

67 SiCr

Patented drawn silicon chrome alloyed spring wire

External standard:

None existing.

Applications:

Patented drawn silicon chrome alloyed spring wire for special springs requiring higher relaxation and temperature resistance. Suitable for high static and dynamic stresses.

Range of diameters:

0.40 to 4.50 mm Ø

Chemical composition (heat analysis):

C %	Si %	Mn %	P max. %	S max. %	Cr %
0.60 - 0.85	1.20 - 1.60	0.40 - 0.80	0.035	0.035	0.40 - 0.60

Alteration in composition is possible. Please inquire.

Micro structure

Patented and hard drawn; i.e. cold formed fine pearlite.

Mechanical properties:

Wire diameter mm	Tolerance mm	Tensile strength MPa	Minimum reduction of area %	Torsion test	Permissible depth of surf. defects ¹⁾	Permissible part. decaburi- zation depth ¹⁾
> 0.40 bis 0.80	± 0.010	2150 bis 2450	-	20	max. 0.010 mm	max. 1.3 % of wire diameter
> 0.80 bis 1.00	± 0.015	2150 bis 2450		16		
> 1.00 bis 1.40		2050 bis 2350	40	12		
> 1.40 bis 1.80	± 0.020	1950 bis 2250		10		
> 1.80 bis 2.30		1850 bis 2100				
> 2.30 bis 3.00		1750 bis 2000				
> 3.00 bis 4.00		1700 bis 1900				
> 4.00 bis 4.50		1650 bis 1850				

a) Ovality: Difference between the largest and smallest diameter of a cross section does not exceed 50 % of the diameter tolerance.

b) Modulus of elasticity $E = 206.000 \text{ MPa}$
Modulus of rigidity $G = 79.500 \text{ MPa}$ } Standard

c) Torsion tests are carried out according to EN 10218 - 1
Testing length $L = 100 \cdot d$ (up to a maximum of 300 mm)

¹⁾ End samples

Structure and surface condition:

Patented hard drawn spring wire; phosphate coated

Forms of delivery:

In coils or spools, unless otherwise agreed.