Polytrope® STR Enhanced Polyolefins

Chemical Resistance Guidelines

for Polytrope® STR High Gloss Capstock Resins

Polytrope® STR resins are based on enhanced polyolefin compositions that have been specifically designed to provide high performance for sheet and thermoforming applications. *Polytrope® STR* high gloss capstock resins possess excellent inherent resistance to a broad range of chemicals. Testing has also shown that this resistance does not change through post forming operations, such as thermoforming. Chemical type and resistance testing was completed according to automotive OEM specifications because they typically represent the most stringent requirements for chemical exposure of exterior body panels.

If test results for a specific chemical or test condition of interest is not provided, please contact your A. Schulman Inc. representative to discuss your specific requirements. Due to the many factors that can influence chemical resistance, the information within this table is only intended as a guideline and does not express or imply any type of warranty/guarantee. It is recommended that the chemical resistance of all *Polytrope® STR* resins be verified within the specific environment of the intended application.

The pass/fail status for each test within a table applies only to the material's ability to resist an unacceptable change in appearance while in an "non-stressed" state. Chemical staining and surface deformation are the two factors considered when evaluating chemical resistance. A designation of "pass" corresponds to "slight-to-no noticeable staining or deformation" after exposure.

Table 1: Chemical Resistance of Polytrope® STR High Gloss Capstock Resins at Room Temperature

(*Table 2 cont. next page*)

CHEMICAL AGENT	DESCRIPTION	TEST METHOD	OBSERVATION	COMMENTS
Carwash (100%)	Armor All®	GM9533P @ 23°C	Pass	
Carwash: Water (1:100)	Armor All®	GM9533P @ 23°C	Pass	
Washer Fluid (100%)	Optikleen®	GM9533P @ 23°C	Pass	
Washer Fluid: Water (1:1)	Optikleen®	GM9533P @ 23°C	Pass	
Adhesive Remover	Goo Gone®	GM9533P @ 23°C	Pass	
Grease	multipurpose lithium grease	GM9533P @ 23°C	Pass	
Motor Oil	5W-30	GM9533P @ 23°C	Pass	
Brake Fluid	SuperTech™	GM9533P @ 23°C	Pass	
A/C Oil	Interdynamics R-134a PAG 150	GM9533P @ 23°C	Pass	
Engine Coolant	Peak	GM9533P @ 23°C	Pass	
Acid Rain	pH 3	GM9533P @ 23°C	Pass	
Sulphuric Acid	pH 2	GM9533P @ 23°C	Pass	
Sulphuric Acid	pH 4	GM9533P @ 23°C	Pass	
Deionized Water	---	GM9533P @ 23°C	Pass	
Tap Water	---	GM9533P @ 23°C	Pass	
Calcium Sulfate	---	GM9533P @ 23°C	Pass	
Egg Albumin	---	GM9533P @ 23°C	Pass	
Gasoline	87 octane	GM9501P (mtd A) @ 23°C	Pass	
Gasoline	87 octane	GM9501P (mtd B) @ 23°C	Pass	
MEK	---	GM9509P @ 23°C	Pass	
Xylene	---	GM9509P @ 23°C	Pass	very slight haze
Methanol	---	GM9509P @ 23°C	Pass	
Spray Cleaner I	Simple Green®	GM9533P @ 23°C	Pass	
Spray Cleaner II	Windex®	GM9533P @ 23°C	Pass	
Spray Cleaner III	CRC® Citrus	GM9533P @ 23°C	Pass	
Laundry Detergent	Gain®	GM9533P @ 23°C	Pass	
Bleach (100%)	Clorox®	GM9533P @ 23°C	Pass	
Bleach: Water (1:1)	Clorox®	GM9533P @ 23°C	Pass	
Car Wax	Turtle Wax®	GM9533P @ 23°C	Pass	

Chemical Resistance Guidelines

for High Gloss Polytrope® STR 3566 Capstock Resin

Table 2: Chemical Resistance of Polytrope® STR High Gloss Capstock Resins at Elevated Temperatures

CHEMICAL AGENT	DESCRIPTION	TEST METHOD	OBSERVATION	COMMENTS
Carwash (100%)	Armor All®	GM9533P @ 70°C	Pass	
Carwash: Water (1:100)	Armor All®	GM9533P @ 70°C	Pass	
Washer Fluid (100%)	Optikleen®	GM9533P @ 70°C	Pass	
Washer Fluid: Water (1:1)	Optikleen®	GM9533P @ 70°C	Pass	
Adhesive Remover	Goo Gone®	GM9533P @ 70°C	Pass	
Grease	multipurpose lithium grease	GM9533P @ 70°C	Pass	
Motor Oil	5W-30	GM9533P @ 70°C	Pass	
Brake Fluid	SuperTech™	GM9533P @ 70°C	Pass	
A/C Oil	Interdynamics R-134a PAG 150	GM9533P @ 70°C	Pass	
Engine Coolant	Peak®	GM9533P @ 70°C	Pass	
Acid Rain	pH 3	GM9533P @ 80°C	Pass	
Sulphuric Acid	pH 2	GM9533P @ 80°C	Pass	
Sulphuric Acid	pH 4	GM9533P @ 80°C	Pass	
Deionized Water	---	GM9533P @ 80°C	Pass	
Tap Water	---	GM9533P @ 80°C	Pass	
Calcium Sulfate	---	GM9533P @ 80°C	Pass	
Egg Albumin	---	GM9533P @ 80°C	Pass	
Spray Cleaner I	Simple Green®	GM9533P @ 80°C	Pass	
Spray Cleaner II	Windex®	GM9533P @ 80°C	Pass	
Spray Cleaner III	CRC® Citrus	GM9533P @ 80°C	not recommended	some staining/swelling
Laundry Detergent	Gain®	GM9533P @ 80°C	Pass	
Bleach (100%)	Clorox®	GM9533P @ 80°C	Pass	
Bleach: Water (1:1)	Clorox®	GM9533P @ 80°C	Pass	
Car Wax	Turtle Wax®	GM9533P @ 80°C	not recommended	some swelling