

<b>Quality</b>	ASTM A 350 LF2	We are a professional manufacturer and exporter of ASTM A350 LF2 Flanges A350 LF2 CL1 Slip On Flange RF ASME B16.5, ASTM A350 LF2 Blind flanges, ASTM A350 LF2 Weld neck flanges in China.									
<b>According to standards</b>	ASTM A 350M - 07	ASTM A350 LF2 is one of the most common forged carbon/ low-alloy steel grade for forged flanges, forged fittings and valves intended primarily for low-temperature service and requiring notch toughness testing.									
<b>Chemical composition</b>											
	<b>C% max</b>	<b>Si%</b>	<b>Mn%</b>	<b>P% max</b>	<b>S% max</b>	<b>Cu% max</b>	<b>Ni% max</b>	<b>Cr% max</b>	<b>Mo% max</b>	<b>V% max</b>	<b>Nb% max</b>
	0,30	0,15-0,30	0,60-1,35	0,035	0,040	0,40	0,40	0,30	0,12	0,08	0,02
The sum of copper (Cu), chromium (Cr) and molybdenum (Mo) should not exceed 1,00%											
The sum of chromium (Cr) and molybdenum (Mo) should not exceed 0,32%											
Carbon Equivalent CE = C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/ 15 max 0,47											
<b>Temperature °C</b>											
<b>Hot-forming</b>	<b>Normalizing</b>	<b>Quenching</b>	<b>Tempering</b>	<b>Stress-relieving</b>							
1150-850	880-930 air cooling	880-930 oil / polymer water	590 air cooling	50 under the temperature of tempering							
<b>Soft annealing</b>	<b>Normalizing and tempering</b>	<b>Isothermal annealing</b>	<b>Pre-heating welding</b>	<b>Stress-relieving after welding (PWHT)</b>							
700 air cooling	900 air 600 air	860 furnace cooling to 660 after, air	200 AC1	590 furnace cooling MS Mf							
<b>Mechanical properties</b>											
Forged values as reference Heat treatments must guarantee the reported values ASTM A 350 LF2											
all dimension	Testing at room temperature (longitudinal)										
mm	<b>R</b>	<b>Rp 0.2</b>	<b>A</b>	<b>C%-2%</b>	<b>Kv - 46 C° CL.1</b>	<b>Kv - 18 C° CL.2</b>		<b>HB</b>			
	<b>N/mm2</b>	<b>N/mm2</b>	<b>min.</b>	<b>min.</b>	<b>J average / minimum</b>		<b>max</b>				
T	485-655	250	22	30	20 / 16		27 / 20		197		
T= max heat-treated thickness Test specimen should correspond to the 1/4 T											
<b>Mechanical properties (longitudinal testing)</b>											
Heat treatments	<b>Ø product</b>	<b>R</b>	<b>Rp 0.2</b>	<b>A</b>	<b>C-Z</b>	<b>Kv -46 °C</b>	<b>Kv -18 °C</b>	<b>product</b>			
	mm	<b>N/mm2</b>	<b>N/mm2</b>	<b>%</b>	<b>%</b>	<b>J</b>	<b>J</b>				
<b>Quenching 880 °C water</b>	95	600	480	24.6	58	68-66-64	112- 114-110	Hot-rolled			
<b>Tempering 640 °C air</b>											
<b>Normalizing 900 °C air</b>	210	580	400	32.6	64.4	22⊕ 24-18	70⊕ 74-70	Hot-rolled			
<b>Natural</b>	95	526	302	28.6	62	06/06/04	16/10/08	Hot-rolled			
<b>EUROPE EN</b>	<b>ITALY UNI</b>	<b>CHINA GB</b>	<b>GERMANY DIN</b>	<b>FRANCE AFNOR</b>	<b>U.K.</b>	<b>B.S.</b>	<b>RUSSIA GOST</b>	<b>USA AISI/SAE</b>			
S355J2G3 appr.	Fc510 appr.	16Mn	St52.3 N	50D	20G	A350 LF2 cl. 1-  cl. 2					