, approx.)
Total Exchange Capacity, Na+ form	2,0 eq/l min.
Total Exchange Capacity, H+ form	1,9 eq/l min.
pH Range	0 ÷ 14

Suggested Operating Conditions	
Maximum Temperature Na form	150°C (300°F) max
Maximum Temperature H form	100°C (212°F) max
Minimum Bed Depth	0,6 m (24”)
Backwash Rate	25 ÷ 50% Bed Expansion
Regeneration	
Sodium Cycle	8 ÷ 20% NaCl
Hydrogen Cycle	5 ÷ 10% HCl, 2-8% H2SO4
Flow Rate	2 ÷ 7 BV/h (0,25 ÷ 0,90 gpm/cu.ft)
Displacement Rinse Rate	Same as Regenerate Flow Rate
Displacement Rinse Volume	1,4 ÷ 2,0 BV (10 ÷ 15 gallons/cu.ft)
Fast Rinse Rate	Same as Service Flow Rate
Fast Rinse Volume	4 ÷ 8 BV (30 ÷ 60 gallons/cu.ft)
Service Flow Rate	10 ÷ 50 BV/h (1,25 ÷ 6,25 gpm/cu.ft)

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
DM174-2004 NSF44 NSF61	Pure Resin	Domestic, Commercial, Industrial

Pure Resin PC003UN-NA

- Gel Strong Acid Cation Exchange Resin with high uniformity coefficient;
- High capacity premium grade bead form, conventional gel polystyrene sulphonate cation exchange resin supplied in the sodium or hydrogen form;
- Intended for use in all water softening, dealcalisation, deionization and chemical processing applications, such as the following:
- In H form (PC003HUN), can be used in multiple and mixed bed demineralizers with strong base;
- Anion exchangers such as Pure PA101, PA102 and PA103 in OH- form.
- Well suited for industrial, commercial or residential softening applications because of its high capacity and good physical stability;
- Shipped in 25 liter bags.

Ref	Description	Fam.	Subfam.		
RA312	STRONG CATION GEL PURE RESIN PC003UN-Na	65	300		

Polymer Matrix Structure	Polystyrene crosslinked with 8% DVB
Functional Group	R-(SO3)¯M+
Ionic Form, as shipped	Na+
Physical Form and Appearance	Clear Spherical Beads
Sphericity	95% min
Screen Size Range US Standard Screen	25 ÷ 35 mesh, wet
Particle Size Range	0,5 ÷ 0,71 mm ≥ 95%
Uniformity Coefficient	1,15 max
Water Retention, Na+ form -H form	43 ÷ 48% - 47 ÷ 54% i
Swelling Na+ → H+	10% max
Swelling Ca^{2+}→Na+	5% max
Shipping Weight, Na+ form	780 ÷ 880 g/l (51 lbs/cu.ft, approx.)
Shipping Weight, H form	770 ÷ 870 g/l (50 lbs/cu.ft, approx.)
Total Exchange Capacity, Na+ form	2,0 eq/l min.
Total Exchange Capacity, H form	1,9 eq/l min.
pH Range	0 ÷ 14

Suggested Operating Conditions	
Maximum Temperature Na+	150°C (300°F) max
Maximum Temperature H+	100°C (212°F) max
Minimum Bed Depth	0,6 m (24”)
Backwash Rate	25 ÷ 50% Bed Expansion
Regeneration	
Sodium Cycle	8 ÷ 20% NaCl
Hydrogen Cycle	5 ÷ 10% HCl, 2-8% H2SO4
Flow Rate	2 ÷ 7 BV/h (0,25 ÷ 0,90 gpm/cu.ft)
Displacement Rinse Rate	Same as Regenerate Flow Rate
Displacement Rinse Volume	1,4 ÷ 2,0 BV (10 ÷ 15 gallons/cu.ft)
Fast Rinse Rate	Same as Service Flow Rate
Service Flow Rate	4 ÷ 8 BV (30 ÷ 60 gallons/cu.ft)
Service Flow Rate	10 ÷ 50 BV/h (1,25 ÷ 6,25 gpm/cu.ft)

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
DM174-2004 NSF44 NSF61	Pure Resin	Domestic, Commercial, Industrial

Pure Resin PC100NA

- Macroporous Strong Acid Cation Exchange Resin;
- Macroporous poly (styrene sulphonate) cation exchange resin with excellent resistance to both osmotic and thermal shock;
- Supplied as spherical beads;
- Used for water softening with high level of DVB;
- Also widely used in mixed bed demineralizers where high hydraulic demands exist and high resistance to mechanical thermal
- and oxidative stresses are required, such as condensate polishing, chemical processing, hydrometallurgy, sugar treatment;
- Shipped in 25 liter bags.

Ref	Description	Fam.	Subfam.		
RA318	STRONG CATION MACROPOROUS PURE RESIN PC100 (Na)	65	300		

Typical physical and chemical characteristics	
Structure of the polymer matrix	Polystyrene with 8% of DVB
Functional Group	R-(SO3)¯M
Ionic Form, as shipped	Na
Physical Form and Appearance	Spherical clear grains
Sphericity	95% minimo
Screen Size Range US Standard Screen	16 ÷ 50 mesh, a umido
Particle Size Range	+1,2 mm < 5%, - 0,3 mm < 1%
Uniformity Coefficient	1,6 al massimo
Water Retention	45 ÷ 55%
Swelling Na+ → H+	10% al massimo
Shipping Weight	760 ÷ 830 g/l (50 lbs/cu.ft, approx.)
Total exchange capacity	1,8 eq/l min
pH Range	0 ÷ 14

Suggested Operating Conditions	
Maximum Temperature	150ºC (300ºF) max
Minimum Bed Depth	0,6 m (24”)
Backwash Rate	2 ÷ 7 BV/h (0,25 ÷ 0,90 gpm/cu.ft)
Regeneration	8 ÷ 20% NaCl
Flow Rate	2 ÷ 7 BV/h (0,25 ÷ 0,90 gpm/cu.ft)
Contact Time	At least 20 Minutes
Displacement Rinse Rate	Same as Regenerant Flow Rate
Displacement Rinse Volume	1,4 ÷ 2,0 BV (10 ÷ 15 galloni/cu.ft)
Fast Rinse Rate	Uguale alla portata di esercizio
Fast Rinse Volume	4 ÷ 8 BV (30 ÷ 60 galloni/cu.ft)
Service Flow Rate	10 ÷ 50 BV/h (1,25 ÷ 6,25 gpm/cu.ft)

Box: LxPxH	Box: Q.tà	Box: Peso	Pallet: LxPxH	Pallet: Q.tà	Pallet: Peso

Certificates	Manufacturer	Sectors
DM174-2004	Pure Resin	Industrial

Pure Resin PC100H

- Macroporous Strong Acid Cation Exchange Resin;
- Macroporous poly (styrene sulphonate) cation exchange resin with excellent resistance to both osmotic and thermal shock;
- Supplied as spherical beads;
- Used for water softening with high level of DVB;
- Also widely used in mixed bed demineralizers where high hydraulic demands exist and high resistance to mechanical thermal and oxidative stresses are required, such as condensate polishing, chemical processing, hydrometallurgy, sugar treatment;
- Shipped in 25 liter bags.

Ref	Description	Fam.	Subfam.		
RA320	STRONG CATION MACROPOROUS PURE RESIN PC100 (H)	65	300		

Polymer Matrix Structure	Polystyrene crosslinked with 8% DVB
Functional Group	R-(SO3)¯M+
Ionic Form, as shipped	H+
Physical Form and Appearance	Clear Spherical Beads
Sphericity	95% min
Screen Size Range US Standard Screen	16 ÷ 50 mesh, wet
Particle Size Range	+1,2 mm < 5%, - 0,3 mm < 1%
Uniformity Coefficient	1,6 max
Water Retention	50 ÷ 60%
Swelling Na+ → H+	10% max
Shipping Weight, Na+ form	760 ÷ 830 g/l (50 lbs/cu.ft, approx.)
Total Exchange Capacity	1,7 eq/l min.
pH Range	0 ÷ 14

Suggested Operating Conditions	
Maximum Temperature	120ºC (248ºF) max
Minimum Bed Depth	0,6 m (24”)
Backwash Rate	2 ÷ 7 BV/h (0,25 ÷ 0,90 gpm/cu.ft)
Regeneration	5 ÷ 10% HCl, 2 ÷ 8% H2SO4
Flow Rate	2 ÷ 7 BV/h (0,25 ÷ 0,90 gpm/cu.ft)
Contact Time	At least 20 Minutes
Displacement Rinse Rate	Same as Regenerant Flow Rate
Displacement Rinse Volume	1,4 ÷ 2,0 BV (10 ÷ 15 gallons/cu.ft)
Fast Rinse Rate	Same as Service Flow Rate
Fast Rinse Volume	4 ÷ 8 BV (30 ÷ 60 gallons/cu.ft)
Service Flow Rate	10 ÷ 50 BV/h (1,25 ÷ 6,25 gpm/cu.ft)

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
	Pure Resin	Industrial

Pure Resin PA103OH

- Gel Strong Base Anion Exchange Resin;
- It is a Type II, gel strong-base anion exchange resin, with high capacity and excellent regeneration efficiency;
- Supplied as spherical beads in the hydroxyl form;
- It removes all ions including silica and CO2, anyway, it operates best on waters having a high percentage of strong acids (FMA);
- Intended for use in all type of dealcalisation, demineralization, deionization and chemical processing applications;
- Shipped in 25 liter bags.

Ref	Description	Fam.	Subfam.		
RA340	STRONG ANION GEL TYPE II PURE RESIN PA103 (OH)	65	300		

Polymer Matrix Structure	Polystyrene crosslinked with divinylbenzene
Functional Group	R-(SO3)¯M+
Ionic Form, as shipped	Hydroxyl (OH-)
Physical Form and Appearance	Clear Spherical Beads
Sphericity	95% min
Screen Size Range US Standard Screen	16 ÷ 50 mesh, wet
Particle Size Range	+1,2 mm < 5%, - 0,3 mm < 1%
Uniformity Coefficient	1,6 max
Water Retention, Cl- form	45 ÷ 50%
Swelling Cl- → OH-	15% max
Weight, Cl- form	680 ÷ 760 g/l (44 lbs/cu.ft, approx.)
Total Exchange Capacity, Cl- form	1,3 eq/l min.
pH Range	0 ÷ 14

Suggested Operating Conditions	
Maximum Temperature, Cl- form	60ºC (140ºF) max
Maximum Temperature, OH- form	40°C (105°F) max
Minimum Bed Depth	0,6 m (24”)
Backwash Rate	50 ÷ 75% Bed Expansion
Regeneration	
Regenerant Concentration	2 ÷ 6% NaOH
Flow Rate	2 ÷ 4 BV/h (0,25 ÷ 0,50 gpm/cu.ft)
Contact Time	At least 60 Minutes
Displacement Rinse Rate	1,4 ÷ 2 BV (10 ÷ 15 gallons/cu.ft)
Displacement Rinse Volume	1,4 ÷ 2 BV (10 ÷ 15 gallons/cu.ft)
Fast Rinse Rate	Same as Service Flow Rate
Fast Rinse Rate	4 ÷ 8 BV (30 ÷ 60 gallons/cu.ft)
Service Flow Rate	10 ÷ 50 BV/h (1,25 ÷ 6,25 gpm/cu.ft)

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
	Pure Resin	Industrial

Pure Resin PA201(CL)

- Macroporous Strong Base Anion Exchange Resin;
- It is a Type II, gel strong-base anion exchange resin;
- Supplied wet as spherical beads in the chloride form;
- It has a high operating capacity, especially on high-FMA feedwaters, as well as a high reversible sorptive capacity for complex organic materials, such as the fulvic and humic acids which occur in many surface water supplies;
- It is recommended for use in waters with low silica loads. For high silica waters, a type I anion resin such as Pure PA200 is recommended;
- Shipped in 25 liter bags.

Ref	Description	Fam.	Subfam.		
RA342	STRONG ANION MACROPOROUS TYPE II PURE RESIN PA201(Cl)	65	300		

Polymer Matrix Structure	Macroporous polystyrene crosslinked with divinylbenzene
Functional Group	R-N(CH3)2 (C2H4OH)+
Ionic Form, as shipped	Chloride (Cl-)
Physical Form and Appearance	Opaque light yellowish spherical beads
Sphericity	95% min
Screen Size Range US Standard Screen	16 ÷ 50 mesh, wet
Particle Size Range	+1,2 mm < 5%, - 0,3 mm < 1%
Uniformity Coefficient	1,6 max
Water Retention, Cl- form	47 ÷ 57%
Swelling Cl- → OH-	10% max
Weight, Cl- form	1,2 eq/l min.
Total Exchange Capacity, Cl - form	1,2 eq/l min.
pH Range	0 ÷ 14

Suggested Operating Conditions	
Maximum Temperature, Cl- form	60ºC (140ºF) max
Maximum Temperature, OH- form	40°C (105°F) max
Minimum Bed Depth	0,8 m (30")
Backwash Rate	50 ÷ 75% Bed Expansion
Regeneration, Regenerant Concentration	2 ÷ 5% NaOH
Service/fast rinse	5 ÷ 50 m/h (2 ÷ 20 gpm/ft2)
Co-current regeneration/displacement rinse	1 ÷ 10 m/h (0,4 ÷ 4 gpm/ft2)
Total rinse requirement	3 ÷ 5 Bed volumes
Temperature	Ambient up to 35°C (95°F) for silica removal

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
	Pure Resin	Industrial

Pure Resin PA300

- Macroporous Weak Base Anion Exchange Resin;
- It is a macroporous polystyrene weak-base anion exchange resin having tertiary amine functionality;
- It has superior kinetics and greater resistance to oxidation and osmotic shock, high chemical and physical stability;
- Intended primarily for use in multiple bed demineralizers;
- It can be used in a two-bed system following a strong acid cation exchanger such as Pure PC003 where weak acid ions (silica and carbon dioxide) do not have to be removed;
- It can also be used in a separate bed, ahead of the strong base exchanger to remove organics and strong acid ions;
- Shipped in 25 liter bags.

Ref	Description	Fam.	Subfam.		
RA350	WEAK ANION MACROPOROUS PURE RESIN PA300	65	300		

Polymer Matrix Structure	Polystyrene crosslinked with divinylbenzene
Functional Group	R-N-(CH3)2
Ionic Form, as shipped	Free Base
Physical Form and Appearance	Spherical Beads
Sphericity	95% min
Screen Size Range US Standard Screen	16 ÷ 50 mesh, wet
Particle Size Range	+1,2 mm < 5%, - 0,3 mm < 1%
Uniformity Coefficient	1,6 max
Water Retention, Cl- form	50 ÷ 60%
Swelling Cl- → OH-	25% max.
Weight, Cl- form	650 ÷ 720 g/l (42 lbs/cu.ft, approx.)
Total Exchange Capacity, Cl- form	1,4 eq/l min.
pH Range	0 ÷ 14

Suggested Operating	
Maximum Temperature	100ºC (212ºF) max
Minimum Bed Depth	0,6 m (24")
Backwash Rate	50 ÷ 75% Bed Expansion
Regeneration	
Regenerant Concentration	2 ÷ 6% NaOH
Flow Rate	2 ÷ 8 BV/h (0,25 ÷ 1,00 gpm/cu.ft)
Contact Time	At least 60 Minutes
Displacement Rinse Rate	Same as Regenerant Flow Rate
Displacement Rinse Volume	1,4 ÷ 2 BV (10 ÷ 15 gallons/cu.ft)
Fast Rinse Rate	Same as Service Flow Rate
Fast Rinse Volume	4,9 ÷ 8 BV (35 ÷ 60 gallons/cu.ft)
Service Flow Rate	16 ÷ 32 BV/h (2,0 ÷ 4,0 gpm/cu.ft)

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
	Pure Resin	Industrial

Pure Resin PA202

- Nitrate Selective Resin;
- Macroporous strong base anion exchange resin supplied in the chloride form as moist, tough, spherical beads, specially designed for the removal of nitrates from water;
- The macroporous matrix and special ion exchange group functionality imparts ideal nitrate selectivity to Pure PA202 making this resin particularly suitable for nitrate removal even when moderate to high sulphate concentrations are present;
- Shipped in 25 liter bags.

Ref	Description	Fam.	Subfam.		
RA360	STRONG ANION NITRATES SELECTIVE PURE RESIN PA202	65	300		

Polymer Matrix Structure	Macroporous, Styrene with DVB
Functional Group	R-N-R3+ Cl-
Ionic Form, as shipped	Cl-
Physical Form and Appearance	Clear Spherical Beads
Sphericity	95% min
Screen Size Range US Standard Screen	16 ÷ 50 mesh, wet
Particle Size Range	+1,2 mm < 5%, - 0,3 mm < 1%
Uniformity Coefficient	1,6 max
Water Retention, Cl- form	52 ÷ 56%
Shipping Weight	680 ÷ 730 g/l (42 ÷ 45,5 lbs/cu.ft, approx.)
Total Exchange Capacity	1,0 eq/l min.
Max Operating Temperature	100°C (212°F) max.
pH Range	0 ÷ 14

Suggested Operating Conditions	
Maximum Operating Temperature	100ºC (212ºF) max
Working Exchange Capacity 25°C	≥ 0,3 meq/l (wet)
Concentration of Regenerate Solution	NaCl: 8 ÷ 10%
Consumption of Regenerate	NaCl (8 ÷ 10%) Vol. : Resin Vol. = 2÷3 : 1
Flow Rate of Regenerate Solution	4 ÷ 6 (m/hr)
Flow Rate of Regenerate Solution	30 ÷ 60 (minute)
Rinse Flow Rate	15 ÷ 25 (m/hr)
Rinse Time (minute)	25 (approx.)
Operating Flow Rate	15 ÷ 25(m/hr)

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
DM174-2004	Pure Resin	Domestic, Commercial, Industrial

Pure Resin PMB101-2

- Mixed Bed Resin;
- It is a high capacity mixed bed ion exchange resin consisting of a mixture of a gel, Type I strong base anion resin and a gel strong acid cation resin for direct water purification;
- The conductivity is around 0,1 us/cm;
- Suitable for use in regenerable or non-regenerable cartridges, for deionization with high silica removal efficiency and refine water for electrical home applications;
- Shipped in 25 liter bags.

Ref	Description	Fam.	Subfam.		
RA370	MIXED BED PURE RESIN PMB101-2	65	300		

Polymer Matrix Structure	Gel polystyrene crosslinked with DVB
Functional Group: Cation	R-SO3- H+
Functional Group: Anion	R4-N-OH-
Ionic Form, as shipped	H+ / OH-
Physical Form and Appearance	Spherical Beads
Sphericity	95% min
Screen Size Range US Standard Screen	16 ÷ 50 mesh, wet
Particle Size Range	+1,2 mm < 5%, - 0,3 mm < 1%
Volume Ratio (as shipped) Cation	40% PC003H
Volume Ratio (as shipped) Anion	60% PA101OH
Total Exchange Capacity, Cation (in Na+ form)	2,0 eq/l min.
Total Exchange Capacity, Cation (in H+ form)	1,9 eq/l min.
Total Exchange Capacity, Anion (in Cl- form)	1,0 eq/l min.
Total Exchange Capacity, Anion (in OH- form)	1,0 eq/l min.
Water Retention, H+ form	45 ÷ 50%
Water Retention, OH+ form	53 ÷ 60%
Water Retention, H+ form	700 ÷ 740 g/l (44 ÷ 46 lbs/cu.ft, approx.)
Max temperature	60°C (140°F)
pH Range	0 ÷ 14

Suggested Operating Conditions	
Minimum Bed Depth	0,6 m (24")
Service Flow Rate	20 ÷ 60 BV/h (2,5 ÷ 7,5 gpm/cu.ft)
Limitations	Extended exposure to strong oxidizers, such as chlorine, hydrogen peroxide and concentrated nitric acid, degrade the structural backbone of the resin and should be avoided

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
	Pure Resin	Industrial

Pure Resin PMB102-2

- Mixed Bed Resin;
- It is a high capacity mixed bed ion exchange resin consisting of a mixture of a gel, Type I strong base anion resin and a gel strong acid cation resin for direct water purification;
- The conductivity is around 0,1 us/cm;
- Suitable for use in regenerable or non-regenerable cartridges, for deionization with high silica removal efficiency and applications for treatment of the R.O. permeate;
- Shipped in 25 liter bags.

Ref	Description	Fam.	Subfam.		
RA372	MIXED BED PURE RESIN PMB102-2 (REFINING PERMEATEWATER)	65	300		

Polymer Matrix Structure	Gel polystyrene crosslinked with DVB
Polymer Matrix Structure: Cation	R-SO3- H+
Polymer Matrix Structure: Anion	R4-N-OH-
Ionic Form, as shipped	H+ / OH-
Ionic Form, as shipped	Spherical Beads
Sphericity	95% min
Screen Size Range US Standard Screen	16 ÷ 50 mesh, wet
Particle Size Range	+1,2 mm < 5%, - 0,3 mm < 1%
Volume Ratio (as shipped): Cation	40% PC003H
Volume Ratio (as shipped): Anion	60% PA102OH
Total Exchange Capacity, (Cation (in Na+ form)	2,0 eq/l min.
Total Exchange Capacity, Cation (in H+ form)	1,9 eq/l min.
Total Exchange Capacity, Anion (in Cl- form)	1,3 eq/l min.
Total Exchange Capacity, Anion (in OH- form)	1,0 eq/l min.
Water Retention, H+ form	45 ÷ 50%
Water Retention, OH+ form	48 ÷ 58%
Shipping Weight (Approx.)	700 ÷ 740 g/l (44 ÷ 46 lbs/cu.ft, approx.)
Max temperature: Non-regenerative bed	100°C (212°F)
Max temperature: Regenerative bed	60°C (140°F)
pH Range	0 ÷ 14

Suggested Operating Conditions	
Minimum Bed Depth	0,6 m (24")
Service Flow Rate	20 ÷ 60 BV/h (2,5 ÷ 7,5 gpm/cu.ft)
Limitations	Extended exposure to strong oxidizers, such as chlorine, hydrogen peroxide and concentrated nitric acid, degrade the structural backbone of the resin and should be avoided

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
	Pure Resin	Industrial

Pure Resin PMB101-3

- Mixed Bed Resin;
- It is a high capacity mixed bed ion exchange resin consisting of a mixture of a gel, Type I strong base anion resin and a gel strong acid cation resin for direct water purification;
- The conductivity is around 0,06 us/cm;
- Suitable for use in regenerable or non-regenerable cartridges, for deionization with high silica removal efficiency and ultrapure water production applications;
- Shipped in 25 liter bags.

Ref	Description	Fam.	Subfam.		
RA374	MIXED BED PURE RESIN PMB101-3 (PURE WATER 12 - 16MOhm)	65	300		

Polymer Matrix Structure	Gel polystyrene crosslinked with DVB
Functional Group: Cation	R-SO3- H+
Functional Group: Anion	R4-N-OH-
Ionic Form, as shipped	H+ / OH-
Physical Form and Appearance	Spherical Beads
Sphericity	95% min
Screen Size Range US Standard Screen	16 ÷ 50 mesh, wet
Particle Size Range	+1,2 mm < 5%, - 0,3 mm < 1%
Volume Ratio (as shipped) Cation	40% PC003H
Volume Ratio (as shipped) Anion	60% PA101OH
Total Exchange Capacity, Cation (in Na+ form)	2,0 eq/l min.
Total Exchange Capacity, Cation (in H+ form)	1,9 eq/l min.
Total Exchange Capacity, Anion (in Cl- form)	1,3 eq/l min.
Total Exchange Capacity, Anion (in OH- form)	1,0 eq/l min.
Water Retention, H+ form	45 ÷ 50%
Water Retention, OH+ form	53 ÷ 60%
Shipping Weight (Approx.)	700 ÷ 740 g/l (44 ÷ 46 lbs/cu.ft, approx.)
Max temperature: Non-regenerative bed	100°C (212°F)
Max temperature: Regenerative bed	60°C (140°F)
pH Range	0 ÷ 14

Suggested Operating Conditions	
Minimum Bed Depth	0,6 m (24”)
Service Flow Rate	20 ÷ 60 BV/h (2,5 ÷ 7,5 gpm/cu.ft)
Limitations	Extended exposure to strong oxidizers, such as chlorine, hydrogen peroxide and concentrated nitric acid degrade the structural backbone of the resin and should be avoided.

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
	Pure Resin	Industrial

Pure Resin PS400

- Selective removal of polyvalent ions;
- Macroporous Weak Acid Cation Exchange Resin;
- it is based on the iminodiacetatic acid functional group, which has chelating properties for heavy metal ions even against high concentrations of calcium;
- It finds use in processes for extraction and recovery of metals from ores, galvanic plating solutions, picking baths and effluents;
- Shipped in 25 liter bags.

Ref	Description	Fam.	Subfam.		
RA376	WEAK CATION POLYVALENT IONS SELECTIVE PURE RESINPS400	65	300		

Polymer Matrix Structure	Macroporous, Styrene / DVB
Functional Group	Iminodiacetatic
Functional Group	Na+
Physical Form and Appearance	Milky White Spherical Beads
Sphericity	95% min
Screen Size Range US Standard Screen	16 ÷ 50 mesh, wet
Particle Size Range	0,30 ÷ 1,20 mm ≥ 95
Uniformity Coefficient	1,6 max.
Water Retention, Na+ form	55 ÷ 65%
Reversible Swelling H+ → Na+	40% max.
Shipping Weight	720 ÷ 780 g/l (45 lbs/cu.ft, approx.)
Total Exchange Capacity, Na+ form	≥ 1.0 meq/ml
pH Range	6 ÷ 11

Suggested Operating Conditions	
Maximum Temperature, H+ form	100ºC (212ºF) max.
Operating Flow Rate	15 ÷ 45 (m/hr)
Method of Regeneration	pass 1 eq/l HCl 2~4 BV in 1~1,5 hours, rinse with DI water or soft water until pH = 3~4; pass 1 eq/l NaOH 2~4 BV in 1,5~2 hours, rinse with DI water or soft water until pH = 9

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
DM174-2004	Pure Resin	Industrial

Greensand Plus

- Filter media used for removing soluble iron, manganese, hydrogen sulphide, arsenic and radium from well water supplies;
- The Manganese Greensand Plus has a manganese dioxide coated surface that acts as a catalyst in the oxidation-reduction of iron and manganese;
- The silica sand core allows to better withstand operating conditions in waters that are low in silica, TDS and hardness;
- A pre-filtration with sand and anthracite is recommended;
- The Manganese Greensand Plus can be used in CR (continuous regeneration) or IR (intermittent regeneration) and requires no changes in backwash rate or times or chemical feeds;
- The removal of iron and manganese can be made by using oxidant as chlorine, even in the presence of manganese;
- Not shipped in regenerated form; prior to use it is necessary to regenerate with a solution of potassium permanganate contacting the bed for a minimum of 4 hours. A regeneration level of 4 g of potassium permanganate per liter is recommended. Before placing in service the filter must be rinsed of all remaining traces of potassium permanganate;
- Dosage Cl2 (mg/l) = 1 mg/l Fe + 3 mg/l Mn + 6 mg/l H2S + 8 mg/l NH3 for service flow rate continuous;
- Available in 14,2 liters bags.

Ref	Description	Fam.	Subfam.		
RA074	MANGANESE GREENSAND PLUS BAG 14,2 LT	65	315		

Physical properties		Operating conditions	
Colour	black	pH range	6,2 ÷ 8,8
Specific gravity (g/l)	2400	Service flow rate continuous / intermittent (m3/h m2)	12 ÷ 29
Bulk density (g/l)	1410	Backwash flow rate @13°C (m3/h m2)	30
Effective size (mm)	0,30 ÷ 0,35	Backwash bed expansion (%)	35 ÷ 40
Uniform coefficient	1,6	Pressure drop (psi)	10 ÷ 18

Recommended Operating Guidelines	Intermittently Regeneration (IR)	Recommended Operating Guidelines	
Minimum bed depth (mm)	750 single media:380 each for dual media beds	Minimum bed depth (mm)	500 Greensand Plus and 380 Anthracite
Backwash Duration	10 minutes (until water is CLEAR)	Backwash Duration	10 minutes (until water is clear)
Regenerant Dosage 6,5% Bleach	65 liters / m3 diluted in approx. 25 liters of water injected over 30 ÷ 40 minutes		
Regenerant Dosage 12% Bleach	25 liters / m3 diluted in approx. 25 liters of water injected over 30 ÷ 40 minutes		

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
NSF61		Domestic, Commercial, Industrial

BIRM

- Granular filter media used for the reduction of iron and manganese dissolved in the water. In ground water the dissolved iron is usually in the ferrous bicarbonate state and is not filterable; BIRM acts as an insoluble catalyst to enhance the reaction between dissolved oxygen and iron compounds, producing ferric hydroxide which precipitates and may be easily filtered;
- The physical characteristics of BIRM provide an excellent filter media which is easily cleaned by backwashing to remove the precipitant;
- BIRM is not consumed in the iron removal operation;
- Available in 28,3 liters bags;
- Following are the conditions necessary for a good efficiency of the BIRM:
- No Oil, Hydrogen Sulphide and Polyphosphates in the water;
- pH 6,8 ÷ 9,0 (if water contains also manganese pH has to be 8,0 ÷ 8,5);
- Dissolved oxygen content must be equal to at least 15% of the iron content and 29% of the manganese content;
- Alkalinity should be greater than two times the combined sulphate and chloride concentration;
- Less than 5 ppm TOC.

Ref	Description	Fam.	Subfam.		
RA072	BIRM REGULAR BAG 28.3 LT.	65	315		

PHYSICAL PROPERTIES		OPERATING CONDITIONS	
Colour	black	Bed depth (mm)	750 ÷ 900
Specific gravity (g/l)	2000	Service flow rate (m3/h m2)	9 ÷ 13
Bulk density (g/l)	560 ÷ 640	Backwash flow rate (m3/h m2)	24 ÷ 30
Mesh Size	12 x 50	Backwash bed expansion (%)	20 ÷ 40
Effective Size (mm)	0,48		
Uniform Coefficient	2,7		

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
NSF61	Clack	Domestic, Commercial, Industrial

Pyrolusite

- PYROLUSITE is manganese dioxide (MnO2) of very good quality and pureness obtained by washing, drying and screening of mineral selected for the specific catalytic activity;
- Used as catalyser for the reduction of iron and manganese dissolved in the water, by sand filters, mixed 20÷50 % with sand 0,4÷0,8 / 0,7÷1,2 mm;
- Does not require a compulsory regeneration with KMnO4 , but you can do a continuous chlorination or a chlorination during the backwash;
- Hardness 3° ÷ 5° Mosh;
- Available in 25 kg bags.

Ref	Description	Fam.	Subfam.		
RA069	MWG PYROLUSITE (MANGANESE DIOXIDE) BAG 25 KG	65	315		

Physical Properties	
Colour	brown
Bulk density (g/l)	2000
Effective size (mm)	0,35 ÷ 0,85
Mn (%)	80

Operating Conditions	
Composition	Mixed 20÷50 % with sand 0,4÷0,8 / 0,7÷1,2 mm
Suggested filtration speed (m/h)	≤ 10
Max backwash speed (m3/h m2)	25
Backwash expansion at 25 m/h (%)	25
Min contact time (min)	6
Range pH	6,5 ÷ 8,5

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
STANDARD EN 13752	**MWG**	Domestic, Commercial, Industrial

Activated Carbon

- RA204 activated carbon is not suitable for treatment of water intended for human consumption;
- In granular form;
- Suitable for Chlorine, chemical oxidants, chlorinated compounds and organic contaminants dissolved in water;
- activated carbon require periodic backwashing to eliminate accumulated suspended matters and to regrade the filter bed;
- A good backwashing of the AC filter bed of the start-up is required.
- Mainly bituminous origin coal activated carbons are carefully selected, with a thermal activation process at strictly controlled temperature to obtain a large surface area and a mesoporous structure allowing the adsorption of high molecular weight organic compounds in particular hydrocarbons, atrazine, surfactants;

- Mainly vegetal (coconut base) activated carbons are suitable for applications that need good resistance to the attrition and mechanical shocks; they have a microporous structure allowing the adsorption of low molecular weight organic compounds in particular trichloroethylene, tetrachloroethylene.

Ref	Description	Fam.	Subfam.		
RA204	MWG BAG 25 KG CARB. CYLINDRICAL MIN. SC 45 (47 LT.ABOUT)	65	305		
RA201	MWG BAG 25 KG CARB. MIN. GAC 830 M (52 LT.ABOUT)	65	305		
RA202	MWG BAG 25 KG CARB. MIN. GAC 1240 M (52 LT. ABOUT)	65	305		
RA206	MWG BAG 25 KG CARB. GAC 8X30 VEGETAL	65	305		
RA208	MWG BAG 25 KG CARB. GAC 12X40 VEGETAL	65	305		

Ref	Type	Origin	Size(mm)	Bulk density (g/l)	Bet (m²/g)	Iodine number (mg/g)	Ash content (%)
RA204	SC45 cylindrical	Mineral	4	530	700	750	12
RA201	GAC 8x30	Mineral	0,6 ÷ 2,4	480	1100	1000	12
RA202	GAC 12x40	Mineral	0,4 ÷ 1,7	480	1100	1000	12
RA206	GAC 8x30	Vegetal	0,6 ÷ 2,4	500	1250	1100	3
RA208	GAC 12x40	Vegetal	0,4 ÷ 1,7	500	1250	1100	3

Operating conditions	
Bed depth (mm) (dechlorination)	650 ÷ 750
Service flow rate (m3/h m2) (dechlorination)	12 ÷ 15
Backwash flow rate (m3/h m2)	24 ÷ 30
Backwash bed expansion (%)	30 ÷ 40

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
STANDARD EN 12915-1:2004 (except RA204)	**MWG**	Commercial, Industrial

Acid Washed Activated Carbon

- High quality granular activated carbon produced by physical activation of selected raw material of mineral origin;
- It is further washed with acid in order to reduce the ash content;
- Particularly effective for the removal of organic pollutants, dyes, pesticides, chlorinated and aromatic solvents, phenols, tannins, chlorine derivatives and compounds that cause bad smells and tastes in drinking water;
- Suitable for different applications such as the purification of water intended for human consumption, the purification of wastewater, of process and condensates. It is also used in the purification and discoloration processes of intermediates chemical and food products;
- It can be thermally reactivated once its adsorbing capacity is exhaust;
- Available in 25 kg bags.

Ref	Description	Fam.	Subfam.		
RA222	MWG BAG 25 KG CARB. GAC 12X30 MINERAL ACID WASHED	65	305		

GENERAL PROPERTIES			
Iodine number	Astm D 4607	mg / g	1.000
Moisture as packed	Astm D 2867	%	2
Size	Astm D 2862	Mesh	12 x 30
Methylene blue index	12 Mesh / 30 Mesh	%	5 - 5
Indice Blu di Metilene	Cefic Dab VI	ml	18
CCl4 adsorption	Astm D 3467	%	60
Surface area (B.E.T.)	Astm D 3663	m ²/g	1.100
Bulk density	Astm D 2854	kg/m ³	460
Density after back-washing and draining		kg/m ³	420
Iron (acid extraction)		ppm	300
Hardness	Astm D 3802	%	95
Ash content	Astm D 2866	%	8
pH	Astm D 3838	-	neutral

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
STANDARD EN 12915	**MWG**	Domestic, Commercial, Industrial

Filter Sand and Gravel

- REF. RA049, RA050, RA051, RA052 and RA053;
- Filter sand and gravel shape of alluvium origin, uncrushed;
- High contents of silica, selected for specific use in water filtration for potable and industrial application;
- Hardness 7° Mosh.

Ref	Description	Fam.	Subfam.		
RA049	QUARTZ SAND 0.4 - 0.8 BAG 25 KG	65	310		
RA050	QUARTZ SAND 0.8 - 1.2 BAG 25 KG	65	310		
RA051	QUARTZ SAND 1 - 2 BAG 25 KG	65	310		
RA053	QUARTZ SAND 2 - 3 BAG 25 KG	65	310		
RA052	QUARTZ SAND 3 - 5 BAG 25 KG	65	310		

Ref	Description	SIZE (mm)
RA049	QUARTZ SAND 0.4 - 0.8 BAG 25 KG	0,4 ÷ 0,8
RA050	QUARTZ SAND 0.8 - 1.2 BAG 25 KG	0,8 ÷ 1,2
RA051	QUARTZ SAND 1 - 2 BAG 25 KG	1,0 ÷ 2,0
RA053	QUARTZ SAND 2 - 3 BAG 25 KG	2,0 ÷ 3,0
RA052	QUARTZ SAND 3 - 5 BAG 25 KG	3,0 ÷ 5,0

Physical properties	
Colour	white
Specific gravity (g/l)	2650
Bulk density (g/l)	1500
SiO2 content	> 96 %
Humidity	0,3 % max
Melting point	1700 g/c
pH	8

Operating conditions	
Bed depth (mm) (sand filter)	450 ÷ 750
Service flow rate (m3/h m2)	8 ÷ 12
Backwash flow rate (m3/h m2)	30 ÷ 42
Backwash bed expansion (%)	5 ÷ 10

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
STANDARD EN 12904		Domestic, Commercial, Industrial

Anthracite

- Granular anthracite selected per gradation, hardness and purity for specific use in potable and industrial water filtration;
- The high filtering efficiency of anthracite is due to its angular shape, that allows high filtering speed, longer filter runs and less head loss;
- Excellent media with density lower than sand, the anthracite is usually used in multimedia filters;
- Minimum carbon contents 90%, low silica, hardness 3° Mosh average.

Operating conditions:

- Monolayer bed depth 600 ÷ 900 mm;
- Top bed depth in multilayer beds 250 ÷ 450 mm;
- Service flow rate following specific conditions;
- Backwash flow rate 28 ÷ 35 m3/h m2;
- Bed expansion 20 ÷ 30%.

Ref	Description	Fam.	Subfam.		
RA060	ANTHRACITE 0.6 - 1.0 BAG 25 KG	65	310		
RA061	ANTHRACITE 2 - 3 BAG 25 KG.	65	310		

Ref	Description	SIZE (mm)
RA060	ANTHRACITE 0.6 - 1.0 BAG 25 KG	0,6 ÷ 1,0
RA061	ANTHRACITE 2 - 3 BAG 25 KG.	2,0 ÷ 3,0

Physical properties	
Bulk density (g/l)	950
Absolute density (g/l)	1400
Humidity packaging	2 % max
Ashes	4 % (±2)
Substances volatiles	3 % (±1)
Sulphur	0,5 % max
pH	8 ÷ 10

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
STANDARD EN 12909		Domestic, Commercial, Industrial

Calcite

- CALCITE is a natural crushed and screened calcium carbonate media which is used to neutralize low pH waters;

- Acidic water slowly dissolves the calcium carbonate to raise the pH which reduces the potential leaching of copper, lead and other metals found in typical plumbing systems;
- One of the advantages of CALCITE is its self-limiting property, that corrects pH only enough to reach a non corrosive equilibrium;
- Of course CALCITE will increase the hardness of the water;
- Periodic backwashing of the bed is necessary to keep in working order the system;
- The CALCITE bed will have to be periodically replenished as the CALCITE is depleted;
- Gravel support bed is recommended;
- Available in 15,6 liters bags.

Ref	Description	Fam.	Subfam.		
RA073	CALCITE BAG 15.6 LT.	65	320		

Physical properties	
Colour	white
Specific gravity (g/l)	2700
Bulk density (g/l)	1450
Effective size (mm)	0,4 ÷ 1,1
Composition	CaCO3 95% min. MgCO3 3% max
Operating conditions	
Bed depth (mm)	600 ÷ 750
Service flow rate (m3/h m2)	7 ÷ 15
Backwash flow rate ($m^3/h\ m^2$)	20 ÷ 30
Backwash bed expansion (%)	≥ 50
pH range	5,0 ÷ 7,0

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
NSF60		Domestic, Commercial, Industrial

Filter AG

- Filter-Ag is a non-hydrous silicon dioxide media which can be used as highly efficient filter media for the reduction of suspended matter. Its fractured edges and irregular surface provides an high surface area and complex flow path for efficient filtration;
- Less pressure loss through a bed of Filter-Ag than through most other filter medias;
- Light weight requires lower backwash rates than other filter medias;
- Upon installation allow bed to soak overnight before backwashing;
- Available in 28,3 liters bags.

Ref	Description	Fam.	Subfam.		
RA059	FILTER AG - BAG 28,3 LT	65	310		

Physical properties	
Colour	light grey
Specific gravity (g/l)	2250
Specific gravity (g/l)	380 ÷ 420
Effective size (mm)	0,5 ÷ 2,0

Operating conditions	
Bed depth (mm)	600 ÷ 900
Service flow rate (m3/h m2)	12 ÷ 13
Backwash flow rate (m3/h m2)	20 ÷ 24
Backwash bed expansion (%) of bed depth	20 ÷ 40
Freeboard of bed depth (%)	≥ 50

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
NSF61	Clack	Domestic, Commercial, Industrial

Filter AG Plus

- Filter-Ag Plus is a clinoptilolite natural media with a large surface area and microporous structure which can be used as highly efficient filter media for the reduction of suspended matter. Its irregular surface and 3 micron void spaces provides a surface area over 100 times greater than silica sand;
- Its low pressure drop, high service flow rates and high bed loadings combined with lower backwash frequency allow economy in equipment downsizing and reduced pumping requirements;
- Utilizing deep bed filtration can tipically reduce suspended solids down to 5 micron or less range;
- Filter Ag Plus can be applied to systems designed for either pressure or gravity flow;
- Available in 28,3 liters bags.

Ref	Description	Fam.	Subfam.		
RA058	FILTER AG PLUS - BAG 28,3 LT	65	310		

Physical properties	
Colour	White to off white
Specific gravity (g/l)	2200
Bulk density (g/l)	800
Effective size (mm)	0,55

Operating conditions	
Bed depth (mm)	600 ÷ 1200 (900 for optimal filtration)
Service flow rate (m3/h m2)	30 ÷ 50
Backwash flow rate (m3/h m2)	35 ÷ 45
Backwash bed expansion (%) of bed depth	30 ÷ 40
Freeboard of bed depth (%)	≥ 50

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
NSF61	Clack	Domestic, Commercial, Industrial

GFH (Granular Ferric Hydroxide)

- Granular ferric hydroxide GFH is an adsorbent for selective removal of arsenic (both arsenite and arsenate), phosphate, vanadium, antimony, lead, uranium, molybdenum and other heavy metals from natural water;
- Preoxidation is not required for arsenic removal applications;
- Once the media has exhausted its adsorption capacity, it is removed from the vessel and replaced with new media;
- The simplicity of this process is very attractive for small installations and wellhead applications;
- Active substance Fe(OH)3 + β-FeOOH;
- Dry solids content 58% (± 10%).

Requirements for raw water

- Free of turbidity
- Positive redox potential
- No calcium precipittion

Ref	Description	Fam.	Subfam.		
RA068	GRANULAR FERRIC HYDROXIDE DRUM 30 KG	65	315		

Physical properties (with water content 45%):	
Density of grains (g/l)	1590
Bulk density (g/l) backwashed	1150 (± 10%)
Particle size range (mm)	0,2 ÷ 2,0
Specific surface (m2/g) (BET method)	circa 300
Porosity of grains (%)	72 ÷ 77
Bulk porosity (%)	22 ÷ 28
Iron content, relative to dry solids	600g / Kg (± 10%)

Operating conditions	
Bed depth (m)	0,8 ÷ 1,6
Specific flow rate (m3/h m2)	5 ÷ 20
Specific flow rate (m3/h m2)	3 ÷ 6
Backwash flow rate (m3/h m2)	26
Expansion free volume (%) of bed depth	50
Pressure loss max (bar)	0,5
Operation temperature max (°C)	60
AsO4 3- Arsenic adsorption density in the drinking water processing (g/kg)	2 ÷ 10 (*)
(*) the adsorption density depends on pH and water chemistry.	

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
STANDARD EN 15029 NSF61		Domestic, Commercial, Industrial

Ecomix

- ECOMIX is a granular filtering media, suitable for remove natural organic matter, hardness, iron, manganese and ammonia in a wide pH range and without any oxidant products dosage;
- ECOMIX is a homogeneous mixture of five high quality ion-exchange and adsorption materials of natural and synthetic origin;
- You can use ECOMIX as a ion-exchange resin and regenerate it with sodium chloride (NaCl);
- Wide range of raw water as indicated in the “Limit Concentration
- Table” below;
- ECOMIX can treat water with high concentration of Fe and Mn, and with max TDS = 4000 mg/l;
- To calculate filter capacity, one should only consider water hardness and ion-exchange capacity (don’t consider Fe and Mn data);
- NSF/ANSI 44, 61 & 372 certified;
- Shipping weight 0,75 kg / liter;
- Available in 12,0 or 25,0 liters bags.
- ECOMIX A is preferred when the contaminats to be removed are mainly Ammonia, Hardness, Iron and Manganese, and you have a little quantity of organic matter;
- ECOMIX C is preferred when the contaminats to be removed are mainly Ammonia, Hardness, Iron and Manganese, and you have a big quantity of organic matter;
- ECOMIX P is preferred when the contaminats to be removed are mainly Hardness, Iron and Manganese;
- **Warning**: if you use only a part of the product contained in a bag, you have make sure that all the contents are mixed, in order to homogenize the product before spilling. ECOMIX is a mixture of five materials with different specific weight and different particle size, which if not well mixed tends to stratify.

Ref	Description	Fam.	Subfam.		
RA080	FILTER MEDIA ECOMIX - A (BAG 12 LT.)	65	315		
RA080A	FILTER MEDIA ECOMIX - A (BAG 25 LT.)	65	315		
RA081	FILTER MEDIA ECOMIX - C (BAG 12 LT.)	65	315		
RA081A	FILTER MEDIA ECOMIX - C (BAG 25 LT.)	65	315		
RA082	FILTER MEDIA ECOMIX - P (BAG 12 LT.)	65	315		
RA082A	FILTER MEDIA ECOMIX - P (BAG 25 LT.)	65	315		

Ref	Ion exchange capacity (eq/l)	Ion exchange capacity (g CaCO3/l)	Dose of rigenerant (g of NaCl 100% per liter)
RA080	0,75	35	100
RA080A	0,75	35	100
RA081	0,65	30	100
RA081A	0,65	30	100
RA082	0,80	40	100
RA082A	0,80	40	100

Certificates	Manufacturer	Sectors
NSF44 NSF61 NSF372		Domestic, Commercial, Industrial

Ecomix

Limit Concentration Tables

ECOMIX A	Hardness (ppm CaCO3)	Fe (mg/l) (ppm)	Mn (mg/l) (ppm)	COD (ppm O2)	Ammonia (mg/l) (ppm)	TDS (ppm)
Raw water concentration limits	< 750	< 15	< 3	< 20	< 4	< 4000
Quality of purified water	≤ 20	< 0,3	< 0,1	< 10	< 0,5	No changes

ECOMIX C	Hardness (ppm CaCO3)	Fe (mg/l) (ppm)	Mn (mg/l) (ppm)	COD (ppm O2)	Ammonia (mg/l) (ppm)	TDS (ppm)
Raw water concentration limits	< 750	< 10	< 3	< 20	< 4	< 4000
Quality of purified water	≤ 20	< 0,3	< 0,1	< 4	< 0,5	No changes

ECOMIX P	Hardness (ppm CaCO3)	Fe (mg/l) (ppm)	Mn (mg/l) (ppm)	COD (ppm O2)	Ammonia (mg/l) (ppm)	TDS (ppm)
Raw water concentration limits	< 750	< 10	< 3	N.A.	N.A.	< 4000
Quality of purified water	≤ 20	< 0,3	< 0,1	N.A.	N.A.	No changes

Operating conditions		Unit of measurement
Maximum operating temperature	40	°C
pH range	5 ÷ 9	
Minimum bed depth	500	mm
Optimum bed depth	800	mm
Service flow rate	10 ÷ 25	$m^3/h\ m^2$
Backwash flow rate (15÷20 min)	10 ÷ 15	$m^3/h\ m^2$
Regeneration flow rate (45÷65 min)	3 ÷ 5	$m^3/h\ m^2$
Active chlorine	< 1	mg/l (ppm)
Free bed volume	≥ 40	%

Commonly used pressure vessels:

	8x35	8x44	10x35	10x54	12x52	13x54	14x65	16x65	21x60
Volume of Ecomix (Liters)	16	20	24	36	48	60	72	96	144
Flow Capacity (m^3/h)@ 25 m/h	0,8	0,8	1,2	1,2	1,8	2,0	2,5	3,0	5,5
IX Capacity (kg CaCO3)	0,56	0,7	0,8	1,3	1,7	2,1	2,5	3,3	5,0
Salt Requirement (kg)	1,6	2,0	2,4	3,6	4,8	6,0	7,2	9,6	14,4
Backwash Flow Rate (m^3/h)	0,4	0,4	0,6	0,6	0,9	1,1	1,2	1,6	2,7

Corosex

- Corosex is designed for use in filters to neutralize acidity by increasing the pH value;
- By neutralizing the free carbon dioxide in water, Corosex can correct acidic water conditions and render it less corrosive. Corosex, being a highly reactive magnesium oxide, is used most effectively where pH correction is substantial or high flow conditions are in use. pH correction and media consumption are affected by a number of water chemical variables. Being soluble to acidity, Corosex will slowly dissolve and will need to be replenished periodically;
- On a per weight basis, magnesium oxide can neutralize five times more acidity than can calcium carbonate. This results in greatly reduced chemical usage for the same pH correction. Please note; under certain low flow conditions, Corosex may overcorrect and create a highly basic (high pH) condition;
- Under certain hardness conditions, pH correction can cause hardness minerals to precipitate out of solution, resulting in cementing or solidification of the Corosex mineral bed. Upflow service is generally recommended with hardness exceeding 9 °F. Always use an in-line filter ahead of an upflow system to prevent plugging of the lower distribution screen;
- As Corosex's magnesium oxide neutralizes the water, it will increase hardness and a softener may become necessary after the neutralizing filter;
- Corosex can be effectively combined with Calcite to combine the high flow neutralization properties of Corosex, along with the slower reacting low flow properties of Calcite, reducing potentially high basic properties due to overcorrection;
- High degree of activity and speed of correction allowing high flow;
- High capacity...less chemical usage;
- Available in 18,7 liters bags.

Ref	Description	Fam.	Subfam.		
RA075	COROSEX BAG 18.7 LT.	65	315		

Physical properties	
Colour	Brownish white
Specific gravity (g/l)	3600
Bulk density (g/l)	1200
Effective size (mm)	1,4
Uniformity coefficient	1,7
Composition	MgO 97% min.
Mesh size	6 x 16

Operating conditions	
Bed depth (mm)	600 ÷ 750
Service flow rate ($m^3/h\ m^2$)	12 ÷ 15
Backwash flow rate ($m^3/h\ m^2$)	25 ÷ 30
Backwash bed expansion (%)	≥ 50
pH range	4,5 ÷ 6,0

Box: WxLxH	Box: Q.ty	Box: Weight	Pallet: WxLxH	Pallet: Q.ty	Pallet: Weight

Certificates	Manufacturer	Sectors
NSF60	Clack	Domestic, Commercial, Industrial