

BS 5242 PART3-78 TUBES FOR FLUID POWER CYLINDER BARRELS (FOR MININIING)**1. Chemical Composition**

Grade	Mfg. Process	Chemical Composition (%)								
		C	Si	Mn	P	S	Ni	Cr	Mo	Others
HP1	W	0.25Max*	-	-	0.05Max	0.05Max	-	-	Ec 0.50Max	t 10mmMin 10< t 20Max 20< t 50Max
HP2	W	0.25Max*	-	-	0.05Max	0.05Max	-	-	Ec 0.50Max	t 10mmMin 10< t 20Max 20< t 50Max
HP3	W	0.25Max*	-	-	0.05Max	0.05Max	-	-	Ec 0.55Max	t 10mmMin 10< t 20Max 20< t 50Max
HP4	W	0.25Max*	-	-	0.05Max	0.05Max	-	-	EC 0.50Max	-
HP5	W	0.25Max*	-	-	0.05Max	0.05Max	-	-	EC 0.50Max	-
HP6	W	0.25Max*	-	-	0.05Max	0.05Max	-	-	Ec 0.55Max	-
HP7	W	-	-	-	0.05Max	0.05Max	-	-	-	-
HP8	W	-	-	-	0.05Max	0.05Max	-	-	-	-

2. Mechanical Properties

Grade	Tensile Test MPa or N/mm ²		Remarks (Similar to JIS)
	Min Yield point	Tensile Strength	
HP1	235	360Min	(STC370)
	225		
	215		
HP2	335	490Min	(STC510A)
	315		
	285		

HP3	460	550Min	-
	450		
	420		
HP4	385	450Min	(STC440)
HP5	440	550Min	-
HP6	540	640Min	(STC590A)
HP7	650	780Min	-
HP8	750	845Min	-

JIS Number and Corresponding Foreign Standards

JIS			BS			DIN			Index Number
Standard Number	Grade	Type	Standard Number	Grade	Type	Standard Number	Grade	Type	
G3473	STD370	C	5242/1	HP1	C	2391	St35		C022
	(STC38)		5242/3	HP1	C				
	STC440	C	5242/1	HP4	C				
	(STC45)		5242/3	HP4	C				
	STC510A	C	5242/1	HP2	C				
	(STC52A)		5242/3	HP2	C				
	STC510B	C							
	(STC52B)								
	STC510B	C							
	(STC55)								
	STC590A	C	5242/1	HP5	C				
	(STC60A)		5242/3	HP5	C				
	STC590B	C							
	(STC60B)								