

ArcelorMittal 180 BH Bake hardening steel, Cold rolled

Category : Metal , Ferrous Metal , Alloy Steel

Material Notes:

Available in the following: uncoated (HC180B), electroglvanized (HC180B+ZE) and Extragal®/Galvannealed (HC180BD+Z) Description: The composition and processing of these steels are designed to promote a significant increase in yield strength during low-temperature heat treatment, particularly paint curing. ArcelorMittal Bake hardening steels can thus achieve higher strength in the finished part while retaining good forming performance. The gain in yield strength through the "bake hardening" (BH) effect is generally greater than 40 MPa. Thanks to this BH effect, ArcelorMittal steels offer two advantages compared to conventional drawing quality steels: Improved dent resistance in all finished parts in the case of low forming strains (hood, roof, doors and wings); Substantial weight reduction potential at equivalent dent resistance (the decrease in thickness is offset by increased yield strength resulting from the heat treatment process). Bake hardening steels thus offer a suitable response to automotive bodywork requirements. By providing an excellent drawability-dent resistance combination, they enhance vehicle weight reduction and aesthetics. Applications: Steels in the BH range are designed for visible (door, hood, tailgate, front wing, roof) and structural (underbody, reinforcement, cross member, lining) parts Information provided by ArcelorMittal

Order this product through the following link:

http://www.lookpolymers.com/polymer_ArcelorMittal-180-BH-Bake-hardening-steel-Cold-rolled.php

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	300 - 360 MPa	43500 - 52200 psi	
Tensile Strength, Yield	180 - 230 MPa	26100 - 33400 psi	
Elongation at Break	>= 34 %	>= 34 %	L₀=80 mm, th<3 mm
Fatigue Strength	<= 305 MPa	<= 44200 psi	after 2% elongation and heat treatment
	@# of Cycles 1.00e+8	@# of Cycles 1.00e+8	
	<= 307 MPa	<= 44500 psi	after 2% elongation and heat treatment
	@# of Cycles 5.00e+6	@# of Cycles 5.00e+6	
	<= 310 MPa	<= 45000 psi	after 2% elongation and heat treatment
	@# of Cycles 1.00e+7	@# of Cycles 1.00e+7	
	<= 334 MPa	<= 48400 psi	
	@Thickness 0.800 mm, # of Cycles 1.00e+7	@Thickness 0.0315 in, # of Cycles 1.00e+7	

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.040 %	<= 0.040 %	
Iron, Fe	>= 98.76 %	>= 98.76 %	as balance
Manganese, Mn	<= 0.70 %	<= 0.70 %	

Component Elements Properties	Metric	English	Comments
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