PRODUCT INFORMATION

DYNASPHER SA1-F

GEL STRONG ANION RESIN TYPE I

FOOD TREATMENT SOLUTION

DESCRIPTION

DYNASPHER SA1–F is a gelulare 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.

It is particularly suitable for acids separation and fruit juices demineralization process where the decolorization is not required. DYNASPHER SA1-F has selected particle size and high mechanical resistance in order to reduce the pressure drop.

SYSTEM DESIGN

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

PRINCIPAL APPLICATIONS

- Fruit juices demineralization
- Natural extract demineralization
- Sugars
- Milk whey
- Pharmaceutical
- Nutraceuitacal
- 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) realeased according AFNOR method (method T90 – 601)

TYPICAL PACKAGING

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

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CONSULTING FIRM RFP SRLS
RESINS FOOD PROCESSES

TYPICAL CHARAPTERISTICS

PHYSICAL CHARAPTERISTICS

Copolymer	Polystyrene Crosslinked - DVB
Matrix	Gelulare
Type	Gel strong anion type I
Functional Group	Trimethylamine
Physical Form	Yellowish brown trasparent spherical beads

CHEMICAL CHARAPTERISTICS

Ionic Form as Shipped	Cl^- form
Total Exchange Capacity	≥ 1.3 eq/lt
Water Retention	42.0-48.0 %

PARTICLE SIZE

Particle size range	0.315 - 1.25 mm
Uniformity Coefficient	≤ 1.4
< 300 µm	≤ 0.5 %
> 1180 µm	≤ 3.0 %

STABILITY

Whole Uncracked Beads	≥ 98 %
Swelling	$Cl^- \longrightarrow OH^-$ + 25% max

DENSITY

Particle Density	1.060 - 1.110 g / ml
Shipping Weight	660 - 750 g / lt

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	0 - 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.

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HYDRAULIC CHARACTERISTICS

Estimated bed expansion of DYNASPHER SA1-F as a function of backwash flowrate and temperature is show in figure 1.

Estimated pressure drop for DYNASPHER SA1-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 - 40 °C (41 °F - 104 °F)

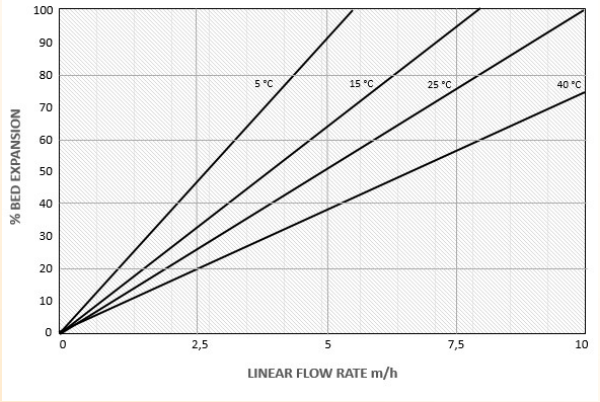
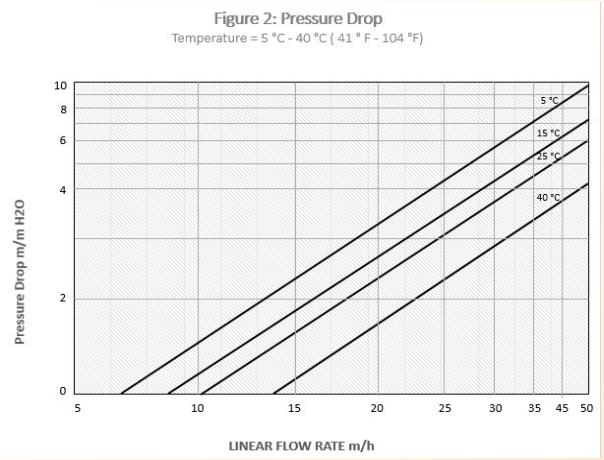


Figure 2: Pressure Drop
Temperature = 5 °C - 40 °C (41 ° F - 104 °F)



CUSTOMER NOTICE

STORAGE

It is recommended to store ion exchange resins at temperatures above the freezing point of water under roof in dry conditions whithout 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.