



## DOWEX MONOSPHERE MP-725A (OH)

A Uniform Particle Size Macroporous Strong Base Anion Exchange Resin for Mixed Bed Demineralization and Condensate Polishing Applications

Product	Type	Matrix	Functional group
DOWEX* MONOSPHERE* MP-725A (OH)	Type 1 strong base anion	Styrene-DVB macroporous	Quaternary amine

Guaranteed Sales Specifications	OH <sup>-</sup> form			
Total exchange capacity, min.		eq/l	0.8	
		kgr/ft <sup>3</sup> as CaCO <sub>3</sub>	17.5	
Water content		%	65 – 75	
Bead size distribution†				
Mean particle size		μm	690 ± 50	
Uniformity coefficient, max.			1.1	
>850μ, max.		%	5	
<300μ, max.		%	0.5	
Whole beads, min.		%	95	
Trace metals, ppm dry resin, max.	Na	Fe	Cu	Al
	50	50	50	50

Typical Physical and Chemical Properties	OH <sup>-</sup> form		
Total swelling (Cl <sup>-</sup> → OH <sup>-</sup> )		%	15
Particle density		g/ml	1.04
Shipping weight		g/l	625
		lbs/ft <sup>3</sup>	39

### Recommended Operating Conditions

- Maximum operating temperature:
  - OH<sup>-</sup> form 60°C (140°F)
  - Cl<sup>-</sup> form 100°C (212°F)
- pH range 0-14
- Bed depth, min. 450 mm (1.5 ft)
- Flow rates:
  - Service/fast rinse 5-50 m/h (2-20 gpm/ft<sup>2</sup>)
  - Service/condensate polishing 40-150 m/h (16-60 gpm/ft<sup>2</sup>)
  - Backwash See figure 1
  - Co-current regeneration/displacement rinse 1-10 m/h (0.4-4 gpm /ft<sup>2</sup>)
- Total rinse requirement 3 – 6 Bed volumes
- Regenerant:
  - Type 4-8% NaOH
  - Temperature Ambient or up to 50°C (122°F) for silica removal

† For additional particle size information, please refer to Particle Size Distribution Cross Reference Chart (Form No. 177-01775).

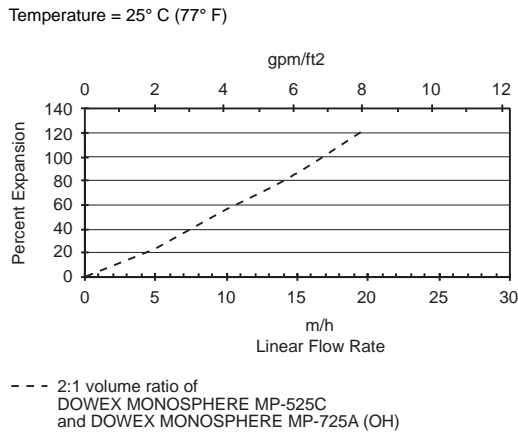
## Typical properties and applications

DOWEX MONOSPHERE MP-725A (OH) strong base anion exchange resin is a condensate grade macroporous resin with uniform particle size, exceptional physical stability and resistance to osmotic shock. This resin is specially sized to give excellent separation after backwash when used in conjunction with DOWEX MONOSPHERE MP-525C cation exchange resin in condensate polishing mixed beds. In addition, the smaller bead size of DOWEX MONOSPHERE MP-725A (OH) provides for a greater mass transfer area compared to larger conventional type macroporous resins. This is especially important for contaminant ion removal during a condenser leak.

## Packaging

25 liter bags or 5 cubic feet fiber drums

**Figure 1. Backwash Expansion Data**

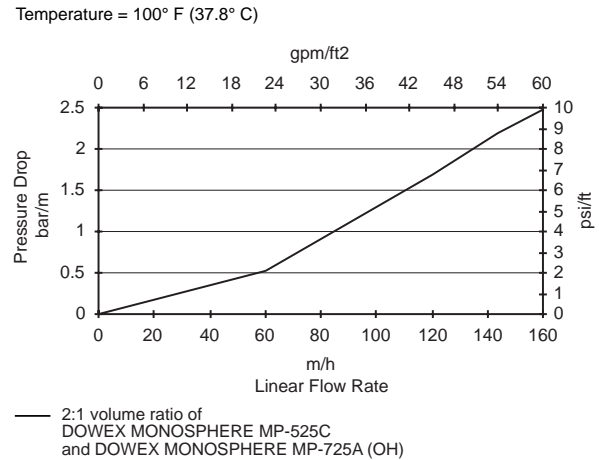


### For other temperatures use:

$$F_T = F_{77°F} [1 + 0.008 (T_F - 77)], \text{ where } F = \text{gpm/ft}^2$$

$$F_T = F_{25°C} [1 + 0.008 (1.8T_C - 45)], \text{ where } F = \text{m/h}$$

**Figure 2. Pressure Drop Data**



### For other temperatures use:

$$P_T = P_{20°C} / (0.026 T_C + 0.48), \text{ where } P = \text{bar/m}$$

$$P_T = P_{68°F} / (0.014 T_F + 0.05), \text{ where } P = \text{psi/ft}$$

## DOWEX Ion Exchange Resins

For more information about DOWEX resins, call the Dow Liquid Separations business:

North America: 1-800-447-4369  
 Latin America: (+55) 11-5188-9277  
 Europe: (+32) 3-450-2240  
 Japan: (+81) 3-5460-2100  
 Australia: (+61) 3-9226-3545  
<http://www.dowex.com>

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.

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