



## AMBERJET™ 1000 Na Industrial Grade Strong Acid Cation Exchanger

### Description

AMBERJET™ 1000 Na resin is a uniform particle size, high quality, strong acid cation exchanger designed for use in water treatment applications including softening as well as demineralisation. The uniformity and mean particle size of AMBERJET 1000 Na have been optimised for use in industrial equipment. AMBERJET 1000 Na can be directly substituted for conventional gel cation exchange resin in new equipment and in re-beds of existing installations.

### Typical Properties

Physical form	Amber spherical beads
Matrix	Styrene divinylbenzene copolymer
Functional group	Sulfonic acid
Ionic form as shipped	Na <sup>+</sup>
Total exchange capacity	≥ 2.00 eq/L (Na <sup>+</sup> form)
Moisture holding capacity	45–50% (Na <sup>+</sup> form)
Shipping weight	850 g/L
Specific gravity	1.26–1.30 (Na <sup>+</sup> form)
Particle size	
Uniformity coefficient	≤ 1.3
Harmonic mean size	0.600–0.800 mm
< 0.425 mm	2% max
Maximum reversible swelling	Na <sup>+</sup> → H <sup>+</sup> < 10%

Test methods are available on request.

### Suggested Operating Conditions

Maximum operating temperature	135°C/275°F		
Minimum bed depth	800 mm (2.6 ft)		
Service flow rate	5–40 BV*/h (0.62–5.0 gpm/ft <sup>3</sup> )		
Regeneration			
Regenerant	NaCl	HCl	H <sub>2</sub> SO <sub>4</sub>
Level (g/L)	50–240	40–150	40–200
Level (lbs/ft <sup>3</sup> )	3–15	2.5–3.4	2.5–12.5
Concentration (%)	10	4–10	0.7–8
Minimum contact time	20 minutes		
Slow rinse	2 BV at regeneration flow rate		
Fast rinse	1–3 BV at service flow rate		

\*1 BV (Bed Volume) = 1 m<sup>3</sup> solution per m<sup>3</sup> resin or 7.5 gals per ft<sup>3</sup> resin

### Performance

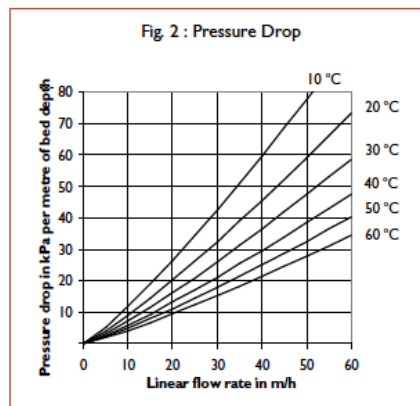
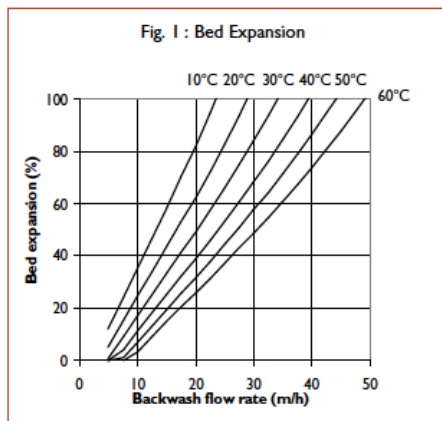
Operating capacity and ionic leakage depend on several factors such as water analysis, temperature and regenerant level. The engineering data sheets EDS 0760 A, 0761 A, 0762 A, 0763 A, 0764 A and 0765 A provide information to calculate them in softening and demineralisation applications with coflow and reverse flow regeneration.

## Limits of Use

AMBERJET 1000 Na resin is suitable for industrial uses. For all other specific applications such as pharmaceutical, food processing or potable water applications, it is recommended that all potential users seek advice from Dow in order to determine the best resin choice and optimum operating conditions.

## Hydraulic Characteristics

Figure 1 shows the bed expansion of AMBERJET 1000 resin as a function of backwash flow rate and water temperature. Figure 2 shows the pressure drop data for AMBERJET 1000 resin, as a function of service flow rate and water temperature. Pressure drop data are valid at the start of the service run with clear water and a correctly classified bed.



## Product Stewardship

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

## Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

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.

## DOW™ Ion Exchange Resins

For more information about DOW™ resins, call the Dow Water & Process 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 1000  
<http://www.dowwaterandprocess.com>

Notice: No freedom from any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactments. The product shown in this literature may not be available for sale and/or available in all geographies where Dow is represented. The claims made may not have been approved for use in all countries. Dow assumes no obligation or liability for the information in this document. References to "Dow" mean the Dow legal entity selling products to Customer unless otherwise expressly noted. Any claim for breach of warranty may only be brought against the Dow legal entity selling products to Customer. The applicable law governing this document shall be the law set forth in Dow's general terms and conditions or as otherwise agreed to by the parties for the sale of products. For sales governed by German law, a "Limited Warranty" will not be granted. NO WARRANTIES ARE GIVEN EXCEPT FOR ANY SPECIFIC WARRANTY SET FORTH HEREIN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

