

FOOD TREATMENT SOLUTION**DESCRIPTION**

DYNASPHER PA1U-F is a uniform macroporous strong base type I anion exchange resin with a styrene-DVB copolymer matrix with quaternary ammonium groups. It has excellent physical and chemical properties, high operating capacity, lower pressure drop, well physical and chemical stability. Its macroporous structure makes it particularly suitable for the demineralization and decolorization process of fruit juices and sugar solutions. DYNASPHER PA1U-F has selected particle size and high mechanical resistance in order to reduce the pressure drops.

SYSTEM DESIGN

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

PRINCIPAL APPLICATIONS

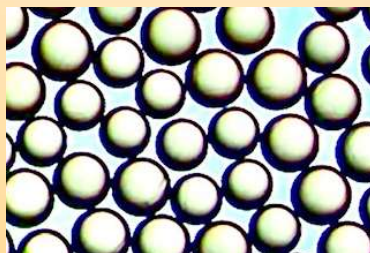
- Fruit juices demineralization
- Fruit juices decolorization
- Sugars
- Milk whey
- Pharmaceutical
- Nutraceutical
- Metallurgical

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 ft³ Sack
- 25 lt Sack
- 5 ft³ Drum (Fiber)
- 1 m³ Supersack
- 42 ft³ Supersack



TYPICAL CHARACTERISTICS

PHYSICAL CHARACTERISTICS

Copolymer	Styrene-divinylbenzene
Matrix	Macroporous
Type	Macroporous strong anion type I
Functional Group	Trimethylamine
Physical Form	White to light yellow spherical beads

CHEMICAL CHARACTERISTICS

Ionic Form as Shipped	Cl ⁻
Total Exchange Capacity	≥ 1.1 eq/lit
Water Retention	50.0 - 58.0 %

PARTICLE SIZE

Particle size range	0.6 mm ± 0,05 mm
Uniformity Coefficient	≤ 1.1
< 300 µm	≤ 0.1 %
> 1180 µm	≤ 1.0 %

STABILITY

Whole Uncracked Beads	≥ 99 %
Swelling	Cl ⁻ → OH ⁻ + 25% max

DENSITY

Particle Density	1.060 - 1.100 g / ml
Shipping Weight	650 - 730 g / lit

For additional size in formation, please refer to the our Technical Dept.

SUGGESTED OPERATING CONDICTIONS

Termal stability	60 °C (140 °F) max OH ⁻ - 80 °C (176 °F) max Cl ⁻
Chemical stability	1 - 14
Service Cycle	1 - 14
Minimum bed depth	800 mm

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

HYDRAULIC CHARACTERISTICS

Estimated bed expansion of DYNASPHER PA1U-F as a function of backwash flowrate and temperature is show in figure 1.

Estimated pressure drop for DYNASPHER PA1U-F 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.

Figure 1: Back wash expansion
Temperature = 5 °C - 35 °C (41 °F - 95 °F)

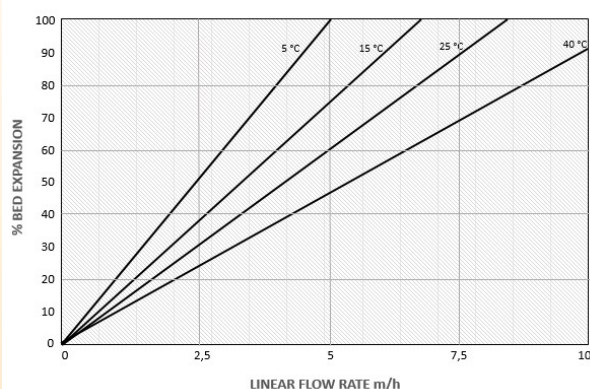
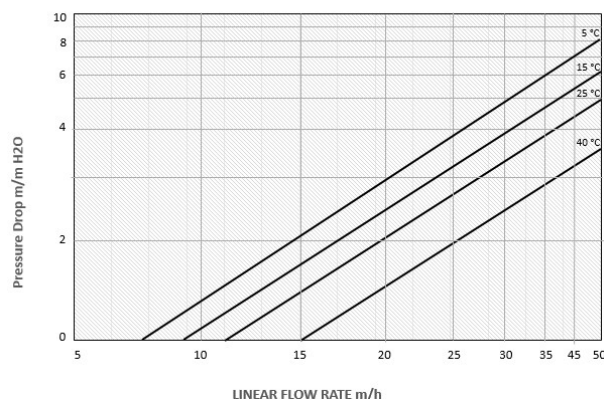


Figure 2: Pressure Drop
Temperature = 5 °C - 35 °C (41 °F - 95 °F)



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.