

HYDROLUX[®] S1548

Strongly Acidic Cation Resin Gel-Type

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Descriptions

HYDROLUX[®] S1548 is a food grade, strongly acidic cation exchange resin (Gel Type). It has styrene-divinylbenzene copolymer with sulfonic acid functional group.

HYDROLUX[®] S1548 is a low cross-linkage product, excellent mechanical, chemical stability and high whole bead count. And specifically treated and improved for catalytic applications.

HYDROLUX[®] S1548 comprise of beads within $500\pm 50\ \mu\text{m}$ of particle size. This property of mono-dispersed particle distribution allows operators of resin to use it in more superior conditions such as fast diffusion time, mechanical/chemical stability and better effluent quality.

HYDROLUX[®] S1548 is used widely for softening of solutions, especially for thin juices of the sugar and pectin industries. It could also use for decationisation of solutions of organic products, e.g. sugar beet, sugar cane, starch sugar, glycerine, gelatine, whey and food acids etc. and use for extraction of amino acids, e.g. lysine.

HYDROLUX[®] S1548 is certified by TFDA (Taiwan Food and Drug Administration) for Food Additives, and assure compliance with the TFDA Food safety and sanitation regulations.

The certificate no. is 衛部添製字第 002973 號

Specification

Type	Strongly Acidic Cation
Matrix	Polystyrene + DVB (Divinyl Benzene)
Functional Group	R-SO ₃ ⁻
Ionic Form ≥95%	H ⁺
Shipping Weight (g/L)	840 ± 5%
Specific Gravity	1.13 approx.
Total Capacity (eq/L)	1.2↑
Moisture Contents (%)	68 ± 3
Uniformity Coefficient	≤ 1.1
Particle Size (mm)	0.50 ± 0.05
Whole Perfect Beads (%)	95 min
Maximum Swelling (%)	Na ⁺ --> H ⁺ = 9
Operating Temp	120°C
Operating pH Range	0~14

Operating Data

Maximum Temperature ...	120°C
pH Range	0~14
Minimum Bed Depth ...	800mm
Service Flow Rate ...	16~32 BV/h
Velocity	12~40 m/h
Pressure Drop ...	Refer to Figure 2.
Backwash Flow Rate ...	Refer to Figure 1.
Flow at 50% Expansion, Ca ²⁺ ..	25°C, 14 m/h
Flow at 100% Expansion, Ca ²⁺ ..	25°C, 26 m/h
Regenerant	HCl or H ₂ SO ₄
Regenerant Level ...	HCl 50~100g/L-R, H ₂ SO ₄ 80~150g/L-R
Concentration ...	4~10% HCl, 1~3% H ₂ SO ₄
Flow Rate	2~8 BV/h
Regenerant Contact Time ...	45 sec. (min)
Temperature	Ambient
Rinse Water Requirement ...	4~10 BV
Displacement Rinse Rate ...	2~8 BV/h
Fast Rinse Rate ...	16~32 BV/h
Swelling Na ⁺ to H ⁺ ...	About 9%

Figure 1. Bed Expansion

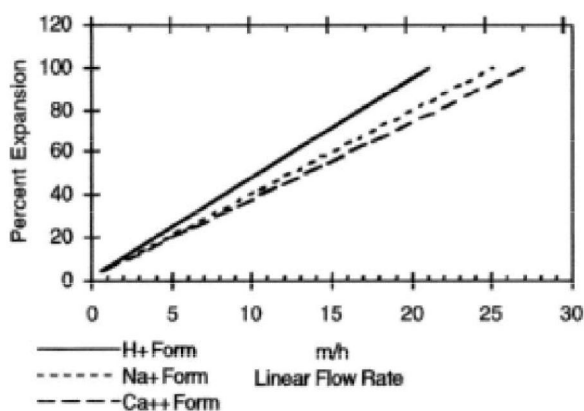
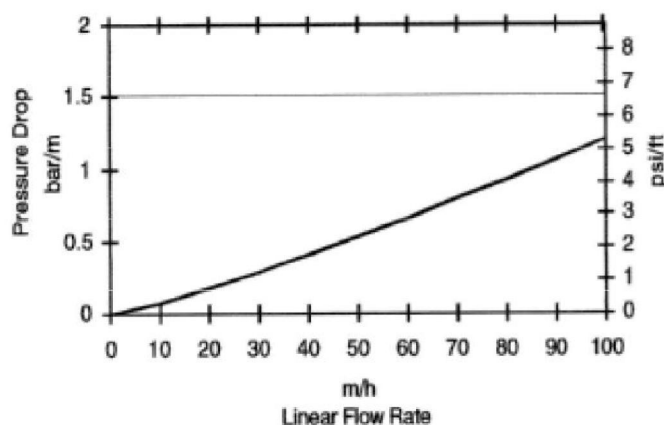


Figure 2. Pressure Drop



Handling

To protect eyes and skin of operator, protective gears such as glasses, sometimes gloves are necessary. It is recommended that eye-wash facilities are nearby at the using area. Since it is small beads type, it will be very slippery when it is spilled on the floor. Exposure to high temperature, sparks and flames should be avoided.

Exposure to or mixing with oxidizing agents like nitric acid also should be avoided for the safety.

Storage

Dry, cool and dark places with ventilation are recommended. Storage container bags or drums should be tightly sealed to prevent intrusion of impurities and drying. At high temperature, degradation of capacity may occur and below freezing temperature, freezing of resin may occur. The freezing may cause physical breakage leading to low whole bead count.

Disposal

There are two ways to dispose of resins. Unused ones could be discarded by landfill or incineration following local regulations with fore-mentioned cautions. For incineration, furnace equipped with suitable safety measures is necessary because toxins such as SO_x, NO_x, CO_x could be generated. Used ones could be landfilled or incinerated as well but poisonous materials like heavy metals, if they are contained, should be removed before resins be discarded.

Packaging

25L PE Bag / 1,000L Ton bag

Hydrolux Technology Co., Ltd.
We are experts on liquid purification

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