

### WATER TREATMENT SOLUTION

#### DESCRIPTION

DYNASPHER PK10-WT is a macro porous strong acid cation exchange resin, supplied in sodium form. It is a copolymer of styrene and DVB with sulphonic acid exchange groups. Its high degree of crosslinking provides exceptional stability, which gives it great resistance to chemical oxidation and to mechanical, thermal, or osmotic stress.

#### SYSTEM DESIGN

Co - current / Counter current / Floating bed / Blocked bed

#### PRINCIPAL APPLICATIONS

- Water softening
- Water demineralization
- Condensate
- Mixed bed
- Food
- Pharmaceutical
- Metallurgical industry

#### REGULATORY

- F.D.A. – CFR 21 – 173.25
- Codes Alimentarius – Inventory of Processing Aids – CAC/MISC3
- European Resolution AP (97) – 1 regarding the TOC (Total Organic Carbon) released according AFNOR method (method T90 – 601)

#### TYPICAL PACKAGING

- 1 ft<sup>3</sup> Sack
- 25 lt Sack
- 5 ft<sup>3</sup> Drum (Fiber)
- 1 m<sup>3</sup> Supersack
- 42 ft<sup>3</sup> Supersack



### TYPICAL CHARACTERISTICS

#### PHYSICAL CHARACTERISTICS

Copolymer	Styrene - divinylbenzene
Matrix	Macroporous
Type	Strong acid cation
Functional Group	Sulfonic acid
Physical Form	Gray brown opaque spherical beads

#### CHEMICAL CHARACTERISTICS

Ionic Form as Shipped	Na <sup>+</sup>
Total Exchange Capacity	≥ 1.8 eq/lit
Water Retention	46.0 - 52.0 %

#### PARTICLE SIZE

Particle Diameter	0.425 – 1.180 mm
Uniformity Coefficient	≤ 1.5
< 300 μm	≤ 0.5 %
> 1180 μm	≤ 3.0 %

#### STABILITY

Whole Uncracked Beads g	≥ 98 %
Swelling	Na <sup>+</sup> → H <sup>+</sup> +6%

#### DENSITY

Particle Density	1.23 - 1.24 g / ml
Shipping Weight	780 - 820 g / lit

For additional size information, please refer to our Technical Dept.

#### SUGGESTED OPERATING CONDITIONS

Temperature Range (Na <sup>+</sup> Form)	5 - 150 °C (41 - 302 °F)
pH Range	1 - 14
Service Cycle	1 - 14
Stable	0 - 14

For additional particle size information regarding recommended minimum bed depth, operating conditions, and regeneration conditions for Layered or Mixed bed, please refer to our technical dept.

# PRODUCT INFORMATION

## DYNASPHER PK10-WT

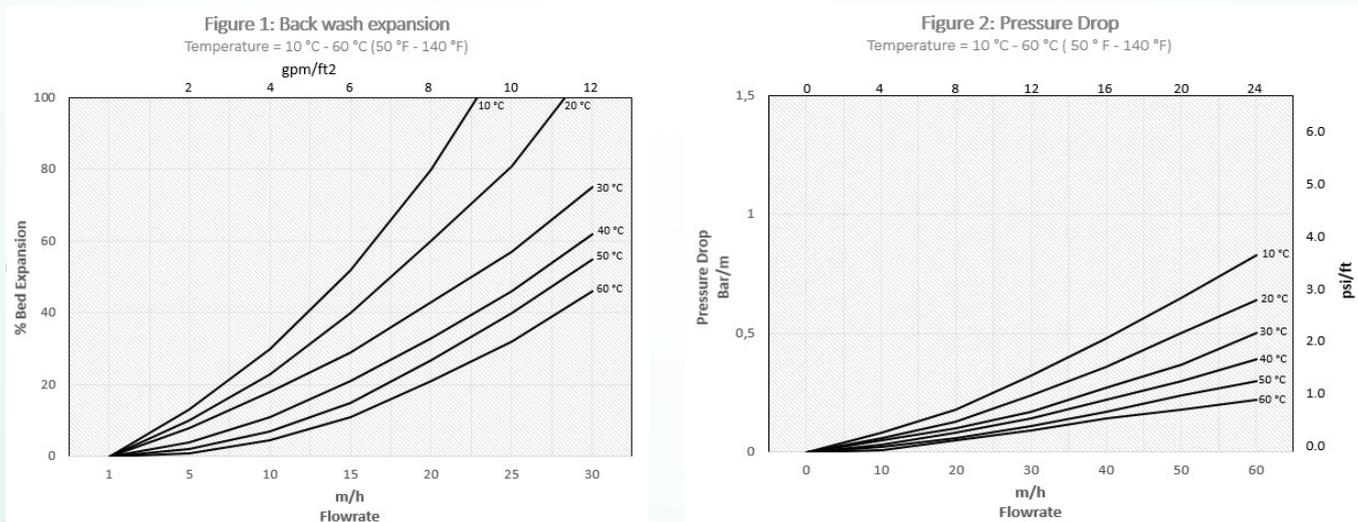
### STRONGLY ACID CATION POROUS RESIN

## HYDRAULIC CHARACTERISTICS

Estimated bed expansion of DYNASPHER PK10-WT as a function of backwash flowrate and temperature is show in figure 1.

Estimated pressure drop for DYNASPHERE PK10-WT as a function of service flowrate and temperature is show in figure 2.

These pressure drop expectations are valid at the start of the service run with clean water and well – classified bed.



## CUSTOMER NOTICE

### STORAGE

It is recommended to store ion exchange resins at temperatures above the freezing point of water under roof in dry conditions without exposure to direct sunlight. If resin should become frozen, it should not be mechanically handled and left to thaw out gradually at ambient temperature. It must be completely thawed before handling or use. No attempt should be made to accelerate the thawing process.

### DISPOSAL

In the European Community Ion exchange resins have to be disposed, according to the European waste nomenclature which can be accessed on the internet – site of the European Union.

### TOXICITY

The safety data sheet must be observed. It contains additional data on product description, transport, storage, handling, safety and ecology.

### WARNING

Oxidizing agents such as nitric acid attack organic ion exchange resins under certain conditions. This could lead to anything from slight resin degradation to a violent exothermic reaction (explosion). Before using strong oxidizing agents, consult sources knowledgeable in handling such materials.