

PRODUCT DATA SHEET
AMBERLITE™ IRA410 Cl
Industrial Grade Strong Base Anion Exchanger

AMBERLITE IRA410 Cl resin is a type 2 strongly basic anion exchange resin, with a clear gel structure. It is based on crosslinked polystyrene and has a high bead integrity, good regeneration efficiency and excellent rinse performance. It is particularly suited for use in two-column water demineralisation plants (one cation, one anion

unit). AMBERLITE IRA410 Cl resin has better regeneration efficiency than type 1 resins, resulting in a higher operating capacity. However, its affinity for silica is lower. Therefore, AMBERLITE IRA410 Cl resin will be mainly used to treat waters with a silica to total anion ratio of less than 30 %. It should be regenerated at ambient temperature.

PROPERTIES

Physical form _____	Pale yellow translucent spherical beads
Matrix _____	Styrene divinylbenzene copolymer
Functional group _____	Dimethyl ethanol ammonium
Ionic form as shipped _____	Chloride
Total exchange capacity ^[1] _____	≥ 1.25 eq/L (Cl ⁻ form)
Moisture holding capacity ^[1] _____	45 to 51 % (Cl ⁻ form)
Shipping weight _____	680 g/L
Particle size	
Uniformity coefficient ^[1] _____	≤ 1.60
Harmonic mean size ^[1] _____	0.600 to 0.750 mm
< 0.300 mm ^[1] _____	1.0 % max
Reversible swelling _____	Cl ⁻ → OH ⁻ ≤ 20 %

^[1] Contractual value

Test methods are available on request.

SUGGESTED OPERATING CONDITIONS

Maximum operating temperature _____	35°C
Minimum bed depth _____	700 mm
Service flow rate _____	5 to 40 BV*/h
Regeneration	
Regenerant _____	NaOH
Level _____	40 to 100 g/L
Concentration _____	2 to 4 %
Minimum contact time _____	30 minutes
Slow rinse _____	2 BV at regeneration flow rate
Fast rinse _____	4 to 8 BV at service flow rate

* 1 BV (Bed Volume) = 1 m³ solution per m³ resin

LIMITS OF USE

AMBERLITE IRA410 Cl 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 Rohm and Haas in order to determine the best resin choice and optimum operating conditions.

HYDRAULIC CHARACTERISTICS

Figure 1 shows the bed expansion of AMBERLITE IRA410 Cl resin as a function of backwash flow rate and water temperature. Figure 2 shows the pressure drop data for AMBERLITE IRA410 Cl 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.

Fig. 1 : Bed Expansion

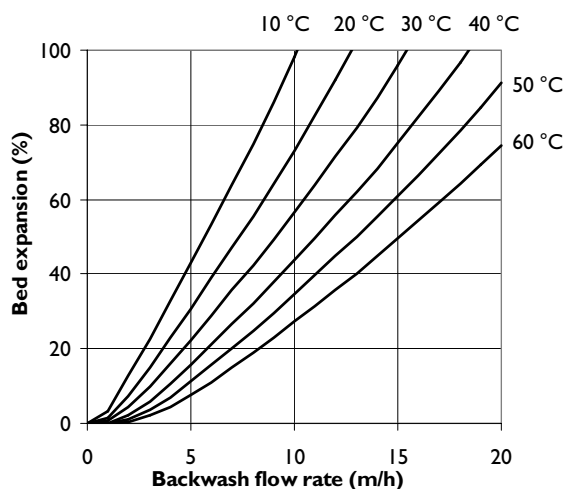
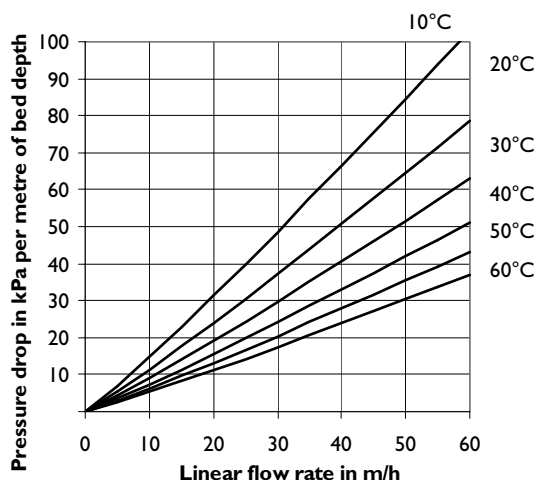


Fig. 2 : Pressure Drop



ROHM and HAAS 

AMBERJET is a trademark of Rohm and Haas Company and its affiliates, Philadelphia, U.S.A.

Ion exchange resins and polymeric adsorbents, as produced, contain by-products resulting from the manufacturing process. The user must determine the extent to which organic by-products must be removed for any particular use and establish techniques to assure that the appropriate level of purity is achieved for that use. The user must ensure compliance with all prudent safety standards and regulatory requirements governing the application. Except where specifically otherwise stated, Rohm and Haas Company does not recommend its ion exchange resins or polymeric adsorbents, as supplied, as being suitable or appropriately pure for any particular use. Consult your Rohm and Haas technical representative for further information. Acidic and basic regenerant solutions are corrosive and should be handled in a manner that will prevent eye and skin contact. Nitric acid and other strong oxidising agents can cause explosive type reactions when mixed with Ion Exchange resins. Proper design of process equipment to prevent rapid buildup of pressure is necessary if use of an oxidising agent such as nitric acid is contemplated. Before using strong oxidising agents in contact with Ion Exchange Resins, consult sources knowledgeable in the handling of these materials.

Rohm and Haas Company makes no warranties either expressed or implied as to the accuracy or appropriateness of these data and expressly excludes any liability upon Rohm and Haas arising out of its use. We recommend that the prospective users determine for themselves the suitability of Rohm and Haas materials and suggestions for any use prior to their adoption. Suggestions for uses of our products of the inclusion of descriptive material from patents and the citation of specific patents in this publication should not be understood as recommending the use of our products in violation of any patent or as permission or license to use any patents of the Rohm and Haas Company and its affiliates. Material Safety Data Sheets outlining the hazards and handling methods for our products are available on request.

LENNTECH WATER TREATMENT AND Air purification