

## AK Steel 18 Cr-Cb™ Ferritic Stainless steel

Category : Metal , Ferrous Metal , Ferritic , Stainless Steel

### Material Notes:

AK Steel 18 Cr-Cb™ provides a more effective solution than Type 409 to many automotive exhaust applications, due to its higher oxidation resistance, improved creep resistance and moderate formability. AK Steel 18 Cr-Cb™ is a ferritic stainless steel that is stabilized with titanium and columbium. When given a high temperature final solution anneal, the alloy exhibits dramatic creep resistance. The dual stabilization prevents carbide sensitization during welding and high-temperature exposure, and makes the alloy thermally non-hardenable. Potential applications include exhaust system catalytic converters, mufflers and pipes; heat exchangers and heat exchanger tubing; and nonstructural furnace parts. ASTM Grain Size = 5 - 7. Information provided by AK Steel

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_AK-Steel-18-Cr-Cb-Ferritic-Stainless-steel.php](http://www.lookpolymers.com/polymer_AK-Steel-18-Cr-Cb-Ferritic-Stainless-steel.php)

Physical Properties	Metric	English	Comments
Density	7.65 g/cc	0.276 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	<= 88	<= 88	Specification
Tensile Strength, Ultimate	>= 414 MPa	>= 60000 psi	Specification
	462 - 517 MPa	67000 - 75000 psi	Typical
Tensile Strength, Yield	>= 262 MPa	>= 38000 psi	Specification
	@Strain 0.200 %	@Strain 0.200 %	
	303 - 359 MPa	43900 - 52100 psi	Typical
	@Strain 0.200 %	@Strain 0.200 %	
Elongation at Break	>= 25 %	>= 25 %	in 2 inches, Specification
	30 - 38 %	30 - 38 %	in 2 inches, Typical

Component Elements Properties	Metric	English	Comments
Carbon, C	0.020 %	0.020 %	
Chromium, Cr	18 %	18 %	
Iron, Fe	80.43 %	80.43 %	As Remainder
Manganese, Mn	0.30 %	0.30 %	
Niobium, Nb (Columbium, Cb)	0.55 %	0.55 %	
Silicon, Si	0.45 %	0.45 %	

Component Elements Properties	Metric	English	Comments
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Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.00002329 ohm-cm	0.00002329 ohm-cm	

Descriptive Properties	Value	Comments
Strain Hardening Exponent n	0.18	

## Contact Songhan Plastic Technology Co.,Ltd.

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