

Why use Farrat Neoprene CR45?

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

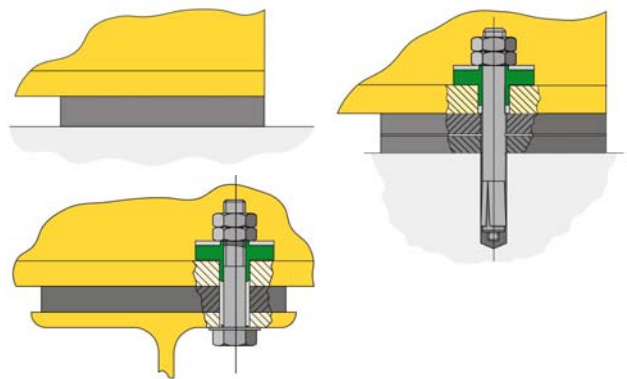
- Tested and approved to ISO6446 and BS6177.
- High resilience and low damping characteristics.
- Excellent shock absorption characteristics.
- Excellent ozone, oil and general chemical resistance.
- Low level of creep.
- Long lifetime (in excess of 60 years).
- Fire / flame resistance.
- Can be supplied 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	CR45
Colour			Black
Thicknesses	mm		5, 10, 15, 20, 25
Hardness (IRHD) ±5		BS ISO 48	45
Static Shear Modulus	MPa	BS ISO 1827:2007	0.56
Ratio Dyn to Static Modulus			1.55
Maximum Residual Compression	%	EN ISO 1856	2
Compression set	%	BS ISO 815:1991	13.2
Creep			Minimal
Tensile stress at break	N/mm ² / MPa	BS ISO 37	16
Elongation at break	%	BS ISO 37	625
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 - CR45 Chloroprene / Neoprene - 10b
High Performance vibration isolation material



Material Code	Material Thickness mm	Pad Length mm	Pad Width mm	Pad Area mm ²	Applied Load kN	Applied Load Kg	Applied Load T	Pressure (Max 15) N/mm ²	Shape Factor	Compression Modulus E N/mm ²	Spring Const K N/mm	Maximum Static Deflection (Max 15%) mm	Vertical Dynamic Natural Frequency (fnd) Hz
CR45-5	5	50	50	2500	8.2	816.0	0.8	3.3	2.5	21.8	10880	0.75	22.5
CR45-5	5	75	75	5625	39.8	3975.2	4.0	7.1	3.8	47.1	53003	0.75	22.5
CR45-5	5	100	100	10000	122.3	12230.2	12.2	12.2	5.0	81.5	163070	0.75	22.5
CR45-5	5	150	150	22500	337.5	33750.0	33.8	15.0	7.5	173.5	780822	0.43	29.6
CR45-5	5	200	200	40000	600.0	60000.0	60.0	15.0	10.0	288.4	2307231	0.26	38.2
CR45-5	5	250	250	62500	937.5	93750.0	93.8	15.0	12.5	416.5	5205859	0.18	45.9
CR45-5	5	300	300	90000	1,350.0	135000.0	135.0	15.0	15.0	549.1	9884657	0.14	52.7
CR45-5	5	500	500	250000	3,750.0	375000.0	375.0	15.0	25.0	1024.6	51231407	0.07	72.0
CR45-5	5	50	500	25000	255.1	25509.8	25.5	10.2	4.5	68.0	340131	0.75	22.5
CR45-5	5	100	500	50000	750.0	75000.0	75.0	15.0	8.3	209.8	2097568	0.36	32.6
CR45-5	5	150	500	75000	1,125.0	112500.0	112.5	15.0	11.5	366.2	5493573	0.20	43.1
CR45-5	5	250	500	125000	1,875.0	187500.0	187.5	15.0	16.7	636.8	15920709	0.12	56.8
CR45-10	10	50	50	2500	2.3	233.6	0.2	0.9	1.3	6.2	1558	1.50	15.9
CR45-10	10	75	75	5625	10.7	1074.2	1.1	1.9	1.9	12.7	7161	1.50	15.9
CR45-10	10	100	100	10000	32.6	3264.1	3.3	3.3	2.5	21.8	21761	1.50	15.9
CR45-10	10	150	150	22500	159.0	15900.8	15.9	7.1	3.8	47.1	106005	1.50	15.9
CR45-10	10	200	200	40000	489.2	48920.9	48.9	12.2	5.0	81.5	326139	1.50	15.9
CR45-10	10	250	250	62500	937.5	93750.0	93.8	15.0	6.3	124.0	775296	1.21	17.7
CR45-10	10	300	300	90000	1,350.0	135000.0	135.0	15.0	7.5	173.5	1561644	0.86	21.0
CR45-10	10	500	500	250000	3,750.0	375000.0	375.0	15.0	12.5	416.5	10411718	0.36	32.5
CR45-10	10	50	500	25000	68.2	6820.7	6.8	2.7	2.3	18.2	45471	1.50	15.9
CR45-10	10	100	500	50000	432.2	43217.9	43.2	8.6	4.2	57.6	288119	1.50	15.9
CR45-10	10	150	500	75000	1,125.0	112500.0	112.5	15.0	5.8	106.8	801064	1.40	16.4
CR45-10	10	250	500	125000	1,875.0	187500.0	187.5	15.0	8.3	209.8	2621960	0.72	23.0
CR45-15	15	50	50	2500	1.2	124.8	0.1	0.5	0.8	3.3	555	2.25	13.0
CR45-15	15	75	75	5625	5.3	525.7	0.5	0.9	1.3	6.2	2336	2.25	13.0
CR45-15	15	100	100	10000	15.4	1542.0	1.5	1.5	1.7	10.3	6853	2.25	13.0
CR45-15	15	150	150	22500	73.4	7344.2	7.3	3.3	2.5	21.8	32641	2.25	13.0
CR45-15	15	200	200	40000	225.7	22567.5	22.6	5.6	3.3	37.6	100300	2.25	13.0
CR45-15	15	250	250	62500	540.2	54022.3	54.0	8.6	4.2	57.6	240099	2.25	13.0
CR45-15	15	300	300	90000	1,100.7	110071.9	110.1	12.2	5.0	81.5	489209	2.25	13.0
CR45-15	15	500	500	250000	3,750.0	375000.0	375.0	15.0	8.3	209.8	3495947	1.07	18.8
CR45-15	15	50	500	25000	32.5	3253.4	3.3	1.3	1.5	8.7	14460	2.25	13.0
CR45-15	15	100	500	50000	199.3	19926.2	19.9	4.0	2.8	26.6	88561	2.25	13.0
CR45-15	15	150	500	75000	556.3	55631.8	55.6	7.4	3.8	49.5	247252	2.25	13.0
CR45-15	15	250	500	125000	1,865.5	186553.0	186.6	14.9	5.6	99.5	829125	2.25	13.0
CR45-20	20	50	50	2500	0.9	86.6	0.1	0.3	0.6	2.3	289	3.00	11.3
CR45-20	20	75	75	5625	3.3	332.9	0.3	0.6	0.9	3.9	1110	3.00	11.3
CR45-20	20	100	100	10000	9.3	934.6	0.9	0.9	1.3	6.2	3115	3.00	11.3
CR45-20	20	150	150	22500	43.0	4296.7	4.3	1.9	1.9	12.7	14322	3.00	11.3
CR45-20	20	200	200	40000	130.6	13056.4	13.1	3.3	2.5	21.8	43521	3.00	11.3
CR45-20	20	250	250	62500	311.7	31172.2	31.2	5.0	3.1	33.3	103907	3.00	11.3
CR45-20	20	300	300	90000	636.0	63603.1	63.6	7.1	3.8	47.1	212010	3.00	11.3
CR45-20	20	500	500	250000	3,750.0	375000.0	375.0	15.0	6.3	124.0	1550592	2.42	12.5
CR45-20	20	50	500	25000	20.0	1996.7	2.0	0.8	1.1	5.3	6656	3.00	11.3
CR45-20	20	100	500	50000	116.0	11597.1	11.6	2.3	2.1	15.5	38657	3.00	11.3
CR45-20	20	150	500	75000	321.1	32113.4	32.1	4.3	2.9	28.5	107045	3.00	11.3
CR45-20	20	250	500	125000	1,080.4	108044.7	108.0	8.6	4.2	57.6	360149	3.00	11.3
CR45-25	25	50	50	2500	0.7	68.9	0.1	0.3	0.5	1.8	184	3.75	10.1
CR45-25	25	75	75	5625	2.4	243.5	0.2	0.4	0.8	2.9	649	3.75	10.1
CR45-25	25	100	100	10000	6.5	652.6	0.7	0.7	1.0	4.4	1740	3.75	10.1
CR45-25	25	150	150	22500	28.8	2876.7	2.9	1.3	1.5	8.5	7671	3.75	10.1
CR45-25	25	200	200	40000	86.0	8601.9	8.6	2.2	2.0	14.3	22938	3.75	10.1
CR45-25	25	250	250	62500	204.0	20400.6	20.4	3.3	2.5	21.8	54402	3.75	10.1
CR45-25	25	400	400	160000	1,279.2	127921.5	127.9	8.0	4.0	53.3	341124	3.75	10.1
CR45-25	25	500	500	250000	3,057.6	305755.4	305.8	12.2	5.0	81.5	815348	3.75	10.1
CR45-25	25	75	500	37500	37.7	3765.4	3.8	1.0	1.3	6.7	10041	3.75	10.1
CR45-25	25	100	500	50000	77.1	7710.2	7.7	1.5	1.7	10.3	20560	3.75	10.1
CR45-25	25	150	500	75000	210.6	21056.3	21.1	2.8	2.3	18.7	56150	3.75	10.1
CR45-25	25	250	500	125000	705.2	70523.3	70.5	5.6	3.3	37.6	188062	3.75	10.1