

Why use Farrat Neoprene CR60?

Farrat Neoprene CR is a high quality, easy to use and economical elastomeric isolation material. It is produced in the UK by Farrat using high quality ISO6446 compliant chloroprene compound. Farrat Neoprene CR provides excellent low frequency vibration, acoustic and shock isolation and has been used globally in industrial and structural applications.

Features

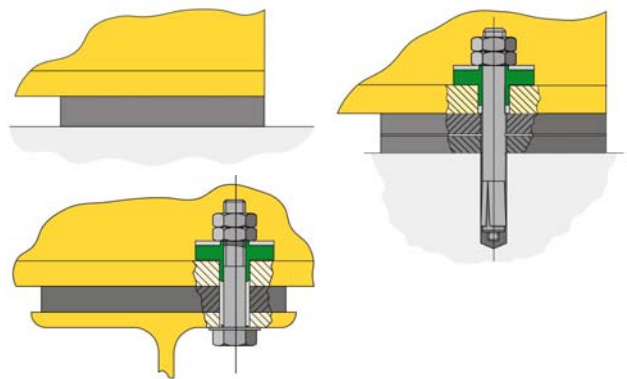
- Tested and approved to ISO6446 and BS6177.
- High resilience and low damping characteristics.
- Excellent shock absorption characteristics.
- Excellent ozone, oil and general chemical resistance.
- Low level of creep.
- Long lifetime (in excess of 60 years).
- Fire / flame resistance.
- Can be supplied as sheets or cut to size pads and strips (including holes and slots if required) according to the customer's requirements.

Applications

Farrat Neoprene has been used in a vast range of applications such as;

- Acoustic structural bearings (plain pads, strips or laminated).
- Anti vibration pads, steelwork acoustic isolators.*
- Resilient seating connections within concrete and steel building structures to allow movement and rotation.
- Acoustic strip bearings for walls.
- Slide bearings.
- Plain pad isolators for machinery and plant equipment.

In low pressure applications it may be necessary to consider alternative materials such as Farrat Isomat. Farrat are happy to advise and provide technical calculations to specify the most appropriate material.



*Where bolt through connections are required, Farrat Anti-vibration (AW) washers and bushes should be incorporated in order to allow free movement of the pad and to ensure that the bolt does not transmit vibration across the connection.

| Characteristics | Unit | Test Standard | CR60 |
|--|-------------------------|----------------------------|-------------------|
| Colour | | | Black |
| Thicknesses | mm | | 5, 10, 15, 20, 25 |
| Hardness (IRHD) ±5 | | BS ISO 48 | 60 |
| Static Shear Modulus | MPa | BS ISO 1827:2007 | 0.93 |
| Ratio Dyn to Static Modulus | | | 1.65 |
| Maximum Residual Compression | % | EN ISO 1856 | |
| Compression set | % | BS ISO 815:1991 | 12.5 |
| Creep | | | Minimal |
| Tensile stress at break | N/mm ² / MPa | BS ISO 37 | 14.8 |
| Elongation at break | % | BS ISO 37 | 390 |
| Low Temperature Resistance | | BS ISO 6446 & BS6177 | Pass |
| Ozone Resistance | | BS ISO 1431-1 | Pass |
| Operating Temperatures* | °C | | -30 to +120 |
| Properties subject to change outside range | °C | | -10 to +80 |
| Flammability | | DIN 4102 EN ISO 11925-2 | B2 B, C, D |
| Operational life (subject to environment) | years | | 65+ |
| Standard Sheet Size | mm | | 1000 x 500 |

For more detailed information and explanations of the pad performance outlined in this datasheet please refer to the Farrat design document: SVI-Structural Bearing Design.

AVM - CR60 Chloroprene / Neoprene - 10b
High Performance vibration isolation material



| Material Code | Material Thickness mm | Pad Length mm | Pad Width mm | Pad Area mm2 | Applied Load kN | Applied Load Kg | Applied Load T | Pressure (Max 15) N/mm2 | Shape Factor | Compression Modulus E N/mm2 | Spring Const K N/mm | Maximum Static Deflection (Max 15%) mm | Vertical Dynamic Natural Frequency (fnd) Hz |
|---------------|--------------------------|------------------|-----------------|-----------------|--------------------|--------------------|-------------------|-------------------------------|-----------------|--------------------------------------|------------------------------|--|--|
| CR60-5 | 5 | 50 | 50 | 2500 | 13.2 | 1321.6 | 1.3 | 5.3 | 2.5 | 35.2 | 17621 | 0.75 | 23.6 |
| CR60-5 | 5 | 75 | 75 | 5625 | 64.5 | 6448.9 | 6.4 | 11.5 | 3.8 | 76.4 | 85986 | 0.75 | 23.6 |
| CR60-5 | 5 | 100 | 100 | 10000 | 150.0 | 15000.0 | 15.0 | 15.0 | 5.0 | 131.3 | 262555 | 0.57 | 27.0 |
| CR60-5 | 5 | 150 | 150 | 22500 | 337.5 | 33750.0 | 33.8 | 15.0 | 7.5 | 272.0 | 1224202 | 0.28 | 38.9 |
| CR60-5 | 5 | 200 | 200 | 40000 | 600.0 | 60000.0 | 60.0 | 15.0 | 10.0 | 436.9 | 3495115 | 0.17 | 49.3 |
| CR60-5 | 5 | 250 | 250 | 62500 | 937.5 | 93750.0 | 93.8 | 15.0 | 12.5 | 607.7 | 7595832 | 0.12 | 58.2 |
| CR60-5 | 5 | 300 | 300 | 90000 | 1,350.0 | 135000.0 | 135.0 | 15.0 | 15.0 | 771.7 | 13890373 | 0.10 | 65.6 |
| CR60-5 | 5 | 500 | 500 | 250000 | 3,750.0 | 375000.0 | 375.0 | 15.0 | 25.0 | 1271.2 | 63560171 | 0.06 | 84.2 |
| CR60-5 | 5 | 50 | 500 | 25000 | 375.0 | 37500.0 | 37.5 | 15.0 | 4.5 | 109.9 | 549496 | 0.68 | 24.7 |
| CR60-5 | 5 | 100 | 500 | 50000 | 750.0 | 75000.0 | 75.0 | 15.0 | 8.3 | 325.3 | 3253088 | 0.23 | 42.6 |
| CR60-5 | 5 | 150 | 500 | 75000 | 1,125.0 | 112500.0 | 112.5 | 15.0 | 11.5 | 542.2 | 8133309 | 0.14 | 55.0 |
| CR60-5 | 5 | 250 | 500 | 125000 | 1,875.0 | 187500.0 | 187.5 | 15.0 | 16.7 | 873.6 | 21838919 | 0.09 | 69.8 |
| CR60-10 | 10 | 50 | 50 | 2500 | 3.6 | 362.7 | 0.4 | 1.5 | 1.3 | 9.7 | 2418 | 1.50 | 16.7 |
| CR60-10 | 10 | 75 | 75 | 5625 | 17.2 | 1721.8 | 1.7 | 3.1 | 1.9 | 20.4 | 11479 | 1.50 | 16.7 |
| CR60-10 | 10 | 100 | 100 | 10000 | 52.9 | 5286.4 | 5.3 | 5.3 | 2.5 | 35.2 | 35243 | 1.50 | 16.7 |
| CR60-10 | 10 | 150 | 150 | 22500 | 258.0 | 25795.7 | 25.8 | 11.5 | 3.8 | 76.4 | 171972 | 1.50 | 16.7 |
| CR60-10 | 10 | 200 | 200 | 40000 | 600.0 | 60000.0 | 60.0 | 15.0 | 5.0 | 131.3 | 525111 | 1.14 | 19.1 |
| CR60-10 | 10 | 250 | 250 | 62500 | 937.5 | 93750.0 | 93.8 | 15.0 | 6.3 | 197.4 | 1233505 | 0.76 | 23.4 |
| CR60-10 | 10 | 300 | 300 | 90000 | 1,350.0 | 135000.0 | 135.0 | 15.0 | 7.5 | 272.0 | 2448404 | 0.55 | 27.5 |
| CR60-10 | 10 | 500 | 500 | 250000 | 3,750.0 | 375000.0 | 375.0 | 15.0 | 12.5 | 607.7 | 15191663 | 0.25 | 41.1 |
| CR60-10 | 10 | 50 | 500 | 25000 | 110.2 | 11019.1 | 11.0 | 4.4 | 2.3 | 29.4 | 73460 | 1.50 | 16.7 |
| CR60-10 | 10 | 100 | 500 | 50000 | 699.8 | 69981.5 | 70.0 | 14.0 | 4.2 | 93.3 | 466544 | 1.50 | 16.7 |
| CR60-10 | 10 | 150 | 500 | 75000 | 1,125.0 | 112500.0 | 112.5 | 15.0 | 5.8 | 170.8 | 1280853 | 0.88 | 21.8 |
| CR60-10 | 10 | 250 | 500 | 125000 | 1,875.0 | 187500.0 | 187.5 | 15.0 | 8.3 | 325.3 | 4066360 | 0.46 | 30.1 |
| CR60-15 | 15 | 50 | 50 | 2500 | 1.8 | 182.4 | 0.2 | 0.7 | 0.8 | 4.9 | 811 | 2.25 | 13.6 |
| CR60-15 | 15 | 75 | 75 | 5625 | 8.2 | 816.1 | 0.8 | 1.5 | 1.3 | 9.7 | 3627 | 2.25 | 13.6 |
| CR60-15 | 15 | 100 | 100 | 10000 | 24.5 | 2454.7 | 2.5 | 2.5 | 1.7 | 16.4 | 10910 | 2.25 | 13.6 |
| CR60-15 | 15 | 150 | 150 | 22500 | 118.9 | 11894.5 | 11.9 | 5.3 | 2.5 | 35.2 | 52864 | 2.25 | 13.6 |
| CR60-15 | 15 | 200 | 200 | 40000 | 366.5 | 36645.7 | 36.6 | 9.2 | 3.3 | 61.1 | 162870 | 2.25 | 13.6 |
| CR60-15 | 15 | 250 | 250 | 62500 | 874.8 | 87476.9 | 87.5 | 14.0 | 4.2 | 93.3 | 388786 | 2.25 | 13.6 |
| CR60-15 | 15 | 300 | 300 | 90000 | 1,350.0 | 135000.0 | 135.0 | 15.0 | 5.0 | 131.3 | 787666 | 1.71 | 15.6 |
| CR60-15 | 15 | 500 | 500 | 250000 | 3,750.0 | 375000.0 | 375.0 | 15.0 | 8.3 | 325.3 | 5421813 | 0.69 | 24.6 |
| CR60-15 | 15 | 50 | 500 | 25000 | 51.4 | 5143.2 | 5.1 | 2.1 | 1.5 | 13.7 | 22859 | 2.25 | 13.6 |
| CR60-15 | 15 | 100 | 500 | 50000 | 323.3 | 32329.5 | 32.3 | 6.5 | 2.8 | 43.1 | 143687 | 2.25 | 13.6 |
| CR60-15 | 15 | 150 | 500 | 75000 | 902.2 | 90218.8 | 90.2 | 12.0 | 3.8 | 80.2 | 400972 | 2.25 | 13.6 |
| CR60-15 | 15 | 250 | 500 | 125000 | 1,875.0 | 187500.0 | 187.5 | 15.0 | 5.6 | 159.4 | 1328459 | 1.41 | 17.2 |
| CR60-20 | 20 | 50 | 50 | 2500 | 1.2 | 119.0 | 0.1 | 0.5 | 0.6 | 3.2 | 397 | 3.00 | 11.8 |
| CR60-20 | 20 | 75 | 75 | 5625 | 5.0 | 496.7 | 0.5 | 0.9 | 0.9 | 5.9 | 1656 | 3.00 | 11.8 |
| CR60-20 | 20 | 100 | 100 | 10000 | 14.5 | 1450.8 | 1.5 | 1.5 | 1.3 | 9.7 | 4836 | 3.00 | 11.8 |
| CR60-20 | 20 | 150 | 150 | 22500 | 68.9 | 6887.3 | 6.9 | 3.1 | 1.9 | 20.4 | 22958 | 3.00 | 11.8 |
| CR60-20 | 20 | 200 | 200 | 40000 | 211.5 | 21145.7 | 21.1 | 5.3 | 2.5 | 35.2 | 70486 | 3.00 | 11.8 |
| CR60-20 | 20 | 250 | 250 | 62500 | 506.2 | 50619.4 | 50.6 | 8.1 | 3.1 | 54.0 | 168731 | 3.00 | 11.8 |
| CR60-20 | 20 | 300 | 300 | 90000 | 1,031.8 | 103182.9 | 103.2 | 11.5 | 3.8 | 76.4 | 343943 | 3.00 | 11.8 |
| CR60-20 | 20 | 500 | 500 | 250000 | 3,750.0 | 375000.0 | 375.0 | 15.0 | 6.3 | 197.4 | 2467010 | 1.52 | 16.6 |
| CR60-20 | 20 | 50 | 500 | 25000 | 30.6 | 3064.5 | 3.1 | 1.2 | 1.1 | 8.2 | 10215 | 3.00 | 11.8 |
| CR60-20 | 20 | 100 | 500 | 50000 | 186.8 | 18678.5 | 18.7 | 3.7 | 2.1 | 24.9 | 62262 | 3.00 | 11.8 |
| CR60-20 | 20 | 150 | 500 | 75000 | 521.2 | 52124.0 | 52.1 | 6.9 | 2.9 | 46.3 | 173747 | 3.00 | 11.8 |
| CR60-20 | 20 | 250 | 500 | 125000 | 1,749.5 | 174953.8 | 175.0 | 14.0 | 4.2 | 93.3 | 583179 | 3.00 | 11.8 |
| CR60-25 | 25 | 50 | 50 | 2500 | 0.9 | 89.7 | 0.1 | 0.4 | 0.5 | 2.4 | 239 | 3.75 | 10.6 |
| CR60-25 | 25 | 75 | 75 | 5625 | 3.5 | 348.5 | 0.3 | 0.6 | 0.8 | 4.1 | 929 | 3.75 | 10.6 |
| CR60-25 | 25 | 100 | 100 | 10000 | 9.8 | 983.8 | 1.0 | 1.0 | 1.0 | 6.6 | 2623 | 3.75 | 10.6 |
| CR60-25 | 25 | 150 | 150 | 22500 | 45.4 | 4544.0 | 4.5 | 2.0 | 1.5 | 13.5 | 12117 | 3.75 | 10.6 |
| CR60-25 | 25 | 200 | 200 | 40000 | 138.3 | 13830.7 | 13.8 | 3.5 | 2.0 | 23.1 | 36882 | 3.75 | 10.6 |
| CR60-25 | 25 | 250 | 250 | 62500 | 330.4 | 33040.2 | 33.0 | 5.3 | 2.5 | 35.2 | 88107 | 3.75 | 10.6 |
| CR60-25 | 25 | 400 | 400 | 160000 | 2,073.1 | 207313.9 | 207.3 | 13.0 | 4.0 | 86.4 | 552837 | 3.75 | 10.6 |
| CR60-25 | 25 | 500 | 500 | 250000 | 3,750.0 | 375000.0 | 375.0 | 15.0 | 5.0 | 131.3 | 1312777 | 2.86 | 12.1 |
| CR60-25 | 25 | 50 | 500 | 25000 | 21.0 | 2098.5 | 2.1 | 0.8 | 0.9 | 5.6 | 5596 | 3.75 | 10.6 |
| CR60-25 | 25 | 100 | 500 | 50000 | 122.7 | 12273.7 | 12.3 | 2.5 | 1.7 | 16.4 | 32730 | 3.75 | 10.6 |
| CR60-25 | 25 | 150 | 500 | 75000 | 340.3 | 34032.8 | 34.0 | 4.5 | 2.3 | 30.3 | 90754 | 3.75 | 10.6 |
| CR60-25 | 25 | 250 | 500 | 125000 | 1,145.2 | 114517.7 | 114.5 | 9.2 | 3.3 | 61.1 | 305381 | 3.75 | 10.6 |