

## Technical Brief

# Chemical compatibility of Mobius<sup>®</sup> components

This chemical compatibility chart is only intended for use as a guide. A listing of sources appears below. Testing was not performed at EMD Millipore to substantiate the recommendations listed.

EMD Millipore recommends that the user performs physical testing as needed. The use of the product will be affected by variability in temperature, concentration, duration of exposure and other factors outside our control. No warranty is given, or is to be implied with respect to the information provided in this table.

These recommendations assume pure solutions at room temperature and pressure without applied stresses. Time of exposure is not considered. These are critical assumptions as polymer properties are strongly affected by environmental conditions, time, the presence of external stress, and the presence of additives. It is not safe to assume that property changes are linearly related to changing temperature.

### Ratings

- R Recommended
- NR Not Recommended
- L Limited. Application specific. Testing recommended.
- ND No data available

### References used in developing this table

1. Borealis A/S. "Chemicals Resistance Table Low Density and High Density Polyethylene." <http://www.borealisgroup.com/pdf/chemical-resistance/chemical-resistance-hdpe-ld.pdf>.
2. Borealis A/S. "Polypropylene Chemical Resistance Table Polypropylene." [http://www.borealisgroup.com/pdf/chemical-resistance/chemtab\\_PP.pdf](http://www.borealisgroup.com/pdf/chemical-resistance/chemtab_PP.pdf).
3. Solvay Advanced Polymers. <http://www.solvayadvancedpolymers.com>.
4. Thermo Fisher Scientific. "Technical Data - Chemical Resistance." <http://nalgenelab.nalgenunc.com/techdata/Chemical/ChemicalResistanceIndex.asp>.
5. allorings.com. "O-Ring Fluid Compatibility Guide." <http://www.allorings.com/compatibility.htm>.
6. RL Hudson. "Fluid Compatibility Guide." <http://www.rlhudson.com/Chemicals/ChemicalGuide.aspx>.

Chemical name	CAS#	Concentration	Polypropylene (PP)	Low Density Polyethylene (LDPE) and PureFlex™ film	Polycarbonate (PC)	Durapore® Filters (all membranes in family)	Millipore Express® Filters (all membranes in family)	Polysulfone (PSF)	Polyetherimide (PEI)	Thermoplastic elastomer Tubing	Silicone
Acetic Acid	64-19-7	100%	R	L	NR	R	L	L	R	R	R
		50%	R	R	L	R	R	R	R	R	R
Acetone	67-64-1	100%	R	L	NR	NR	NR	NR	NR	L	L
Ammonium Persulfate	7727-54-0	all aqueous concentrations	R	R	L	L	L	R	R	ND	R
Ammonium Dihydrogen Phosphate	12-61-0	all aqueous concentrations	R	R	R	R	R	R	R	R	R
Dibasic	7783-28-0	all aqueous concentrations	R	R	R	R	R	R	R	R	R
Tribasic	10361-65-6	all aqueous concentrations	R	R	R	R	R	R	R	R	R
Ammonium Sulfate	7783-20-2	all aqueous concentrations	R	R	R	R	R	R	R	R	R
Boric Acid	10043-35-3	all aqueous concentrations	R	R	R	R	R	R	R	R	R
n-Butyl Alcohol	71-36-3	100%	R	R	L	R	L	L	R	L	L
Calcium Chloride	10043-52-4	all aqueous concentrations	R	R	R	R	R	R	R	R	R
Calcium Hydroxide	1305-78-8	all aqueous concentrations	R	R	L	L	R	R	R	R	R
Calcium Hypochlorite	7778-54-3	> 10% but < saturated	R	R	L	L	L	R	R	R	L
Calcium Nitrate	13477-34-4	all aqueous concentrations	R	R	R	R	R	R	R	R	R
Calcium Sulfate (dihydrate)	10101-41-4	all aqueous concentrations	R	R	R	R	R	R	R	R	R
Citric Acid	77-92-9	all aqueous concentrations	R	R	L	R	L	R	R	R	R
Cottonseed Oil	8001-29-4	100%	R	R	R	R	R	R	R	R	R
Cyclohexanone	108-94-1	100%	L	NR	NR	NR	NR	NR	NR	NR	NR
Chloroform	67-66-3	100%	NR	NR	NR	L	NR	NR	NR	NR	NR
Chloroacetic Acid	79-11-8	100%	R	R	L	L	NR	NR	R	R	L
Dextrin	9004-53-9	all aqueous concentrations	R	R	R	R	R	R	R	R	R
Diethylene Glycol	111-46-6	100%	R	R	R	R	L	L	R	R	R
Dimethyl Sulfoxide	67-68-5	100%	R	R	NR	NR	NR	NR	NR	NR	NR
Disodium Phosphate	7558-79-4	all aqueous concentrations	R	R	R	R	R	R	R	R	R
Ethanol (10%)		< 10%	R	R	R	R	L	R	R	R	R
Ethanol (40%)		< 40%	R	R	R	R	L	L	R	R	R
Ethanol (70%)		< 70%	R	R	L	R	L	L	R	R	R
Ethanol (90%)		< 90%	R	R	L	R	L	L	R	R	R
Ethanol	64-17-5	100%	R	R	L	R	L	L	R	R	R
Ethanolamine	141-43-5	100%	R	R	NR	L	NR	NR	ND	R	L
Ethylene Glycol	107-21-1	100%	R	R	R	R	L	R	R	R	R
Ethyl Ether	60-29-7	100%	R	NR	NR	R	NR	NR	R	NR	NR
37% Formaldehyde	82115-62-6	37%	R	R	R	R	R	R	R	R	L
Formic Acid	64-18-6	88%	R	R	NR	R	L	L	R	R	L
Ferric Nitrate	7782-61-8	all aqueous concentrations	R	R	R	R	R	R	R	R	R
Ferric Sulfate	10028-22-5	all aqueous concentrations	R	R	R	R	R	R	R	R	R
Glycerine	56-81-5	100%	R	R	R	R	R	R	R	R	R
Glycolic acid	79-14-1	all aqueous concentrations	R	R	L	R	R	R	R	R	R
Hydrochloric Acid	7647-01-0	37%	R	R	NR	L	NR	NR	R	L	NR
		< 20%	R	R	L	L	L	L	R	R	L
		< 10%	R	R	L	L	L	L	R	R	R

Chemical name	CAS#	Concentration	Polypropylene (PP)	Low Density Polyethylene (LDPE) and Pureflex™ film	Polycarbonate (PC)	Durapore® Filters (all membranes in family)	Millipore Express® Filters (all membranes in family)	Polysulfone (PSF)	Polyetherimide (PEI)	Thermoplastic elastomer tubing	Silicone
Hydrogen Peroxide	7722-84-1	< 30%	R	R	R	R	R	R	R	L	L
Isopropanol	67-63-0	100%	R	R	L	R	L	L	R	ND	R
Lactic Acid	50-21-5	all aqueous concentrations	R	R	L	R	R	R	R	R	R
Magnesium Sulfate	7487-88-9	all aqueous concentrations	R	R	R	R	R	R	R	R	R
Malic Acid	617-48-1	all aqueous concentrations	R	R	L	R	R	R	R	R	R
Methanol	67-56-1	100%	R	R	L	R	L	R	R	ND	R
Methylene Chloride	75-09-2	100%	L	NR	NR	L	NR	NR	NR	NR	NR
Nickel Chloride	7718-54-9	all aqueous concentrations	R	R	R	R	R	R	R	R	R
Nitric Acid	7697-37-2	95%	NR	NR	NR	NR	NR	NR	NR	NR	NR
		>70%	NR	NR	NR	NR	NR	NR	L	NR	NR
		> 50%	NR	R	NR	NR	L	L	L	NR	NR
		30-50%	L	R	NR	L	L	L	L	NR	NR
		< 10%	R	R	L	L	L	L	R	L	L
Phenol	108-95-2	all aqueous concentrations	R	R	L	R	L	L	L	ND	R
Phosphoric Acid	7664-38-2	< 85%	R	R	L	L	L	R	R	R	NR
Potassium Bicarbonate	298-14-6	all aqueous concentrations	R	R	L	L	R	R	R	R	R
Potassium Bromide	7758-02-3	all aqueous concentrations	R	R	R	R	R	R	R	R	R
Propylene Glycol	57-55-6	100%	R	R	L	R	L	R	R	ND	R
n-Propanol	71-23-8	100%	R	R	L	R	L	R	R	ND	R
Sodium Bromide	7647-15-6	all aqueous concentrations	R	R	R	R	R	R	R	R	R
Sodium Chloride	7647-14-5	all aqueous concentrations	R	R	R	R	R	R	R	R	R
Sodium Hydroxide	1310-73-2	50%	R	R	NR	NR	L	R	L	R	NR
Sodium Sulfate	7757-82-6	all aqueous concentrations	R	R	R	R	R	R	R	R	R
Sodium Thiosulfate	7772-98-7	all aqueous concentrations	R	R	R	R	R	R	R	R	R
Sulfuric Acid	7664-93-9	< 30%	R	R	L	L	L	R	R	R	NR
		> 30% &lt; 80 %	L	R	L	L	L	L	ND	L	NR
		> 80%	NR	L	NR	NR	NR	NR	NR	NR	NR
Tetrahydrofuran	109-99-9	100%	L	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethylene	127-18-4	100%	NR	NR	NR	R	NR	NR	NR	NR	NR
Toluene	108-88-3	100%	L	NR	NR	R	NR	NR	NR	NR	NR
Trichloroethylene	79-01-6	100%	NR	NR	NR	R	NR	NR	NR	NR	NR
Triethanolamine (TEA)	102-71-6	100%	R	R	NR	L	NR	NR	ND	NR	NR
		TEA aqueous buffers	R	R	R	R	R	R	R	R	R
Tris Buffer	77-86-1	all aqueous concentrations	R	R	R	R	R	R	R	R	R
Urea	57-13-6	all aqueous concentrations	R	R	R	R	R	R	R	R	R
Soybean Vegetable Oil	8001-22-7	100%	R	R	R	R	R	R	R	L	R
Xylenes (dimethylbenzenes)	1330-20-7	100%	L	NR	NR	R	NR	NR	NR	NR	NR
Sodium acetate	127-09-3	all aqueous concentrations	R	R	R	R	R	R	R	R	R
Tween 20 (polysorbate)	9005-64-5	all aqueous concentrations	R	R	L	R	R	R	R	ND	R
Tween 80 (polysorbate)	9005-65-6	all aqueous concentrations	R	R	L	R	R	R	R	ND	R
Triton X-100 (Octoxynol-9)	9002-93-1	all aqueous concentrations	R	R	L	R	L	L	L	ND	R
Dimethyl Formamide	68-12-2	100%	R	R	NR	NR	NR	NR	NR	NR	NR



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