

# STAR RAPID

## Star's Common VC Material

		Axson / Sika	Axson / Sika	Hei-Cast	Axson / Sika	Axson / Sika	Axson / Sika	Axson / Sika	Hei-Cast	Axson / Sika	Axson / Sika	
<a href="#">Click on each resin for the material data sheet →</a>		UP 4280	PX 223-HT	8263	PX 527	UPX 5210	UP 5690	UPX 8400	T0387	ESSIL 296	988	
Simulant		ABS	ABS	ABS	ABS / PC	PMMA	PP / HDPE	Rubber	Rubber	Silicone	Platinum Cured Silicone	
Properties	Soft							■	■	■	■	
	Semi Rigid						■ (Good flexibility)					
	Rigid	■	■	■	■	■						
	High Temp.		■ (High Temp ABS 120°C)									
	Flame Retardant			■ (UL94-V0 Specification)								
	Food Grade										■	
	UV Stable					■						
Part Color @ 23°C		Off-White Light-Beige Black	Black	Milky White	Transparent	Transparent	White Black	Off-White Black	Transparent	Translucent	Translucent	
Pantone Color Matching		Rating: 1	0	1	3	2	1	1	2	1	0	
0 - N/A		• Due to the natural 'off-white' color of the base material, we CANNOT achieve BRIGHT or LIGHT colours, e.g. bright blue, bright purple, light blue and light purple.	• The material color is 'black', cannot mix colors.	• Due to the natural 'milky-white' color of the base material, we CANNOT achieve BRIGHT or LIGHT colors, e.g. bright blue, bright purple, light blue and light purple.	• These material colors are clear therefore we can easily match Pantone® references. • For matching bright, vivid or pastel colors these materials are best suited but depends on difficulty level of the requested color.	• Pantone® matches are possible depends on the difficulty level of the requested color.	• These materials are 3 component materials. The C component has a natural 'pale-yellow' color so we CANNOT achieve BRIGHT and LIGHT colors, especially blue and purple. • Also, as we change the hardness of the material by changing the ratio of the C component, the color will change.	• Due to the natural 'milky-white' color of the base material, we CANNOT achieve BRIGHT or LIGHT colors, e.g. bright blue, bright purple, light blue and light purple. • Some Pantone® matches are possible depends on the difficulty level of the requested color.	• Pantone® matches are possible depends on the difficulty level of the requested color.	• Due to the natural 'pale-yellow' color of the base material, we CANNOT achieve BRIGHT or LIGHT colors, e.g. bright blue, bright purple, light blue and light purple. • Difficulty in achieving the silver & blue color.	• Very rare to mix with color due to the pigment we used is not food grade.	
1 - FAIR												
2 - GOOD		• Some Pantone® matches are possible depends on the difficulty level of the requested color.	• It is possible to create some grays.	• Some Pantone® matches are possible depends on the difficulty level of the requested color.								
3- EXCELLENT												
Shore Hardness @ 23°C (Star Capabilities)		82D	80D	83D	80D	83D	65D - 83D	40A - 85A	40A - 70A	42A	32A	
Density @ 23°C (g/cm3)		1.12	1.14	1.3	1.15	1.1	1.13	-	1.14 - 1.16	1.08 - 1.10	1.2	
Tensile Strength (MPa)		86	60	68	73	65 - 70	25 - 35	8 - 22	2 - 40	6.5	3.9	
Flexural Strength (MPa)		100	80	-	117	90 - 95	20 - 50	-	-	-	-	
Flexural Modulus (MPa)		2100	2300	2200	2600	2000 - 2200	600 - 1300	-	-	-	-	
Heat Deflection Temp (°C)		100	-	80	80	-	-	-	-	-	-	
Glass Transition Temp (°C)		-	> 120	-	90	80	65 - 85	-	-	-	-	
Post Curing Temperature (°C) <small>( Only perform when it's requested by customer or in special circumstances )</small>		-	120	-	-	100	-	-	-	-	-	
Elongation at Break (%)		17	11	-	13	15 - 20	50 - 90	-	-	280	400±20	
Shrinkage (%)		0.3	-	0.3	-	0.4 - 0.45	0.35	-	-	-	-	
Can part be Glass Fiber filled? <small>( Please note: GF is not suitable for the final part that requires high gloss &amp; transparency )</small>		YES (+ GF10)	YES (+ GF10)	YES (+ GF10)	YES (+ GF10)	YES (+ GF10)	YES (+ GF10)	YES (+ GF10)	YES (+ GF10)	YES (+ GF10)	YES (+ GF10)	
Resin	Specific gravity @ 25°C (g/cm3)	Part A	1.06	1.17	1.3	1.19	1.06	1.06	1.05	0.99	1.08	-
		Part B	1.17	1.12	1.19	1.1	1.01	1.15	1.2	1.19	1.08	-
		Part C	-	-	-	-	-	1.06	1.03	1.18	-	-
	Viscosity @25°C (mPa.s)	Part A	700	1100	1000	300	100 - 150	1000 - 1500	380	450	85000	48000
		Part B	175	300	160	700	600 - 800	140 - 180	420	200	2500	2000
		Part C	-	-	-	-	-	4500 - 5000	480	700	-	-
	Mixing ratio by weight (A:B:C)		100 : 200	100 : 80	100 : 150	100 : 55	150 : 100	100 : 100 : 0-50	100 : 100 : 0-500	100 : 95 : 0-150	100 : 10	10 : 1
	Mixture pot life on 100g (min)		4 - 5	6 - 7	5	4	-	10 - 15	14 - 16	5	-	-
	Demoulding Time @ 60 - 70°C (min)		30 - 40	-	60	45	60 - 90	60 - 90	-	-	12 - 30	-