



## Quality 25CrMo4 (EN 10083-3)

### PROPERTIES AND EMPLOYMENTS

It is a steel with a low content of carbon and it has a low hardenability, but it is tough and easily weldable. It is commonly used for the production of tubes with high toughness and good resistance that are destined to the mechanical industry and to numerous applications in the field of aeronautics and motor industry. It is not sensible to tempering fragility and it can be treated without relevant risks of breakage or deformations. It is easily machinable with machine tools.

### CORRESPONDENCE TO INTERNATIONAL DESIGNATIONS

Quality	Europe	Germany		France	Spain	G.B.	USA
	EN	DIN	W.n.	AFNOR	UNE	B.S.	AISI/SAE
<b>25CrMo4</b>	<b>25CrMo4</b>	<b>25CrMo4</b>	<b>1,7218</b>	<b>25CD4</b>	<b>F222</b>	<b>708M25</b>	-

### CHEMICAL COMPOSITION % (EN 10083-3)

Steel designation		Chemical composition								
Symbolic	Numeric	C	Si max	Mn	P max	S	Cr	Mo	Ni	B
<b>25CrMo4</b>	<b>1,7218</b>	<b>0,22 ÷ 0,29</b>	<b>0,40</b>	<b>0,60 ÷ 0,90</b>	<b>0,025</b>	<b>max 0,035</b>	<b>0,90 ÷ 1,20</b>	<b>0,15 ÷ 0,30</b>	-	-
<b>25CrMoS4</b>	<b>1,7218</b>					<b>0,020 ÷ 0,040</b>				

Concentration limits of the elements that are not indicated in the table can be deduced in the en 10020 regulation.

### MECHANICAL CHARACTERISTICS (EN 10083-3)


Steel		Mechanical characteristics for the reduced section														
		d ≤ 16mm					16mm < d ≤ 40mm					40mm < d ≤ 100mm				
Symbolic	Numeric	R <sub>e</sub> min	R <sub>m</sub>	A min	Z min	KV <sup>b</sup> min	R <sub>e</sub> min	R <sub>m</sub>	A min	Z min	KV <sup>b</sup> min	R <sub>e</sub> min	R <sub>m</sub>	A min	Z min	KV <sup>b</sup> min
		MPa		%	%	J	MPa		%	%	J	MPa		%	%	J
<b>25CrMo4</b>	<b>1,7218</b>	<b>700</b>	<b>900 to 1100</b>	<b>12</b>	<b>50</b>	<b>-</b>	<b>600</b>	<b>800 to 950</b>	<b>14</b>	<b>55</b>	<b>50</b>	<b>450</b>	<b>700 to 850</b>	<b>15</b>	<b>60</b>	<b>50</b>
<b>25CrMoS4</b>	<b>1,7213</b>															

Steel		(EN 10083-1:2006, attachment a) with a diameter (d) of									
		100mm < d ≤ 10mm					160mm < d ≤ 250mm				
Symbolic	Numeric	R <sub>e</sub> min	R <sub>m</sub>	A min	Z min	KV <sup>b</sup> min	R <sub>e</sub> min	R <sub>m</sub>	A min	Z min	KV <sup>b</sup> min
		MPa		%	%	J	MPa		%	%	J
<b>25CrMo4</b>	<b>1,7218</b>	<b>400</b>	<b>650 to 800</b>	<b>16</b>	<b>60</b>	<b>45</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>25CrMoS4</b>	<b>1,7213</b>										

## JOMINY HARDENABILITY (EN 10083-3)

Steel designation		Symbol	Range limits	HRC hardness measured from the quenched end of the test tube (mm)															
Symbolic	Numeric			1,5	3	5	7	9	11	13	15	20	25	30	35	40	45	50	
25CrMo4	1,7131+H	+H	max	52	52	51	50	48	46	43	41	37	35	33	32	31	31		
25CrMoS4	1,7139+H	+H	min	44	43	40	37	34	32	29	27	23	21	20	-	-	-		

## USUALLY AVAILABLE EX STOCK

M.T. Coloration	Quality	Heat treatment	Surface
	25CrMo4	Quenched and tempered	rolled