



## FILMTEC Membranes

### Addendum: Conductivity of Solutions

#### Conductivity of Solutions

**Table 9.3 Conductivity of solutions, acids, alkalis and salts 77°F (25°C) expressed as  $\mu\text{S}/\text{cm}$  per meq/l**

Component	Infin. diluted	Concentration in meq/l						
		0.1	0.5	1.0	5.0	10.0	50.0	100.0
HCl	426	425	423	421	415	412	399	392
HNO <sub>3</sub>	421	420	417	416	410	407	394	386
H <sub>2</sub> SO <sub>4</sub>	430	424	412	407	390	380	346	317
H <sub>3</sub> PO <sub>4</sub>	419	394	359	336	264	223	133	104
NaOH	248	247	246	245	241	238	227	221
KOH	271	270	269	268	264	261	251	246
NH <sub>4</sub> OH	271	109	49	36	17	12	5.6	3.9
NaCl	126	126	124	124	121	118	111	107
Na <sub>2</sub> SO <sub>4</sub>	130	128	126	124	117	113	97.7	90.0
Na <sub>2</sub> CO <sub>3</sub>	124	122	120	119	112	108	93.2	86.3
NaHCO <sub>3</sub>	96.0	95.2	94.2	93.5	90.5	88.4	80.6	76.0
KCl	150	149	148	141	144	141	133	129

The graphs on the following page relate the conductivity of a solution containing one given chemical to the concentration of this chemical.

The conductivity of solutions at other temperatures can be calculated by multiplying conductivities at 77°F (25°C) with the correction factors in the following table. These factors are only valid for diluted solutions as they presuppose total ionic dissociation of the chemical.

**Table 9.4 Conductivity correction factors**

	32°F (0°C)	64°F (18°C)	77°F (25°C)	122°F (50°C)
HCl	0.66	0.89	1.00	1.37
H <sub>2</sub> SO <sub>4</sub>	0.66	0.87	1.00	1.38
NaCl	0.53	0.86	1.00	1.57
NaOH	0.54	0.89	1.00	1.51
KOH	0.55	0.89	1.00	1.50

Figure 9.1 Conductivity of ionic solutions at 77°F (25°C)

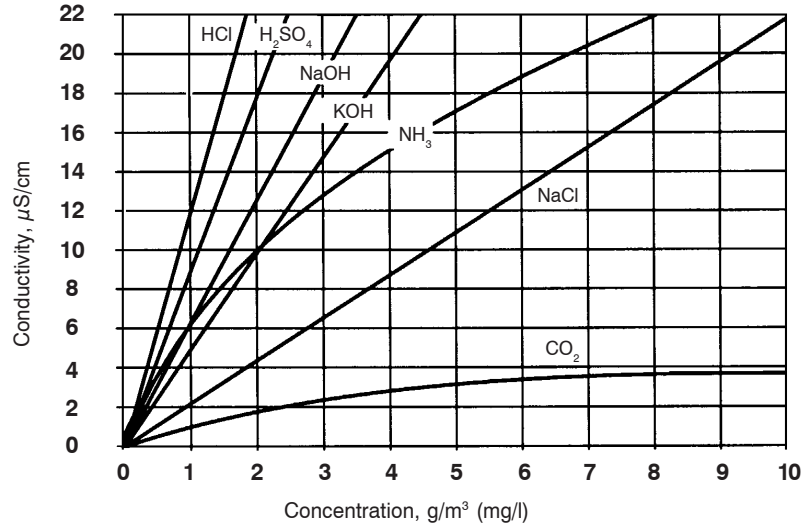
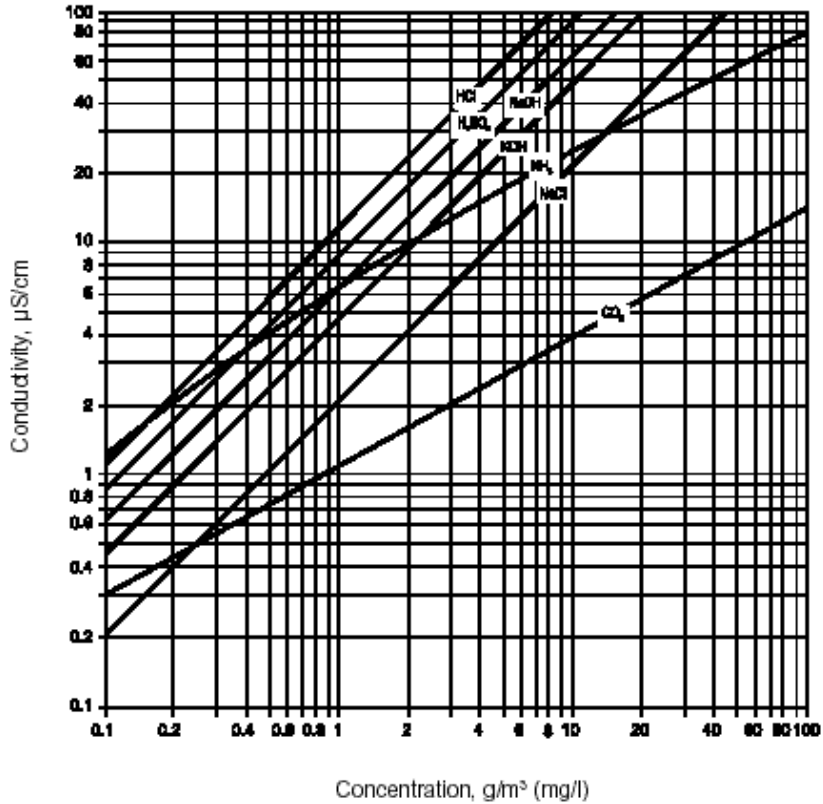


Figure 9.2 Conductivity of ionic solutions at 77°F (25°C)



**FILMTEC™ Membranes**  
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