

# SAF Materials

## Chemical Compatibility

This document is provided as a guide to better understand the general performance you can expect when exposing Stratasys SAF™ materials to various chemicals. Stratasys always recommends conducting your own testing on materials prior to using them for your particular application. These ratings are determined from testing performed based on **ATSM D543 'Standard Practices for Evaluating the Resistance of Plastics to Chemical Reagents'**

### Chemical Resistance Ratings

- 1 = Excellent chemical resistance:** the solvent is unlikely to degrade the thermoplastic during prolonged exposure and moderate environmental conditions (room temperature and normal atmospheric pressure)
- 2 = Good chemical resistance:** the solvent is unlikely to degrade the thermoplastic during short term exposure and moderate environmental conditions (room temperature and normal atmospheric pressure)
- 3 = Limited chemical resistance:** the solvent will likely degrade the thermoplastic during short term exposure
- 4 = Poor chemical resistance:** the solvent will likely attack and aggressively degrade the thermoplastic when exposed

Material		
Solvent	PA11	PA12
Synthetic Motor Oil	1	1
Screenwash	1	1
Antifreeze	1	1
Silicone Based Grease	1	1
Petrochemical Based Grease	1	1
Forecourt Petrol	1	1
Forecourt Diesel	1	1
Automotive Battery Acid	3	2

1 = Excellent chemical resistance      2 = Good chemical resistance      3 = Limited chemical resistance      4 = Poor resistance

\* Excellent scores were given to all materials with less than 10% negative reduction in ultimate tensile strength & elastic modulus. In some cases variations in elongation at break were observed, both positive and negative. Refer to the long format chemical testing white paper for detailed information.

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