SEPARATION TECHNOLOGIES

ION EXCHANGE RESINS

DUOLITE A 368

ENGINEERING DATA SHEET

Auchtel

Duolite A 368 is a macroporous weak base Anion Exchange Resin. These data provide information to calculate the operating capaciy of Duolite A 368

The properties of Duolite A 368 are described in the Product Data Sheet.

OPERATING CAPACITY

The operating capacity is obtained by multiplying the basic value from Table 1 by the correction factors A, B, and C from Tables 2 to 4.

$$Cap = Cap_0 \times A \times B \times C$$

TABLE 1 :Basic Capacity versus SO_4 / FMA* ratio

SO_4/ FMA %	Capacity eq / L (Cap_0)
0	1.05
20	1.11
40	1.15
60	1.22
80	1.33
100	1.36

** FMA = Free Mineral Acidity = Anions of Strong Acids*

TABLE 2 : Capacity Correction Factor A versus CO_2 Concentration.

CO_2, ppm as $CaCO_3$	Factor A
0.0	0.94
5.0	0.96
12.5	0.97
25.0	0.99
37.5	1.01
> 50.0	1.035

TABLE 3 : Capacity Correction Factor B versus Water Temperature.

Water ^0C	Factor B
5	0.90
15	1.00
25	1.05
35	1.08
45	1.10

TABLE 4 : Capacity Correction Factor C versus Run Length. (hours)

Run (hours)	Factor C
4	0.80
6	0.88
8	0.92
12	0.97
18	0.99
>24	1.00

TABLE 3 : Suggested Operating Conditions

Maximum operating temperature	60^0 c (F.B.)	$100\ ^0$c (Cl^-)	
Minimum bed depth	700 mm		
Service flow rate	5 to 40 BV* / hr		
Maximum linear velocity	50 m / hr		
Regenerant	NaOH	NH_3	Na_2CO_3
Level	30-70 g / l	20-80 g / l	60-130 g / l
Flow rate	2 to 8 BV/ hr (minimum contact time : 30 minutes)		
Concentration	2 - 4 %	2 - 6 %	4 - 8 %
Slow rinse	Min 2 BV at regeneration flow rate.		
Fast rinse	Same as service flow rate.		
Influent limitations			
Free chlorine	Nil		
Turbidity	< 2 NTU		
Iron & heavy metal	< 0.1 ppm		

** 1 BV (Bed Volume) = 1 m^3 solution per m^3 resin.*

DUOLITE A 368

ENGINEERING DATA SHEET

SAFE HANDLING INFORMATION

A Material Safety Data Sheet is available for each product. To obtain a copy contact your Auchtel representative.

CAUTION

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 oxidizing 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 oxidizing agent such as nitric acid is contemplated. Before using strong oxidizing agents in contact with Ion Exchange Resins, consult sources knowledge-able in the handling of these material.

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