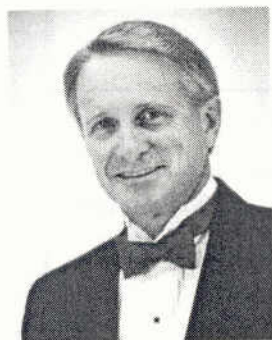


# MASTICORD

## STRUCTURAL BEARING PAD



Welcome to the third edition of the **MASTICORD™** Design Guide.

When **MASTICORD™** was originally developed and the first design guide published in 1982, it filled a glaring need for better bearing pad materials. **MASTICORD™** was quickly recognized as a reliable, economical, engineered product with an easy to use design procedure.

In an ongoing effort, **MASTICORD™** was improved in 1984 and a much expanded design guide was published to "provide predictable performance parameters which address 'real world' field conditions."

Since then, **MASTICORD™** has enjoyed such a successful performance record that we now know that it is capable of higher performance limits than originally thought. Consequently, this all-new third edition of the guide has been issued. Not only does it contain new loading information based on new testing but also expanded information on the design of **MASTICORD™** into a slide bearing system.

JVI is the original developer of a high quality, low cost, engineered random-oriented fiber bearing pad material — **MASTICORD™**. It is hoped that the new information contained in this guide will demonstrate to the user the ongoing commitment to excellence that is the spirit of JVI.

  
James R. Voss  
President

**JVI**  
INC.

**THE BEARING PAD PEOPLE**

# HOW TO SPECIFY MASTICORD™

## A. MATERIAL

Bearing pads shall be a homogeneous blend of ozone-resistant rubber elastomer and high strength random synthetic fiber cords cured together to form a durable material with uniform behavior in all directions, suitable to support structural bearing loads. The **MASTICORD™** bearing pads, as manufactured by **JVI, Inc.** of Skokie, Illinois, shall be of the size and thickness specified or shown by the contract drawings.

## B. MECHANICAL REQUIREMENTS

The **MASTICORD™** bearing pads shall conform to the specified ASTM and other material test requirements in all directions perpendicular to the pad's thickness. The manufacturer shall provide a quality control test report certifying the bearing pad meets the specified test requirements.

1.	Hardness (Shore A)	75 (±5)
2.	Compression	
a.	Minimum ultimate	8,000 psi
b.	Initial minimum cracking strain*	40%
3.	Shear Modulus (G)	
a.	At 70°F for a uniform compressive stress of 1,000 psi and a shear strain of 50% ( $\frac{d_h}{t} \times 100$ ) where both bearing surfaces contact smooth concrete.	170 psi (±50 psi)
b.	G constant in all directions parallel to the bearing plane.	
4.	Tensile Strength* (ASTM D 412, Die C)	1,000 psi
5.	Tear Strength* (ASTM D 624, Die B)	400 lb/in min.
6.	Heat Aging (ASTM D 573)	
a.	Change in tensile strength	±25% max.
b.	Change in elongation	±25% max.
c.	Change in hardness	10 point max.
7.	Ozone Resistance	
a.	After 50 hours at 100°F in an ozone concentration of 80 pphm-tear strength.	300 lb/in min.
8.	Oil Swell (increase in vol.) (ASTM D 471)	120% max.
*10% Variation will be allowed.		

## C. FABRICATION REQUIREMENTS

1. The plan dimensions of the bearing pad shall be within a tolerance of 3 percent or ±1/8 inches, whichever is greater.
2. The thickness of the bearing pad shall be within a tolerance of 15 percent or ±1/16 inches, whichever is greater.

## D. INSTALLATION

The **MASTICORD™** bearing pad shall be erected and located within ±3/8 inch of its planned position as shown by the plans or approved shop drawings.