PRODUCT INFORMATION

DYNASPHER WC290-F

WEAK CATION RESIN

FOOD TREATMENT SOLUTION

DESCRIPTION

DYNASPHER WC290-F is an acrylic macroporous weak acid exchange resin contain carbolxylic groups. It has excellent chemical physical property, high capacity and low pressure drop. It is suitable for temporary hardness removal and for special applications such as treatment of aqueous organic solutions and selective separation of heavy metal cations. It can be also used for isolating and purification of biochimical and Pharmaceutical substances. DYNASPHER WC290-F has high operating capacity for divalent cations and extremely hig regeneration efficiency. The resin is supplied in hydrogen form. It is suitable for industrial demineralization on counter-current and co-current system, floating bed and layered bed.

SYSTEM DESIGN

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

PRINCIPAL APPLICATIONS

- Demineralization
- Dealkalinization
- Proteins
- Pharmaceutical
- metallurgic
- Water

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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TYPICAL CHARAPTERISTICS

PHYSICAL CHARAPTERISTICS

Copolymer	Polyacrylate Crosslinked
Matrix	Macroporous
Type	Weak acid cation
Functional Group	Carboxylic
Physical Form	Light yellow opaque spherical beads

CHEMICAL CHARAPTERISTICS

Ionic Form as Shipped	H^+
Total Exchange Capacity	≥ 4.2 eq/lt
Water Retention	45.0 - 55.0 %

PARTICLE SIZE

Particle Diameter	0.315 - 1.25 mm
Uniformity Coefficient	< 1.6
< 300 µm	≤ 1.0 %
> 1180 µm	≤ 3.0 %

STABILITY

Whole Uncracked Beads	≥ 98 %
Swelling	$H^+ \rightarrow Na^+$ +50% $H^+ \rightarrow Ca^{++}$ +10%

DENSITY

Particle Density	1.140 - 1.200 g / ml
Shipping Weight	780 - 800 g / lt

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

SUGGESTED OPERATING CONDICTIONS

Temperature Range (Na+ Form)	5 - 120 °C (41 - 248 °F)
pH Range	3 - 14
Service Cycle	3 - 14
Stable	0 - 14

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 WC290-F as a function of backwash flowrate and temperature is show in figure 1.

Estimated pressure drop for DYNASPHER WC290-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.

Fig. 1 BED EXPANSION IN WATER

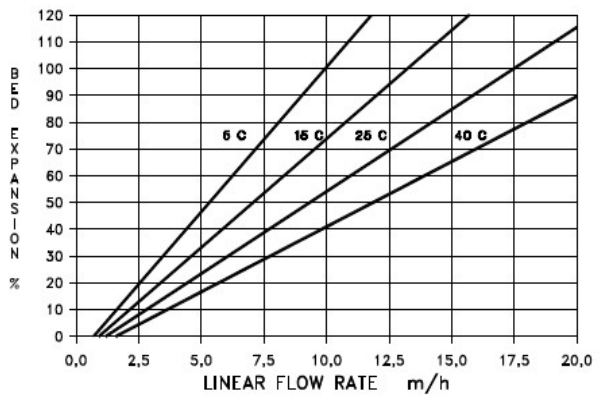
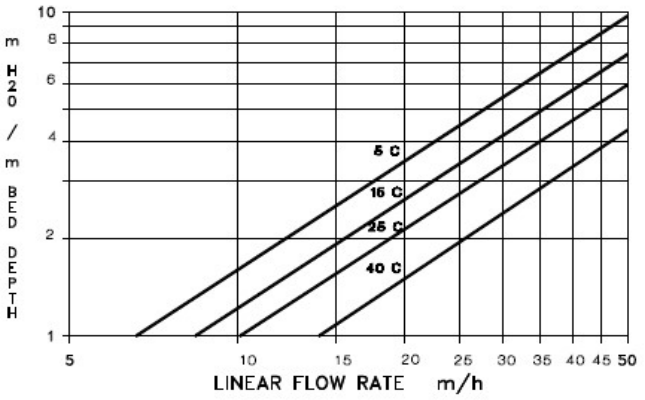


Fig. 2 PRESSURE DROP IN WATER



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.