

## Chemical Compatibility

## Sartolab® Products

|                           | Filter Material |           | Plastic Components |                           |               |               | Sartolab® Types           |                 |               |                    |                     |
|---------------------------|-----------------|-----------|--------------------|---------------------------|---------------|---------------|---------------------------|-----------------|---------------|--------------------|---------------------|
|                           | Membrane        | Prefilter | Polystyrene        | High Density Polyethylene | Polypropylene | Polycarbonate | Sartolab® RF/ BT 150-1000 | Sartolab® RF 50 | Sartolab® P20 | Sartolab® P20 Plus | Sartolab® Prefilter |
| <b>Membrane</b>           | PES             |           |                    |                           |               |               | PES                       | PES             | PES           | PES                |                     |
| <b>Prefilter</b>          |                 | Quartz    |                    |                           |               |               |                           |                 |               | Quartz             | Quartz              |
| <b>Plastic Components</b> |                 |           | PS                 | HDPE                      | PP            | PC            | PS + HDPE                 | PS + HDPE+ PP   | PC            | PC                 | PC                  |
| <b>Sterilization</b>      |                 |           |                    |                           |               |               |                           |                 |               |                    |                     |
| Ethylene oxide            | ++              | ++        | ++                 | ++                        | ++            | ++            |                           |                 | ++            | ++                 | ++                  |
| Gamma irradiation         | ++              | ++        | ++                 | ++                        | ++            | +             |                           |                 |               |                    |                     |
| Autoclaving 121°C, 40 min | ++              | ++        |                    |                           |               |               | -                         | -               | +             | +                  | +                   |
| E-Beam (Beta irradiation) | ++              | ++        | ++                 | ++                        | ++            |               | ++                        | ++              |               |                    |                     |
|                           |                 |           |                    |                           |               |               |                           |                 |               |                    |                     |
| <b>Solvents</b>           |                 |           |                    |                           |               |               |                           |                 |               |                    |                     |
| Acetone                   | -               | ++        | -                  | ++                        | ++            | -             | -                         | -               | -             | -                  | -                   |
| Acetonitrile              | -               | ++        | -                  | ++                        | ++            | -             | -                         | -               | -             | -                  | -                   |
| Gasoline                  |                 | ++        | -                  | +                         | ++            | -             | -                         | -               | -             | -                  | -                   |
| Benzene                   | +               | ++        | -                  | -                         | -             | -             | -                         | -               | -             | -                  | -                   |
| Benzyl alcohol            | +               | ++        | -                  | -                         | ++            | -             | -                         | -               | -             | -                  | -                   |
| n-Butyl acetate           | -               | ++        | -                  | ++                        | +             | -             | -                         | -               | -             | -                  | -                   |
| n-Butanol                 | ++              | ++        | ++                 | ++                        | ++            | ++            | ++                        | ++              | ++            | ++                 | ++                  |
| Cellosolve                | +               | ++        | -                  | ++                        | -             | -             | -                         | -               | -             | -                  | -                   |
| Chloroform                | -               | ++        | -                  | +                         | -             | -             | -                         | -               | -             | -                  | -                   |
| Cyclohexane               | -               | ++        | -                  | ++                        | ++            | -             | -                         | -               | -             | -                  | -                   |
| Cyclohexanone             | -               | ++        | -                  | ++                        | ++            | -             | -                         | -               | -             | -                  | -                   |
| Diethylacetamide          | -               | ++        |                    |                           |               |               | -                         | -               | -             | -                  |                     |
| Diethyl ether             | -               | ++        | -                  | -                         | +             | -             | -                         | -               | -             | -                  | -                   |
| Dimethyl formamide        | -               | ++        | -                  | ++                        | ++            | -             | -                         | -               | -             | -                  | -                   |
| Dimethylsulfoxide         | -               | ++        | -                  | ++                        |               | -             | -                         | -               | -             | -                  | -                   |
| Dioxane                   | -               | ++        | -                  | ++                        | +             | -             | -                         | -               | -             | -                  | -                   |
| Ethanol, 98 %             | ++              | ++        | +                  | ++                        | ++            | ++            | +                         | +               | ++            | ++                 | ++                  |
| Ethyl acetate             | -               | ++        | -                  | ++                        | ++            | -             | -                         | -               | -             | -                  | -                   |
| Ethylene glycol           | ++              | ++        | -                  | ++                        | ++            | ++            | -                         | -               | ++            | ++                 | ++                  |
| Formamide                 | ++              | ++        |                    | ++                        | ++            | +             |                           |                 | +             | +                  | +                   |
| Glycerin                  | ++              | ++        | ++                 | ++                        | ++            | ++            | ++                        | ++              | ++            | ++                 | ++                  |
| n-Heptane                 | +               | ++        | -                  | ++                        | ++            | ++            | -                         | -               | +             | +                  | ++                  |
| n-Hexane                  | +               | ++        | -                  | ++                        | ++            | ++            | -                         | -               | +             | +                  | ++                  |
| Isobutanol                | ++              | ++        | ++                 | ++                        | ++            | ++            | ++                        | ++              | ++            | ++                 | ++                  |
| Isopropanol               | ++              | ++        | ++                 | ++                        | ++            | ++            | ++                        | ++              | ++            | ++                 | ++                  |
| Isopropyl acetate         | -               | ++        | -                  | ++                        | ++            | -             | -                         | -               | -             | -                  | -                   |
| Methanol, 98 %            | +               | ++        | -                  | ++                        | ++            | +             | -                         | -               | +             | +                  | +                   |

|                             | Filter Material |           | Plastic Components |                           |               |               | Sartolab® Types           |                 |               |                    |                     |
|-----------------------------|-----------------|-----------|--------------------|---------------------------|---------------|---------------|---------------------------|-----------------|---------------|--------------------|---------------------|
|                             | Membrane        | Prefilter | Polystyrene        | High Density Polyethylene | Polypropylene | Polycarbonate | Sartolab® RF/ BT 150-1000 | Sartolab® RF 50 | Sartolab® P20 | Sartolab® P20 Plus | Sartolab® Prefilter |
| Membrane                    | PES             |           |                    |                           |               |               | PES                       | PES             | PES           | PES                |                     |
| Prefilter                   |                 | Quartz    |                    |                           |               |               |                           |                 |               | Quartz             | Quartz              |
| Plastic Components          |                 |           | PS                 | HDPE                      | PP            | PC            | PS + HDPE                 | PS + HDPE+ PP   | PC            | PC                 | PC                  |
|                             |                 |           |                    |                           |               |               |                           |                 |               |                    |                     |
| Solvents                    |                 |           |                    |                           |               |               |                           |                 |               |                    |                     |
| Methyl acetate              | -               | ++        | -                  | ++                        | ++            | -             | -                         | -               | -             | -                  | -                   |
| Methylene chloride          | -               | ++        | -                  | +                         | -             | -             | -                         | -               | -             | -                  | -                   |
| Methyl ethyl ketone         | -               | ++        | -                  | ++                        | ++            | -             | -                         | -               | -             | -                  | -                   |
| Methyl isobutyl ketone      | -               | ++        | -                  | ++                        |               | -             | -                         | -               | -             | -                  | -                   |
| Monochlorobenzene           | +               | ++        | -                  | -                         | ++            | -             | -                         | -               | -             | -                  | -                   |
| Nitrobenzene                | -               | ++        | -                  | ++                        | +             | -             | -                         | -               | -             | -                  | -                   |
| n-Pentane                   | ++              | ++        | -                  | +                         | ++            | -             | -                         | -               | -             | -                  | -                   |
| Perchloroethylene           | -               | ++        |                    |                           | +             | -             | -                         | -               | -             | -                  | -                   |
| Pyridine                    | -               | ++        | -                  | ++                        | +             | -             | -                         | -               | -             | -                  | -                   |
| Carbon tetrachloride        | -               | ++        | -                  | -                         | +             | -             | -                         | -               | -             | -                  | -                   |
| Tetrahydrofuran             | -               | ++        | -                  | ++                        | +             | -             | -                         | -               | -             | -                  | -                   |
| Toluene                     | -               | ++        | -                  | +                         | ++            | -             | -                         | -               | -             | -                  | -                   |
| Trichloroethane             | -               | ++        | -                  | +                         |               | -             | -                         | -               | -             | -                  | -                   |
| Trichloroethylene           | -               | ++        | -                  | -                         | -             | -             | -                         | -               | -             | -                  | -                   |
| Xylene                      | -               | ++        | -                  | +                         | +             | -             | -                         | -               | -             | -                  | -                   |
|                             |                 |           |                    |                           |               |               |                           |                 |               |                    |                     |
| Acids                       |                 |           |                    |                           |               |               |                           |                 |               |                    |                     |
| Acetic acid, 10%            | ++              | ++        | ++                 | ++                        | ++            | ++            | ++                        | ++              | ++            | ++                 | ++                  |
| Acetic acid, 80%            | -               | ++        | -                  | ++                        | ++            | -             | -                         | -               | -             | -                  | -                   |
| Hydrofluoric acid, 40%      | +               | ++        |                    | ++                        | ++            | -             | -                         | -               | -             | -                  | -                   |
| Hydrofluoric acid, 50%      | ++              | ++        | -                  | ++                        | ++            | -             | -                         | -               | -             | -                  | -                   |
| Perchloric acid, 50%        | -               | ++        |                    | ++                        | ++            |               | -                         | -               | -             | -                  |                     |
| Phosphoric acid, up to 5%   | +               | ++        | ++                 | ++                        | ++            | ++            | +                         | +               | +             | +                  | ++                  |
| Phosphoric acid, 85%        | ++              | ++        | ++                 | ++                        | ++            | ++            | ++                        | ++              | ++            | ++                 | ++                  |
| Nitric acid, 50%            | +               | ++        | -                  | ++                        | -             | -             |                           |                 | -             | -                  | -                   |
| Nitric acid, conc.          | -               | ++        | -                  | -                         | -             | -             | -                         | -               | -             | -                  | -                   |
| Hydrochloric acid, 10%      | ++              | ++        | ++                 | ++                        | ++            | ++            | ++                        | ++              | ++            | ++                 | ++                  |
| Hydrochloric acid, 20%      | ++              | ++        | ++                 | ++                        | ++            | ++            | ++                        | ++              | ++            | ++                 | ++                  |
| Sulfuric acid, 20%          | +               | ++        | ++                 | ++                        | ++            | ++            | +                         | +               | +             | +                  | ++                  |
| Sulfuric acid, 95%          | -               | ++        | -                  | -                         | -             | -             | -                         | -               | -             | -                  | -                   |
| Trichloroacetic acid, conc. | +               | ++        | -                  | ++                        | ++            | -             | -                         | -               | -             | -                  | -                   |
|                             |                 |           |                    |                           |               |               |                           |                 |               |                    |                     |
| Bases                       |                 |           |                    |                           |               |               |                           |                 |               |                    |                     |
| Ammonia, 1N                 | ++              | ++        |                    |                           | ++            |               |                           |                 |               |                    |                     |
| Ammonium hydroxide, 25%     | +               | +         | -                  | ++                        | ++            | ++            | -                         | -               | +             | +                  | +                   |
| Potassium hydroxide, 30%    | ++              | +         | ++                 | ++                        | ++            | -             | ++                        | ++              | -             | -                  | -                   |
| Sodium hydroxide, 1%        | ++              | +         | +                  | ++                        | ++            | -             | +                         | +               | -             | -                  | -                   |
| Sodium hydroxide, 30%       | ++              | -         | ++                 | ++                        | ++            | -             | ++                        | ++              | -             | -                  | -                   |

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|                               | Membrane        | Prefilter | Polystyrene        | High Density Polyethylene | Polypropylene | Polycarbonate | Sartolab® RF/ BT 150-1000 | Sartolab® RF 50 | Sartolab® P20 | Sartolab® P20 Plus | Sartolab® Prefilter |
| Membrane                      | PES             |           |                    |                           |               |               | PES                       | PES             | PES           | PES                |                     |
| Prefilter                     |                 | Quartz    |                    |                           |               |               |                           |                 |               | Quartz             | Quartz              |
| Plastic Components            |                 |           | PS                 | HDPE                      | PP            | PC            | PS + HDPE                 | PS + HDPE+ PP   | PC            | PC                 | PC                  |
|                               |                 |           |                    |                           |               |               |                           |                 |               |                    |                     |
| Aqueous solutions             |                 |           |                    |                           |               |               |                           |                 |               |                    |                     |
| Formaldehyde, 30%             | +               | ++        | -                  | ++                        | ++            | ++            | -                         | -               | +             | +                  | ++                  |
| Sodium hypochlorite, up to 5% | ++              | ++        | ++                 | ++                        | ++            | -             | ++                        | ++              | -             | -                  | -                   |
| Hydrogen peroxide, 30%        | ++              | ++        | ++                 | ++                        | ++            | ++            | ++                        | ++              | ++            | ++                 | ++                  |
|                               |                 |           |                    |                           |               |               |                           |                 |               |                    |                     |
| pH range                      |                 |           |                    |                           |               |               |                           |                 |               |                    |                     |
| pH 1 to 14                    | -               | ++        |                    |                           |               |               |                           |                 |               |                    |                     |
| pH 1 to 13                    | ++              | ++        |                    |                           |               |               |                           |                 |               |                    |                     |
| pH 1 to 10                    | ++              | ++        |                    |                           |               | ++            |                           |                 | ++            | ++                 | ++                  |
| pH 3 to 14                    | +               | ++        |                    |                           |               |               |                           |                 |               |                    |                     |
| pH 3 to 12                    | ++              | ++        |                    | ++                        |               |               |                           |                 |               |                    |                     |
| pH 4 to 8                     | ++              | ++        |                    | ++                        |               |               |                           |                 |               |                    |                     |

#### Legend

++ High compatibility      - Not compatible  
+ Limited compatibility      ( ) No information available

#### Disclaimer:

The table on this page contain recommendations based solely upon ratings found in several published solubility and compatibility tables. A listing of sources appears below. The tables do not contain results from any actual usage experiments conducted by our scientists. Always test your equipment under the specific conditions of your application before permanent installation.

#### References:

- [1] HPDE Chemical Resistance Guide, INEOS Oleind & Polymers USA, 2012
- [2] Chemische Beständigkeit von Kunststoffen, Bürkle GmbH, 2021
- [3] Carlowitz: Kunststoff-Tabellen, Carl Hanser Verlag München, 1995
- [4] <https://www.customadvanced.com/chemical-resistance-chart.html>
- [5] Nalgene: Chemical Compatibility Guide. Hg. V.v Thermofisher

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