



DOWEX™ PSR-2

A Strong Base Anion Exchange Resin Designed for the Selective Removal of Trace Contaminants from Potable Water

Product	Type	Matrix	Functional group
DOWEX™ PSR-2	Tri-n-butyl amine	Styrene-DVB, gel	Quaternary amine

Guaranteed Sales Specifications		Cl ⁻ form
Total exchange capacity, min.	eq/L kgr/ft ³ as CaCO ₃	0.65 14.2
Water content	%	40.0 - 47.5
Bead size distribution†		
% on 16 mesh, max.	%	3
% through 40 mesh, max.	%	5
Whole uncracked beads, min.	%	95
Crush strength (>200 g/bead, min.)	%	90

Typical Physical and Chemical Properties		Cl ⁻ form
Particle density	g/mL	1.10
Shipping weight**	g/L lbs/ft ³	670 42

Recommended Operating Conditions	• Maximum operating temperature	60°C (140°F)
	• pH range	0 - 14
	• Service flow rate	0.5 - 12 gpm/ft ³
	• Service linear velocity	1.0 - 22 gpm/ft ²
	• Bed depth, min.: Single bed	800 mm (2.6 ft)

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

** As per the backwashed and settled density of the resin, determined by ASTM D-2187.

Typical Properties and Applications

DOWEX™ PSR-2 is a gellular strong base anion resin supplied in the Cl⁻ form. It is designed to offer the highest selectivity for trace contaminants such as nitrate and perchlorate, while its gellular structure also achieves high total exchange capacity.

Applications include:

- Perchlorate retention and removal
- Gold recovery

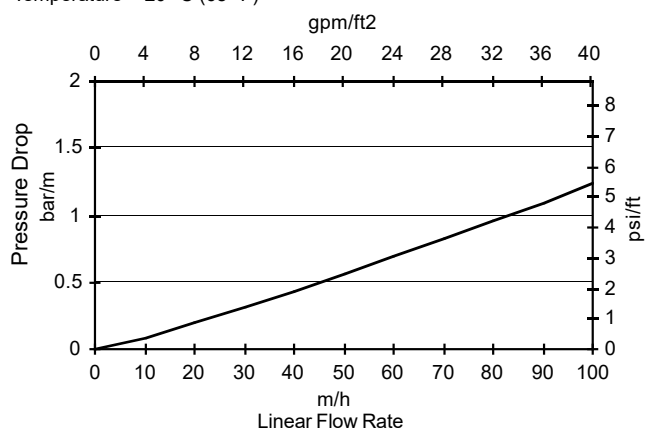
This product has been certified under ANSI Standard 61.

Packaging

5 cubic feet fiber drums

Figure 1. Pressure Drop Data

Temperature = 20° C (68° F)



For other temperatures use:

$$P_T = P_{20^\circ\text{C}} / (0.026 T_{\text{C}} + 0.48), \text{ where } P \equiv \text{bar/m}$$

$$P_T = P_{68^\circ\text{F}} / (0.014 T_{\text{F}} + 0.05), \text{ where } P \equiv \text{psi/ft}$$

DOWEX™ Ion Exchange Resins

For more information about DOWEX resins, call the Dow Water Solutions business:

North America: 1-800-447-4369
Latin America: (+55) 11-5188-9222
Europe: (+32) 3-450-2240
Pacific: +60 3 7958 3392
Japan: +813 5460 2100
China: +86 21 2301 9000
<http://www.dowwatersolutions.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.

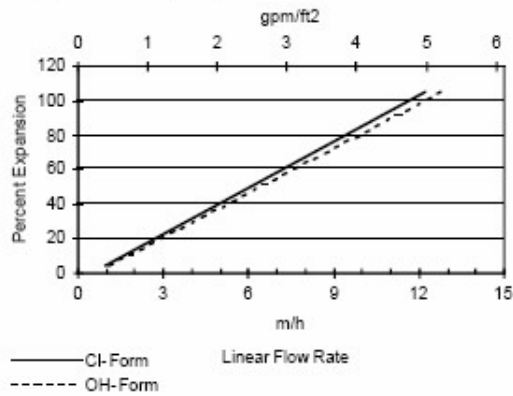
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Expected Properties Dow PSR-2 Resin

Figure 1. Backwash Expansion Data

Temperature = 25° C (77° F)



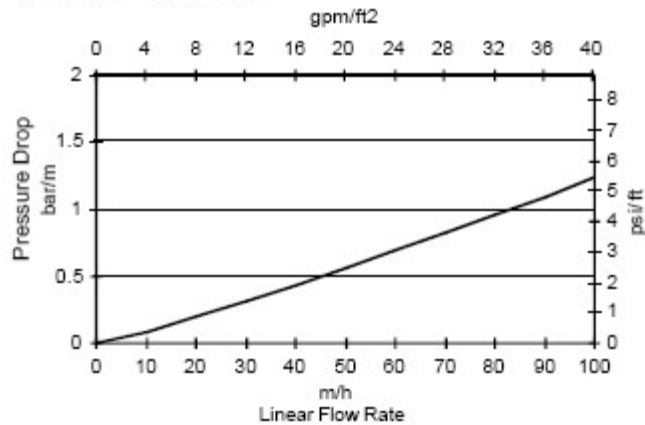
For other temperatures use:

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

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

Figure 1. Pressure Drop Data

Temperature = 20° C (68° F)



For other temperatures use:

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

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

Water Quality Association

3/1/2016



CERTIFIED DRINKING WATER SYSTEM COMPONENTS

NSF/ANSI 61 (03/05/2012): Drinking Water System Components - Health Effects is within WQA's ANSI and SCC approved scope of accreditation under the Drinking Water System Component Scheme

The Dow Chemical Company

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Product Type: Ion Exchange Resin

Brand Name	Model	Water Contact Temp	Water Contact Material	Size
	DOWEX PSR-2 Anion Exchange Resin ^{1,2}	Cold (23C)	SYN	16x50 mesh
	DOWEX PSR-2 PLUS ^{1,2,3}	Cold (23C)	SYN	20-40 Mesh

¹ Anion Resin

² Certified for water treatment plant applications. This product has not been evaluated for point of use applications.

³ This product is certified with a minimum flow rate of 2.57 gpm/ft³ of media.

