



## Frequently Asked Questions

### ASA

#### 1. What is ASA?

ASA (acrylonitrile styrene acrylate) is a UV-stable thermoplastic that BASF developed to improve the weather resistance of thermoplastics similar to ABS. It is chemically and mechanically similar to ABS.

#### 2. What are the benefits of the Stratasys® ASA offering?

ASA material for FDM® offers three primary benefits for general prototyping and end-use part applications:

##### 1. UV stability:

- Parts built in ASA will resist fading during prolonged UV exposure
- ASA parts will not suffer significant mechanical property degradation as a result of prolonged UV exposure

##### 2. Part aesthetics:

- ASA parts show some of the best aesthetics of any FDM parts due to their matte finish and good build quality.

##### 3. Excellent mechanical properties:

- ASA has enhanced strength, flexibility and thermal resistance versus ABS-M30™.



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### 3. Which applications and industries are a good fit for ASA?

Because of ASA's excellent combination of mechanical properties and part quality, ASA will become the material of choice for general prototyping applications including concept models, early prototyping and functional prototyping.

In addition, ASA's unique UV stability make it ideal for applications requiring significant UV exposure or require long-term durability and weather resistance.

Key industries include:

- Automotive
- Sporting goods
- Recreational vehicles
- Outdoor goods
- Construction materials
- Electronics

### 4. What are the properties of ASA?

ASA PROPERTIES	
<b>Mechanical - XZ Orientation</b>	
Tensile Strength (peak)	4,750 psi (32.8 MPa)
Tensile Elongation @ break	5.9%
Flexural Strength	8,930 psi (61.5 MPa)
IZOD Impact, Notched	0.808 ft-lb/in (43.1 J/m)
<b>Mechanical - ZX Orientation</b>	
Tensile Strength (peak)	4,110 psi (28.3 MPa)
Tensile Elongation @ break	1.8%
Flexural Strength	7,390 psi (51.0 MPa)
IZOD Impact, Notched	0.445 ft-lb/in (23.8 J/m)
<b>Thermal</b>	
Heat Deflection at 264 psi	97.9 °C

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### 5. Is an upgrade required?

Customers must purchase a material option to run ASA; no hardware upgrade is necessary.

### 6. What systems is ASA available on?

ASA is available on the F170™, F190™CR, F270™, F370™, F370®CR, F770™, Fortus 450mc™, and F900™

Printer	Model Tip (slice)	Support Material	Support Tip
<b>F170</b>	F123 Head (5, 7, 10, 13 slice)	QSR™ Support (soluble)	F123 Head (all slices)
<b>F190CR</b>	F123 Head (5, 7, 10, 13 slice)	QSR™ Support (soluble)	F123 Head (all slices)
<b>F270</b>	F123 Head (5, 7, 10, 13 slice)	QSR™ Support (soluble)	F123 Head (all slices)
<b>F370</b>	F123 Head (5, 7, 10, 13 slice)	QSR Support (soluble)	F123 Head (all slices)
<b>F370CR</b>	F123 Head (5, 7, 10, 13 slice)	QSR Support (soluble)	F123 Head (all slices)
<b>F770</b>	F123 Head (7, 10, 13 slice)	SR-30 (soluble)	F123 Head (all slices)
<b>Fortus 450mc</b>	T10 (5 slice)	SR-30 / 35 (soluble)	T12SR30 (all slices)
	T12 (7 slice)		
	T16 (10 slice)		
	T20 (13 slice)		
<b>F900</b>	T10 (5 slice)	SR-30 / 35 (soluble)	T12SR30 (5, 7, 10, 13 slice)
	T12 (7 slice)		
	T16 (10 slice)		
	T20 (13 slice)		
	T40A (20 slice)		T20B (20 slice)

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### 7. What colors are available?

ASA is available in ivory, black, dark gray, light gray, white, red, orange, yellow, green, and dark blue.

### 8. Are there any process changes when building and post-processing ASA?

ASA doesn't require any process changes or post-processing compared with ABS-M30. They both use the same SR-30 soluble support material and require the same support removal processing.

ASA is priced identically to ABS-M30.

### 9. Which bonding and finishing methods work for ASA?

ASA parts can be bonded with a variety of cyanoacrylates (super glues), epoxies and polyurethanes just as with ABS-M30.

Depending on geometry and feature size, ASA parts can be sanded and tumbled well. ASA parts can be smoothed with the Finishing Touch™ Smoothing Station.

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