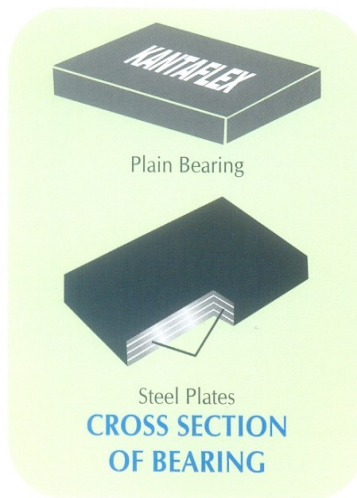


KANTAFLEX ELASTOMERIC (NEOPRENE) BRIDGE BEARING :

(Approved by: Ministry of Shipping, Road Transport & Highways and DGS&D)



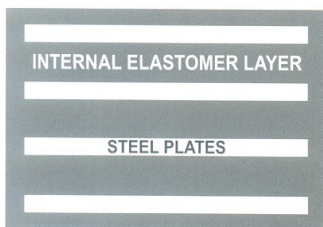
KANTA FLEX Elastomeric Bearings are designed and manufactured as per IRC: 83 (part II) - 1987 with its latest amendments, to meet the requirements of MOSRT&H SPECIFICATION FOR ROAD & BRIDGE WORKS TO SECTION NO : 2000 TO CLAUSE NO : 2005 (ELASTOMERIC BEARING) : AND TO INTERNATIONAL UNION OF RAILWAYS CODE NO UIC772R (USE OF RUBBER BEARINGS FOR RAILWAYS BRIDGES).

It consists of one or more internal layers of elastomeric bonded to internal steel laminates shall be cast as single unit in a mould and vulcanised under heat & pressure, to cater for translation or rotation of the superstructure by elastic deformation.

The raw elastomer used in Bearings are poly-Chloroprene. either of Brands: Neoprene WRT, Bayprene 110, skyprene B 5, & Denka S40V in order to have low crystallization rate and adequate shelf life.

The content of the Poly Chloroprene in the Bearing is not less than 60% and the ash content shall be less than 5%.

The Steel laminates used in the Bearings shall meet the specification of IS : 2062.



Typical Section of Elastomeric Bearing

TECHNICAL DATA

- 10 KN is equivalent to 1 MT.
- Design load of the bearing is equivalent to 10M Pa.
- Shear modulus of the bearing shall be between 0.8 & 1.2 M Pa.
- Ultimate compressive strength of the bearing shall be more than 60 M Pa.
- Dimension can also be designed as per requirement.

PHYSICAL PROPERTIES OF THE ELASTOMER USED IN BEARING

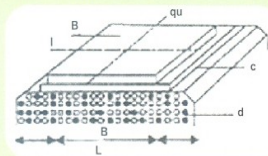
No.	Characteristics	Unit	Values	Testing Std
1	Hardness	Shore A	60 to 65	IS : 3400 (part II)
2	Tensile Strength, Minimum	M Pa	17	IS : 3400 (part I)
3	Elongation at break; Minimum	%	400	IS : 3400 (part I)
4	Compression set, Maximum	%	30	IS : 3400 (part X)
5	Accelerated Ageing	-	--	IS : 3400 (part IV)
5 (a)	Change in Hardness	Shore A	+ 15	
5 (b)	Change in Tensile Strength	%	- 15	
5 (c)	Change in Elongation	%	- 30	
6	Adhesion Strength, Minimum	kN/m	7	IS : 3400 (part XIV)
7	Resistance to Ozone	--	No defect	IS : 3400 (part XX)

DESIGN OF THE ELASTOMERIC BEARING

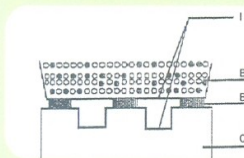
- The overall length divided by overall width shall be less than (or) equivalent to two
- The overall thickness shall be five times lesser than (or) equivalent to overall width (OR)
- The overall thickness shall be Greater than (or) equivalent to overall width divided by ten
- If thickness of steel laminate is 3 mm. Then thickness of elastomer layer shall be either 8 (or) 10 mm
- If thickness of steel laminate is 4 mm. Then thickness of elastomer layer shall be 12 mm
- The thickness of the outer layer of elastomer (Top/Bottom) shall be Half the thickness of middle layer of elastomer, Subject to maximum of 6 mm for any size
- The side cover shall be 6 mm for all Bearings
- Shape factor shall be greater than 6 and lesser than or equivalent to 12

BEARING INSTALLATION

a = Kantaflex Bearing
 B = Bearing Width
 l = Longitudinal axis of bridge
 L = Bearing
 d = Support <- Mortar bed
 qu = Longitudinal axis of bearing



a = Kantaflex Bearing
 c = Abutment
 e = Bridge deck
 f = Recesses for flat jacks Road carrying faces must be parallel



The installation of Elastomeric Bearing will vary to the type of construction whether the structure above the bearing is in-situ construction or precast concrete beams or structural steel beams. In General the bearing is placed on the surface provided at the right level. The lower and upper concrete surface between which the bearing is placed must be horizontal parallel clean & flat.

for in-situ construction the form work must be constructed so as to prevent concrete flowing from damaging the sides of the bearings. This is easily achieved by surrounding the bearing with expanded polystyrene & taping adequately between the top surface of bearing & polystyrene. Polystyrene should be removed after the structure has been cast.

For precast concrete beams and structural steel beam seated on laminated bearings, the bearing must be physically restrained from moving during beam installation. For the purpose a skim coating prior to beam launching so as to take up minor irregularities between the two surface & no displacement of bearing during erection of beam or concreting.

PROPERTIES : Kanta Flex Bearings are :

- MORST & H and DGS & D Approved Trusted Bearings
- Economical Price & Delivery in Short Duration
- In-house Test Facilities Inspection by External Agency

