

AK Steel ULTRALUME® Press Hardenable Carbon Steel

Category : Metal , Ferrous Metal , Carbon Steel

Material Notes:

ULTRALUME Press Hardenable Steel (PHS) is AK Steel's newest addition to our expanding product portfolio of Advanced High Strength Steels (AHSS). Aluminized Type 1 ULTRALUME PHS is intended for automotive steel applications where high strength, design flexibility and collision protection are paramount. Blanks produced from ULTRALUME PHS are heated in a furnace at 900° to 950 °C to bring the steel into the austenitic temperature range. The blank is then transferred to a hot forming press where the hot steel is formed into complex shapes. The steel cools rapidly inside the water-cooled dies and undergoes a phase transformation from austenite to a high strength phase – martensite. This rapid cooling, or quenching, increases the tensile strength of the steel from approximately 600 MPa to 1,400 MPa and higher. Since the steel is held in the dies during cooling, thermo-distortion and springback are avoided. ULTRALUME PHS is continuously hot dip coated on both sides of the steel. The aluminum coating bath contains approximately 91% aluminum and 9% silicon. The metallic coating is metallurgically bonded to the steel substrate and protects the steel surface against decarburization and oxidation during hot stamping. As a result, the shot blasting operation required for hot-stamped, uncoated steel parts is eliminated. Information provided by AK Steel.

Order this product through the following link:

http://www.lookpolymers.com/polymer_AK-Steel-ULTRALUME-Press-Hardenable-Carbon-Steel.php

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	632 MPa	91700 psi	Longitudinal
	650 MPa	94300 psi	Transverse
Tensile Strength, Yield	438 MPa	63500 psi	Longitudinal
	@Strain 0.200 %	@Strain 0.200 %	
	465 MPa	67400 psi	Transverse
	@Strain 0.200 %	@Strain 0.200 %	
Elongation at Break	22 %	22 %	Transverse
	26 %	26 %	Longitudinal

Component Elements Properties	Metric	English	Comments
Boron, B	0.0030 %	0.0030 %	
Carbon, C	0.22 %	0.22 %	
Chromium, Cr	0.20 %	0.20 %	
Iron, Fe	98.127 %	98.127 %	Balance
Manganese, Mn	1.2 %	1.2 %	
Silicon, Si	0.25 %	0.25 %	

Component Elements Properties	Metric	English	Comments
Descriptive Properties		Value	Comments
n Value (10% -Ult)		0.145	Transverse
		0.151	Longitudinal

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China