

STANDARD REFERENCE:

FIAT 52504 Specification | UNI 7847 - 79 (Hot-rolled)

RODACCIAI REFERENCES AND COMPARABLE STANDARDS

EUROPE		ITALY	GERMANY		FRANCE	UK	USA
EU 86 - 70		(UNI 7847 - 79) (UNI 10233 - 3: 93)	(DIN 17212-72)		(NF A 35-563-83)	(BS 970 pt.3-96)	ASTM A 29
Grade	N°		Werkstoff	N°			
-	-	C43	-	-	XC 42 TS	080A42	1042

CHEMICAL COMPOSITION (CAST ANALYSIS) (%)

FIAT	C	Si	Mn	P / max	S	Cr / max	Ni / max	Cu / max	Al	Pb
C43	0,40÷0,46	0,15÷0,40	0,60÷0,90	0,035	0,020÷0,035	0,25	0,25	0,25	0,020÷0,050	-
C43Pb										0,15÷0,30

MECHANICAL PROPERTIES - AS ROLLED CONDITION

Delivering condition	Size mm	Rp 0,2 (MPa) min	Rm (MPa)	A5 (%) min	KCU (J) min	HB core	HB surface
SOFT ANNEALED	all	-	-	-	-	-	≤230
SPHERODIZING	all	-	-	-	-	-	≤200
ISOTHERMAL ANNEALING	all	-	-	-	-	-	155÷180
NORMALIZED	≤60	-	-	-	-	-	165÷215
QUENCHED AND TEMPERED	≤12	470	690÷840	15	25	220÷265	220÷265
	>12 ≤16	400	640÷790	16	20	212÷255	220÷265
	>16 ≤40	360	570÷720	17	20	195÷239	220÷265

MECHANICAL PROPERTIES - BRIGHT PRODUCT CONDITION* **

Size (mm)	as Rolled + as Rolled + Turned (+SH)		Quenched + Tempered + Turned (+QT +SH)***			Quenched + Tempered + Cold Drawn (+QT +C)			Cold Drawn (+C)		
	Hardness HB	Rm (MPa)	Rp 0,2 (MPa) min	Rm (MPa)	A5 (%) min	Rp 0,2 (MPa) min	Rm (MPa)	A5 (%) min	Rp 0,2 (MPa) min	Rm (MPa)	A5 (%) min
≥5 ≤10	-	-	-	-	-	560	800÷1000	8	540	700÷1000	6
>10 ≤16	-	-	-	-	-	525	750÷950	8	460	650÷980	7
>16 ≤40	164÷207	550÷710	400	630÷780	18	490	680÷880	9	365	620÷920	8
>40 ≤63	164÷207	550÷710	350	600÷750	19	435	620÷820	10	330	590÷840	9
>63 ≤100	164÷207	550÷710	350	600÷750	19	420	600÷800	11	290	550÷820	9

*For reference only **For size <5 mm the mechanical properties may be agreed at the time of enquiry and order

***This values are valid also for Cold drawn + Quenched + Tempered condition (+C +QT)

WORKING TEMPERATURES RECOMMENDED

Operation	Hot forgings deformation	Normalizing	Soft annealing	Quenching in water	Tempering
°C	850÷1150	860÷900	650÷700	840÷880	550÷650

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SURFACE HARDENING STEELS
 NOT ALLOYED

R43TI - R43PB
