

3M Purification Inc.

Chemical Filtration Compatibility Guide



Innovative
Filtration
Solutions

Quality. Consistency. Performance.



Legend	Cartridge Filters							O-rings				
R = Recommended N = Not Recommended LR = Limited Recommendation*	Betafine™ DP Series Filters/Betafine™ XL Series Filters	Betafine™ PP & PG Series/Betafine™ PEG Series Filters	LifeASSURE™ ER Series Filters/ LifeASSURE™ EF Series Filters	LifeASSURE™ IMC Series Filters/ LifeASSURE™ EMC Series Filters	LifeASSURE™ PSN Series Filters	LifeASSURE™ FA Series Filters/ LifeASSURE™ PFS Series Filters/ LifeASSURE™ MFE Series Filters	NanoSHIELD™ Hollow Fiber Series	Fluorocarbon	FEP	Silicone	(EPDM)	Kalrez

ACIDS

Acetic Acid—10%	R	R	N	N	N	R	R	R	R	R	R	R
Acetic Acid, Glacial	LR	LR	N	N	N	RN	LR	N	R	R	R	R
Hydrochloric Acid—conc.	R	R	N	N	N	R	LR	R	R	N	N	R
Hydrofluoric Acid—50%	R	LR	N	N	N	R	LR	R	R	N	N	R
Hydrofluoric Acid—dilute	R	R	N	N	N	R	R	R	R	N	N	R
Hydrogen Peroxide—30%	LR	LR	N	N	N	R	LR	R	R	N	N	R
Nitric Acid—30%	LR	LR	N	N	N	N	LR	LR	R	N	N	R
Nitric Acid—40%	LR	LR	N	N	N	N	LR	LR	R	N	N	R
Nitric Acid (Conc.)	N	N	N	N	N	N	N	R	R	N	N	R
Phosphoric Acid	LR	LR	N	N	N	R	LR	R	R	N	LR	R
Sulfuric Acid	N	N	N	N	N	LR	N	R	R	N	N	R

BASES

Ammonium Fluoride—40%	LR	LR	R	R	R	R	R	R	R	N	R	R
Ammonium Hydroxide—conc.	R	R	LR	LR	LR	R	R	LR	R	R	R	R
Potassium Hydroxide—conc.	R	R	LR	LR	LR	R	R	LR	R	N	R	R
Sodium Hydroxide—conc.	R	R	LR	LR	LR	R	R	LR	R	N	R	R
TMAH—5%	R	R	LR	LR	LR	R	R	LR	R	LR	LR	R

ALCOHOLS

2-methyl-1-butanol	R	R	R	R	R	R	R	R	R	LR	R	R
Butanol	R	R	R	R	R	R	R	R	R	LR	R	R
Ethanol	R	R	R	R	R	R	R	R	R	R	R	R
Ethylene Glycol	R	R	R	R	R	R	R	R	R	R	R	R
Glycerol	R	R	R	R	R	R	R	R	R	R	R	R
Isobutanol	R	R	R	R	R	R	R	R	R	R	R	R
Isopropanol (IPA)	R	R	R	R	R	R	R	R	R	R	R	R
Methanol	R	R	R	R	R	R	R	LR	R	R	R	R
Propylene Glycol	R	R	R	R	R	R	R	R	R	R	R	R

MISCELLANEOUS

Dimethylsulfoxide (DMSO)	R	R	R	R	R	R	R	N	R	N	N	R
Hexamethyldisilazane (HMDS)	LR	LR	LR	LR	LR	R	LR	N	R	N	N	R
EGMEA	R	R	R	R	R	R	R	N	R	N	N	R
Silicone Oils	R	R	R	R	R	R	R	R	R	N	R	R
PEGMEA	R	R	R	R	R	R	R	N	R	N	N	R
PGMEA	R	R	R	R	R	R	R	N	R	N	N	R

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ESTERS												
Amyl Acetate	LR	LR	R	R	R	R	N	N	R	N	LR	R
Butyl Acetate	LR	LR	R	R	R	R	LR	N	R	N	LR	R
Cellusolve Acetate	LR	LR	R	R	R	R	LR	N	R	N	LR	R
Ethyl 3 Ethoxypropionate	LR	LR	R	R	R	R	R	N	R	N	LR	R
Ethyl Acetate	LR	LR	R	R	R	R	LR	N	R	N	LR	R
Ethyl Lactate	LR	LR	R	R	R	R	LR	N	R	N	LR	R
Monopropylene Glycol Monoethyl Ether	R	R	R	R	R	R	R	N	R	N	R	R
N Butyl Acetate	LR	LR	R	R	R	R	LR	N	R	N	LR	R
PMA Glycol Ether Acetate	R	R	R	R	R	R	R	N	R	N	R	R
Propylene Glycol Monomethyl Ether	R	R	R	R	R	R	R	N	R	N	R	R
HALOGENATED HYDROCARBONS												
Carbon Tetrachloride	N	N	LR	LR	LR	R	N	R	R	N	N	R
Freon TF	N	N	LR	LR	LR	R	N	R	R	N	N	N
Methylene Chloride	N	N	N	N	N	R	N	R	R	N	N	R
Tetrachloroethylene (Perchloroethylene)	N	N	LR	LR	LR	R	N	R	R	N	N	R
Trichloroethane	N	N	LR	LR	LR	R	N	R	R	N	N	R
Trichloroethylene	N	N	N	N	N	R	N	R	R	N	N	R
HYDROCARBONS												
Cyclohexane	LR	LR	LR	LR	LR	LR	LR	R	R	N	N	R
Hexane	LR	LR	LR	LR	LR	LR	LR	R	R	N	N	R
Pentane	LR	LR	LR	LR	LR	LR	LR	R	R	N	N	R
Petroleum Ether	LR	LR	LR	LR	LR	LR	LR	R	R	N	N	R
Toluene	N	N	LR	LR	LR	N	N	R	R	N	N	R
Xylene	N	N	LR	LR	LR	N	N	R	R	N	N	R
KETONES												
2-Heptanone	LR	LR	LR	LR	LR	R	LR	N	R	N	R	R
4-Hydroxybutyric Acid Lactone	LR	LR	LR	LR	LR	R	LR	N	R	N	R	R
Acetone	R	R	R	R	R	R	R	N	R	N	R	R
Anisole	N	N	LR	LR	LR	LR	LR	R	R	N	N	R
Cyclohexanone	LR	LR	LR	LR	LR	R	LR	N	R	N	R	R
Methyl Ethyl Ketone (MEK)	LR	LR	LR	LR	LR	R	LR	N	R	N	R	R
Methyl Isobutyl Ketone (MIBK)	LR	LR	LR	LR	LR	R	LR	N	R	N	LR	R

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ETCHANTS/STRIPPERS												
Aqua Regia (HNO ₃ :HCL)	N	N	N	N	N	N	N	N	R	N	N	R
BOE (NH ₄ F:HF)	R	R	R	R	R	R	R	R	R	N	N	R
Chrom Phos H ₂ O:H ₃ PO ₄ :CR ₂ O ₃ (32:1:0:1)	LR	LR	N	N	N	R	LR	LR	R	N	N	R
Mixed Acid Etch (HNO ₃ < 20%)	LR	LR	N	N	N	LR	LR	LR	R	N	N	R
N-Methyl Pyrolidone (NMP)	LR	LR	R	R	R	R	LR	N	R	N	LR	R
NOE; Ethylene Glycol NH ₄ F:H ₂ O:Surfactant	R	R	R	R	R	R	R	N	R	N	R	R
Poly Si Etch; (3:5:92); HNO ₃ :HF:DI H ₂ O	LR	LR	N	N	N	R	LR	R	R	N	N	R
Piranha; H ₂ SO ₄ :H ₂ O ₂	N	N	N	N	N	N	N	N	R	N	N	R
RCA Etch; (75:15:5:5) H ₃ PO ₄ :CH ₃ CO ₂ H:HNO ₃ :DI H ₂ O	N	N	N	N	N	R	N	R	R	N	N	R
SC1 (RCA Clean) NH ₄ OH:H ₂ O ₂ :DI H ₂ O	N	N	N	N	N	LR	N	LR	R	N	N	R
SC2 (RCA Clean) HCL:H ₂ O ₂ :DI H ₂ O	N	N	N	N	N	N	N	LR	R	N	N	R

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This listing is intended as a guide for selecting the appropriate 3M Purification filter based on compatibility with most common chemicals. This information is based on technical publications, laboratory experiments, data from material suppliers, and field tests. It is recommended that compatibility of these chemicals be established in the specific application because actual performance may differ as a result of variations in temperature, concentration, exposure time, or other factors. Consideration must also be given in selection of a suitable O-ring material to assure complete compatibility. **Please consult your 3M Purification Sales Specialist or 3M Purification Technical Support for specific concentrations.**

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