

Product Data Sheet

DIAION™ HP2MGL

DIAION™ HP2MGL is based on crosslinked methacrylate. It does not contain any aromatic compounds. It is considered an intermediate polarity adsorbent resin. It is recommended for desalting and adsorption of organic compounds of relatively high polarity by using the more hydrophilic character of the polymer matrix.

Product

Grade Name	DIAION™ HP2MGL
Type	Synthetic Adsorbents
Matrix	Methacrylic, Porous

Specification

Whole Bead Count	-	95 min.
Water Content	%	55 - 65
Particle Size Distribution thr. 355 µm	%	1 max.
Effective Size	mm	0.40 min.
Uniformity Coefficient	-	1.6 max.

Properties

Shipping Density	g/L	725
Mean Particle Size	µm	570
Particle Density	g/mL	1.09
Specific Surface Area	m ² /g	570
Pore Volume	mL/g	1.3
Pore Radius	Å	240

Recommended Operating Conditions

Maximum Operating Temperature	°C	130
Operating pH Range		0 - 14
Minimum Bed Depth	mm	800
Flow rate	BV/h	Loading 0.5 - 5
	BV/h	Displacement 0.5 - 2
	BV/h	Regeneration 0.5 - 2
	BV/h	Rinse 1 - 5

Regenerant

Organic solvents for hydrophobic compounds

Bases for acidic compounds

Acids for basic compounds

Buffer solution for pH sensitive compounds

Water for an ionic solution

Hot steam for volatile compounds



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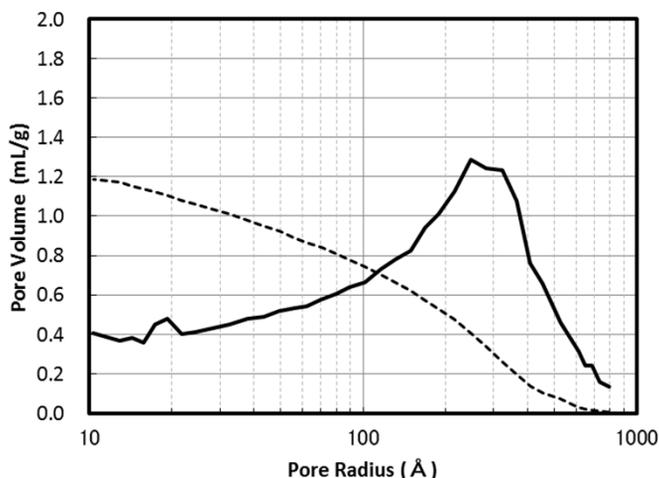
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Pore Size Distribution

**Fig. 1 Pore size distribution of HP2MGL**

Swelling Ratio In Various Solvents

Methanol	1.02
Ethanol	1.05
2-Propanol	1.02
Acetone	1.04
Toluene	1.07
Acetonitrile	1.01
Water	1.00

Hydraulic Characteristics

The approximate pressure drop at various temperatures and flow rates for each meter of bed depth of DIAION™ HP2MGL resin in normal down flow operation is shown in the graph below.

Indicative Applications

- Purification of small peptides, oligonucleotides and proteins
- Adsorption of vitamins, antibiotics, enzymes, steroids and other substance from fermentation solutions
- Decolorization of various sugar solutions
- Adsorption of fatty acids
- Adsorption of various perfume
- Decolorization and purification of various chemicals

FDA Status

DIAION™ HP2MGL may be used to process food and beverage products and isolate specialized food additives as intended. Such use may be said to fully comply with the Federal Food, Drug, and Cosmetic Act, and applicable food additive regulations, including 21 CFR 177.2470 (Polyester resins, cross-linked).

Storage condition

Synthetic adsorbents are at high risk of mold growth. Accordingly, synthetic adsorbents should be stored properly. Properly stored synthetic adsorbent resins may be stored for up to one year after production before the onset of any mold growth is detected. Optimal storage is with a 20% alcohol solution such as ethanol or isopropanol. A 10% or higher concentration of salt solution, such as NaCl, is also recommended to preserve new or used resin for storage. In case salt cannot be used, a 0.01 to 0.02 N NaOH solution may be acceptable as mold cannot withstand survival at pH higher than 12. Storage at freezing temperatures should be avoided as it may cause breakage or crush certain resin particles.

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