

Steel Grade: Ck45 Material No: 1.1191										
CHEMICAL COMPOSITION										
C(%) ≤	Si(%) ≤	Mn(%) ≤	P(%) ≤	S(%) ≤	Cr(%)	Mo(%)	Ni(%)	Other(%)		
0.42~0.50	≤0.40	0.50~0.80	0.035	0.035	≤0.40	≤0.10	≤0.40	—②		
HARDNESS AND HEAT TREATMENT MECHANICAL PROPERTIES										
Hot Working°C	Annealing/Normalizing°C	Quench°C	Temper°C	Brinell Hardness HBS	Tensile Strength $\sigma_b \geq$ Mpa	Normal Temp Yield Strength $\sigma_s \geq$ Mpa	Extensibility $\delta_5 \geq$ (%)	Ballistic $ak_v \geq$ J⑥		
1100~850	650~700	830~860 Oil	530~670	175~210	590~710	355	18	34		
Yield Strength $\sigma_{0.2} \geq$ /Mpa						Creep Limit/Mpa 1000h				
200°C	300°C	350°C	400°C	450°C	500°C	450°C	500°C	550°C	600°C	10000h 450°C
284	245	216	186	—	—	113	54	—	—	78
Creep Limit/Mpa 10000h			Creep Rupture/Mpa 1000h				Creep Rupture/Mpa 10000h			
500°C	550°C	600°C	450°C	500°C	550°C	600°C	450°C	500°C	550°C	600°C
35	—	—	49	22	—	—	98	53	—	—

From: Jiangyou Hacer Technology Co., Limited
 Factory Add: Jiangzhang Road, Jiangyou City, SC, China
 Website: <https://www.jhacer.com/>
 Email: sales@jhacer.com
 Phone: +86-(0)816-3260757
 Call: +86-13658128897 (WhatsApp)
 Fax: +86-(0)816-3260757