



## Quality ASTM A320 - L43 / 40NiCrMo7

### PROPERTIES AND EMPLOYMENTS

It is an alloy steel with elevated resistance and good toughness. It is employed when it is necessary to have elevated characteristics that are more elevated than those offered by 39NiCrMo3, especially for parts of remarkable thickness. It has a very elevated hardenability, in fact those parts of small dimensions ( $\varnothing < 15$  mm) can be hardened in air. It is suitable for superficial hardening where it reached a hardness of 54÷59 hrc according to carbon content. It has an elevated fatigue strength up to a temperature of 450°C more or less and it behave very good even at a low temperature. It can be submitted to heat treatment of nitriding, reaching a remarkable increase in the fatigue limit and elevated superficial hardnesses. Due to its elevated hardenability, it is generally destined to the construction of parts of relevant dimensions that work in heavy conditions, for example trees for hydroelectric turbines. It is successfully employed for bolts at high resistance.

### CORRESPONDENCE TO INTERNATIONAL DESIGNATIONS

Quality	Europe	Germany		France	Spain	G.B.	USA
	EN	DIN	W.n.	AFNOR	UNE	B.S.	AISE/SAE
<b>L43</b>	<b>40NiCrMo7</b>	<b>40NiCrMo8-4</b>	<b>1,6562</b>	-	-	<b>817M40</b>	<b>4340</b>

### CHEMICAL ANALYSIS (ASTM A320)


Steel designation		Chemical composition							
Symbolic	Numeric	C	Mn	Si	P max	S max	Cr	Mo	Ni
<b>L43</b>	<b>1,6562</b>	<b>0,38 ÷ 0,43</b>	<b>0,60 ÷ 0,85</b>	<b>0,15 ÷ 0,35</b>	<b>0,035</b>	<b>0,040</b>	<b>0,70 ÷ 0,90</b>	<b>0,20 ÷ 0,30</b>	<b>1,65 ÷ 2,00</b>

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

### MECHANICAL CHARACTERISTICS (UNI 3545)

Steel		Normalisation temperature 900°C min – Tempering temperature 620°C min				
Symbolic	Numeric	R <sub>e</sub> min	R <sub>m</sub> min	A min	Z min	Impact test -101°C
		N/mm <sup>2</sup>		%	%	J
<b>L43</b>	<b>1,6562</b>	<b>725</b>	<b>860</b>	<b>16</b>	<b>50</b>	<b>27 min</b>

### USUALLY AVAILABLE EX STOCK

M.T. Coloration	Quality	Heat treatment	Surface
	L43	Quenched and tempered	rolled / peeled