



## Technical Data Sheet - fumasep® FAD-55

### Physical and chemical data of fumasep® FAD-55

fumasep®		FAD-55
membrane type		anion exchange membrane
appearance / colour		light-brown
backing foil		PET
reinforcement		none
counter ion		bromide form (Br <sup>-</sup> )
delivery form		dry
Lot-No		
thickness (dry)	mm	50 - 60
ion exchange capacity (as chloride form)	meq g <sup>-1</sup>	2.0 – 2.5
area resistance in Cl <sup>-</sup> form <sup>a)</sup>	Ωcm <sup>2</sup>	0.20 – 0.25
specific conductivity in Cl <sup>-</sup> form <sup>a)</sup>	mS cm <sup>-1</sup>	25 – 30
selectivity 0.1 / 0.5 mol/kg KCl at T = 25 °C <sup>b)</sup>	%	85
uptake in H <sub>2</sub> O at T = 25 °C <sup>c)</sup>	wt %	58
dimensional swelling in H <sub>2</sub> O at T = 25 °C <sup>d)</sup>	%	4 - 8
proton (H <sup>+</sup> ) transfer rate <sup>e)</sup>	μmol min <sup>-1</sup> cm <sup>-2</sup>	8000 - 10000
Young's modulus at 23 °C / 50 % r.h. <sup>f)</sup>	MPa	700 - 900
yield strength at 23 °C / 50 % r.h. <sup>f)</sup>	MPa	24 - 26
tensile strength at 23 °C / 50 % r.h. <sup>f)</sup>	MPa	24 - 26
elongation at break at 23 °C / 50 % r.h. <sup>f)</sup>	%	> 10
bubble point test in water at T = 25 °C	bar	2.5
water permeability	l m <sup>-2</sup> h <sup>-1</sup> bar <sup>-1</sup>	

a) in Cl<sup>-</sup> form in 0.5 M NaCl @ T = 25 °C, measured in standard measuring cell (through-plane).

b) determined from membrane potential measurement in a concentration cell.

c) reference membrane dried over P<sub>2</sub>O<sub>5</sub> *in vacuo*.

d) reference membrane as received.

e) determined from pH potential measurement in a concentration cell 0.1 M HCl / 0.1 M NaCl @ T = 25 °C.

f) determined by stress-strain measurement at T = 25°C and 50 % r.h., according to DIN EN 527-1.

&RQWDFW XV IRU DQ\ TXHVWLRQV RU  
VDOHV LQIRUPDWLRQ  
(PDLO VDOHV#IXHOFHOOVWRUH FRP  
3KRQH  
:HEVLWH ZZZ IXHOFHOOVWRUH FRP