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**BBNR**– Bridge Bearing Pads, **NK**– Neoprene & Cork Pads, **HL**– Neoprene Impregnated Duck Pads, **W**– Neoprene Waffle Pads & **NI**– Nitrile Waffle Pads

# VIBRATION PADS

BULLETIN MP-440

Vibration Pads are used to reduce noise and vibration and to eliminate the need for bolting down. The flat configuration minimizes machine elevation. This low cost method conveniently solves or prevents problems that do not warrant the use

of either rubber or spring mountings. As a general rule, pads are recommended to eliminate high frequency noise, bolting, minor vibration problems in upper stories or for ground floor and non critical applications.

## BBNR– Bridge Bearing Pads

We use the term “Bridge Bearing” as an indication of quality. All bearings that support bridges or highway overpasses use Neoprene or Natural Rubber compounds, so the molded product has high tensile and elongation characteristics and minimal permanent set and creep. Similarly, they must pass rigid tests in ozone and oxygen resistance.

When the pads are used for vibration isolation in supporting buildings or components such as structural floors, secondary floating floors, maximum “Dynamic Stiffness” is another specified characteristic. This is important as the Dynamic Stiffness, Deflection and the shape of the Load Deflection curve controls frequency.

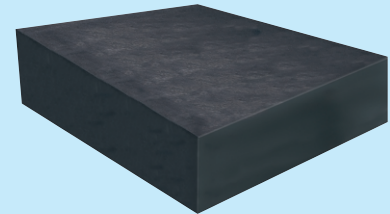
Bearing pads are always solid pads (unlike our waffle pads), because loadings per square inch are high, often in the range of 1000psi (70kg/cm<sup>2</sup>).

Capacities are controlled by area, hardness (durometer), thickness and perimeter relative to the loaded area.

Most of the time we design these pads to specific requirements as explained in Bulletin AB-104-2 in the Architectural Section, but we thought it would be helpful to offer some stock sizes for immediate shipment.

While they can certainly be used in acoustical applications, there is a constant contractor need for a high capacity pad for pipe supports, structural supports, etc., in the load range of these pads.

Pads can be stacked with 1/8”(3mm) steel plates between them up to 250psi(17.5 kg/cm<sup>2</sup>) for higher deflections and greater efficiency. Higher loadings per square inch (cm<sup>2</sup>) require bonded inserts to avoid pancaking.

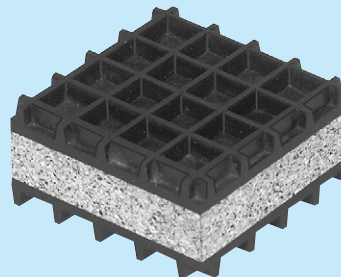


**BBNR**– Bridge Bearing Natural Rubber Pads

| Type  | Size (in) (mm)            | Max. Load (lbs) (kg) | Max. Defl. (in) (mm) |
|-------|---------------------------|----------------------|----------------------|
| BBNR- | 10x10x1 <b>250x250x25</b> | 25000 <b>11340</b>   | 1/8 <b>3.2</b>       |
|       | 8x8x1 <b>200x200x25</b>   | 16000 <b>7257</b>    |                      |
|       | 6x6x1 <b>150x150x25</b>   | 7900 <b>3583</b>     |                      |
|       | 4x4x1 <b>100x100x25</b>   | 2400 <b>1089</b>     |                      |

## NK– Neoprene & Cork Sandwich Pad

Type “NK” pads are isolation sandwiches made by laminating a thick cork center core between two neoprene pads. This arrangement of the materials forces sound to pass through zones of different density with subsequent power losses because of the change in velocity. This pad is primarily recommended for acoustical rather than vibration problems when it is desirable to use a thick economical pad. Standard materials are loaded 50 lbs. per square inch (3.5 kg/cm<sup>2</sup>). Pads are 1”(25mm) thick and can be furnished 18”x 18”(450x450mm) or cut to exact size in addition to the tabulated sizes.

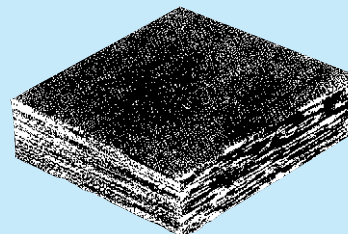


**NK**– Neoprene & Cork Pad

| Type | Size (in) (mm)            | Max. Load (psi)(kg/cm <sup>2</sup> ) |
|------|---------------------------|--------------------------------------|
| NK-  | 18x18x1 <b>450x450x25</b> | 50 <b>3.5</b>                        |
|      | 12x12x1 <b>300x300x25</b> |                                      |
|      | 6x6x1 <b>150x150x25</b>   |                                      |
|      | 4x4x1 <b>100x100x25</b>   |                                      |
|      | 3x3x1 <b>75x75x25</b>     |                                      |
|      | 2x2x1 <b>50x50x25</b>     |                                      |

## HL– Neoprene Impregnated Duck Pads

Type “HL” pads are manufactured by impregnating layer on layer of woven cotton duck with natural or synthetic rubber. This process is carried on in a rubber press where the heat and pressure produces an extremely tough final product that is particularly suited to applications where alignment must be maintained. Typical applications are drop hammer anvil pads, printing press column supports, bridge roadway bearing pads, craneway supports, etc. Maximum loading of 1000 lbs. per square inch (70 kg/cm<sup>2</sup>). Pads are always furnished cut to size in the required thickness. The advantage of HL pads is consistent loading per square inch (cm<sup>2</sup>) unaffected by area as capacity is dependent on the layers of cotton duck only.



**HL**– Neoprene Duck Pads

| Type | Thickness (in) (mm) | Max. Load (psi)(kg/cm <sup>2</sup> ) |
|------|---------------------|--------------------------------------|
| HL-  | 1/4 <b>6</b>        | 1000 <b>70</b>                       |
|      | 3/8 <b>10</b>       |                                      |
|      | 1/2 <b>13</b>       |                                      |
|      | 5/8 <b>16</b>       |                                      |
|      | 3/4 <b>19</b>       |                                      |

**W- Neoprene Waffle Pads**

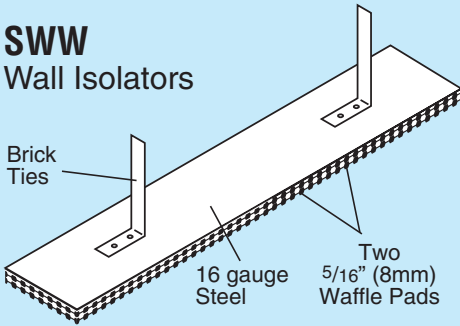
The Type "W" Neoprene Waffle Pad has greater carrying capacity per square inch, increased holding power and a built in contamination seal. Identical rubber grids are molded back to back for maximum rubber contact area and resistance to rib collapse or hinging. The interconnections form suction pockets for gripping smooth steel as well as rough surfaces and also act as dirt and oil dams at the perimeter regardless of how the pad is cut. The square waffle pattern is laid out on 1/2"(13mm) centers to facilitate cutting pads to size in the field without the need for measuring with a tape measure.

While there is no need for bolting or cementing on most installations, Type "W" Adhesive may be used for securing machines that have exceptionally large horizontal forces. The adhesive is also useful when the pad is made part of an assembly or shipped cemented to machinery legs.

Waffle Pad is stocked in both 40 and 50 durometer Neoprene. The high tensile black stock has been selected for its oil resistance and physical specifications. Natural Rubber, Hycar, Butyl, Silicone or other of the Elastomers can be furnished for special conditions. Pricing would be dependent on material and quantity. Standard pads are 5/16"(8mm) thick and may be purchased 24" x 48"(600 x 1200mm), 24" x 24"(600 x 600mm), 18" x 36"(450 x 900mm), 18" x 18"(450 x 450mm) or cut to size.

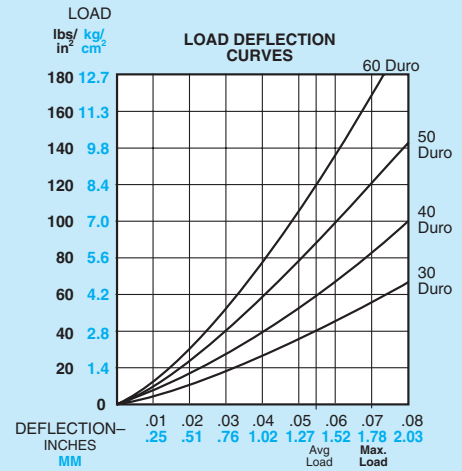
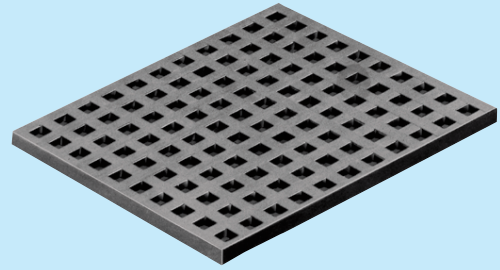
W pads are often used in 2 or 3 layers cemented to 16 gauge steel plates between layers to form SWW wall supports. Assemblies are normally 6'(1.8m) long and 6, 8, 10 or 12" (150, 200, 250 or 300mm) wide to match wall width.

**SWW  
Wall Isolators**



**TYPE W LOAD RATINGS**

| Duro-meter | Recommended Loading (psi)(kg/cm <sup>2</sup> ) | Max. Load (psi)(kg/cm <sup>2</sup> ) |
|------------|--|--------------------------------------|
| 30         | 40 <b>2.8</b>                                  | 55 <b>3.8</b>                        |
| 40         | 60 <b>4.2</b>                                  | 85 <b>6.0</b>                        |
| 50         | 90 <b>6.3</b>                                  | 120 <b>8.4</b>                       |
| 60         | 120 <b>8.4</b>                                 | 170 <b>12.0</b>                      |



**Ni- Nitrile Waffle Pads**

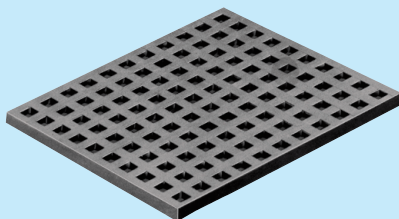
Nitrile has the best oil resistance of all the natural and synthetic rubber materials. It is superior to Neoprene and recommended for all locations where there is constant or intermittent exposure to oil, grease or gasoline.

Mason type "Ni" Nitrile pads provide friction and avoid bolting as well as vibration isolation under:

- Drill presses
- Milling machines
- Shears
- Lathes
- Punch presses
- And similar machines

May be used in multi layers separated by 16 gauge steel plates for greater efficiency.

**Ni-  
Nitrile Waffle Pads**



| Type | Size (in)(mm) | Max. Load (psi)(kg/cm <sup>2</sup> ) | Thickness (in)(mm) | Color Code |
|------|---------------|--------------------------------------|--------------------|------------|
| Ni-  | 18x18 450x450 | 50 <b>3.5</b>                        | 5/16 <b>8</b>      | Black      |
|      | 6x6 150x150   | 50 <b>3.5</b>                        | 5/16 <b>8</b>      | Black      |
|      | 18x18 450x450 | 100 <b>7.0</b>                       | 5/16 <b>8</b>      | Brown      |
|      | 6x6 150x150   | 100 <b>7.0</b>                       | 5/16 <b>8</b>      | Brown      |
|      | 18x18 450x450 | 200 <b>14.0</b>                      | 5/16 <b>8</b>      | Blue       |
|      | 6x6 150x150   | 200 <b>14.0</b>                      | 5/16 <b>8</b>      | Blue       |
|      | 18x18 450x450 | 280 <b>19.7</b>                      | 1/2 <b>13</b>      | Green      |
|      | 6x6 150x150   | 280 <b>19.7</b>                      | 1/2 <b>13</b>      | Green      |