

PRODUCT DATA SHEET

AMBERLITE™IRA458RF Cl **Industrial Grade Strong Base Anion Exchanger**

AMBERLITE IRA458RF Cl resin is an acrylic gel type strongly basic anion exchange resin, with unique chemical and physical properties. It combines high operating capacity with low silica leakage values.

The flexible acrylic structure of AMBERLITE IRA458RF Cl resin allows for effective adsorption

and desorption of naturally occurring organic molecules, such as humic and fulvic acids, that are present in many water supplies. The particle size distribution of AMBERLITE IRA458RF Cl resin has been specially selected to give optimum performance in floating bed and packed bed applications. (RF means reverse flow).

PROPERTIES

Physical form _____	Translucent white spherical beads
Matrix _____	Crosslinked acrylic gel structure
Functional group _____	Quaternary ammonium
Ionic form as shipped _____	Chloride
Total exchange capacity ^[1] _____	≥ 1.25 eq/L (Cl ⁻ form)
Moisture holding capacity ^[1] _____	57 to 64 % (Cl ⁻ form)
Shipping weight _____	720 g/L
Particle size	
Uniformity coefficient ^[1] _____	≤ 1.8
Harmonic mean size ^[1] _____	0.700 to 1.000 mm
< 0.355 mm ^[1] _____	0.5 % 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 _____	1000 mm (preferably > 1400 mm)
Service flow rate _____	5 to 40 BV*/h
Regeneration	
Regenerant _____	NaOH
Level _____	30 to 80 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

PERFORMANCE

The engineering data sheet EDS 0184 A provides information to calculate the operating capacity and silica leakage of AMBERLITE IRA458RF Cl resin used in water treatment.

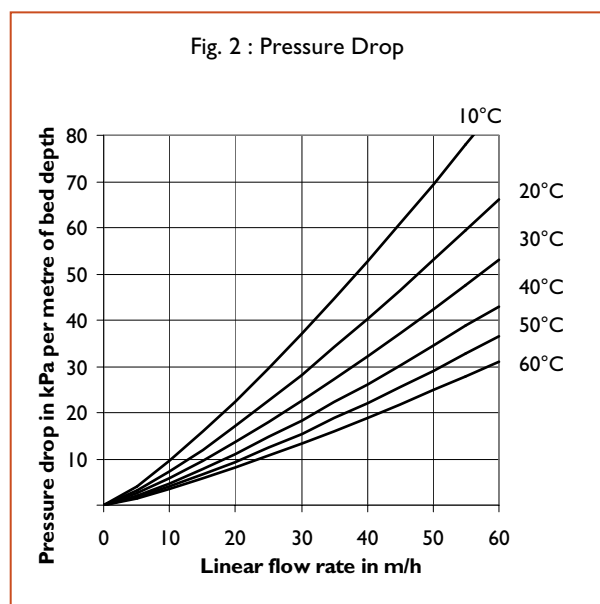
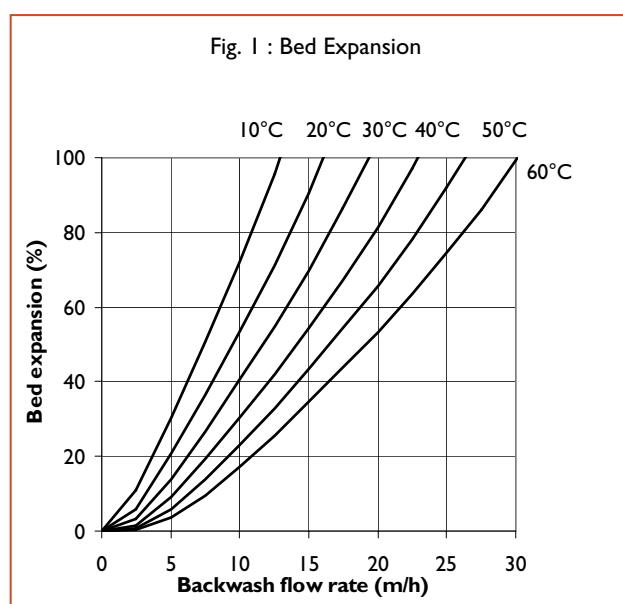
LIMITS OF USE

AMBERLITE IRA458RF 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 IRA458RF Cl resin as a function of backwash flow rate and water temperature. Figure 2 shows the pressure drop data for AMBERLITE IRA458RF 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.



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