



Sealcore 3" Weight Deflection Technical Memo

Contractor: Medco

Subject:

The Sealcore 3" Device (code #5314) weight deflection calculations for applications in concrete floor assemblies, where concerns around weight bearing hazards exist, when the device has been installed and equipment exerts downward pressure on the device in the form of wheels or equipment pad stands.

Product Data:

Material: Cold rolled low-carbon steel

Thickness of metal plate: 14 Gauge (.075")

Density: 7.85 approximate

Young's Modulus: 30,000,000 psi

Tensile Strength: ASTM A36 Mild (low-carbon) steel Yield Strength, psi 36,300 = 12000psi at allowable safety factor of 4x = 82 Mpa = 843kg/cm²

V-Bending Force: 36,000 psi (The maximum amount of stress a material can sustain in tension before eventually failing, measured in units of force per unit area, similar to tensile above)

Summary:

Although difficult to calculate actual applications based on the variability of wheel and pad stand diameters and varying loads the Sealcore Devices, should be able to withstand weight deflections of approximately 400 to 600 psi and should be able to take the strains of wheel or pad stand traffic for the life of the device.