

This page is mainly introduced the 2HR1 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 2HR1, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

Datasheet for Steel Grades Specialsteel 2HR1

2HR1 Standard Number:		
ITEM	Standard Number	Descriptions
1	BS 1449-1-1.2	Steel plate, sheet and strip. Carbon and carbon-manganese plate, sheet and strip. Specification for hot rolled steel plate, sheet and wide strip based on formability

2HR1 Chemical composition (mass fraction) (wt.%)									
Chemical		Min.(%)			Max.(%)				
C		0.04			0.10				
Si					1.00				
Mn					1.00				
P									
S					0.015				
Cr		18.00			21.00				
Ni					remaining				
Mo									
Co					2.00				
Ti		1.80			2.70				
Fe					1.50				
Al		1.00			1.80				
Cu					0.20				
B					0.0080				
Bi					0.0001				
Pb					0.002				
Ag					0.0005				
C	Si	Mn	P	S	Cr	Ni	Mo	V	Ta
W	N	Cu	Co	Pb	B	Nb	Al	Ti	Other

Steel plate, sheet and strip. Carbon and carbon-manganese plate, sheet and strip. Specification

for hot rolled steel plate, sheet and wide strip based on formability

2HR1 Physical Properties

Tensile strength	115-234	σ_b /MPa
Yield Strength	23	$\sigma_{0.2} \geq$ /MPa
Elongation	65	$\delta_5 \geq$ (%)
ψ	-	$\psi \geq$ (%)
Akv	-	$Akv \geq$ /J
HBS	123-321	-
HRC	30	-

2HR1 Mechanical Properties

Tensile strength	231-231	σ_b /MPa
Yield Strength	154	$\sigma_{0.2} \geq$ /MPa
Elongation	56	$\delta_5 \geq$ (%)
ψ	-	$\psi \geq$ (%)
Akv	-	$Akv \geq$ /J
HBS	235-268	-
HRC	30	-

2HR1 Heat Treatment Regime

Annealing	Quenching	Tempering	Normalizing	Q & T
√	√	√	√	√

2HR1 Range of products				
Product type	Products	Dimension	Processes	Deliver Status
Plates / Sheets	Plates / Sheets	0.08-200mm(T)*W*L	Forging, hot rolling and cold rolling	Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting
Steel Bar	Round Bar, Flat Bar, Square Bar	Φ8-1200mm*L	Forging, hot rolling and cold rolling, Cast	Black, Rough Turning, Shot Blasting,
Coil / Strip	Steel Coil /Steel Strip	0.03-16.0x1200mm	Cold-Rolled & Hot-Rolled	Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting
Pipes / Tubes	Seamless Pipes/Tubes, Welded Pipes/Tubes	OD:6-219mm x WT:0.5-20.0mm	Hot extrusion, Cold Drawn, Welded	Annealed, Solution and Aging, Q+T, ACID-WASHED

We can produce Specialsteel the specifications follows: