TYPAR
Geosynthetics you can trust

Summary of Lab Test Results on TYPAVE25

(TRI Report Reference: E2598-32-03; Client: PGINW-Fiberweb)

Physical Ring Data:
2.30 in. O.D. x 1 in. high (2.11 in. I.D.)
0.597 sq. in. of plastic surface contact area per ring
3.58 sq. in. surface contact area per 6 ring test section
Physical Molded Unit Data (injection molded HDPE):
10 in. x 6.25 in. x 1 in. high (62.5 sq. in. per unit), 13.8 rings per sq. foot (avg. 10.4 sq. in. per ring)

Lab Test Data: Bare Rings, with deflection stopped at 0.032 in.
12,257 lbs load to test section (6 rings)
3,424 psi plastic resin strength (12,257/3.58)
2,043 lbs per ring (12,257/6)
196.1 psi over test section area (12,257/62.5)
28,238 lbs per square foot load capacity (196.1x144)

Lab Test Data: Sand Filled Rings
410,089 lbs per test section area (machine load)
68,348 lbs per filled ring (410,089/6)
6,561 psi load over test section area (410,089/62.5)
944,784 lbs per square foot load capacity (6561 x 144)

Examples of Usage – TYPAVE25
Auto tires - 40 psi vs 6561 psi = 164x safety factor (6” x 6” tire contact area)
Truck tires - 110 psi vs 6561 psi = 60x safety factor (6.5” x 6.5” tire contact area)
DC 10 tires - 250 psi vs 6561 psi = 26x safety factor
F-16 tires - 350 psi vs 6561 psi = 19x safety factor
Fire Truck Outriggers - 70,000 lbs/4 = 17,500 lbs/(12 in x 18 in) = 81 psi vs 6561 psi = 81x safety factor

Heavy Truck Axle Load Demand = 36,000 lbs on 4 tires (similar to old H-20 loading) (9” x 9” tire contact area x 9000 lbs per tire at 110 psi tire pressure)
TYPAVE25 “bare” capacity = 196.1 psi x 81 sq.in. = 15,884 lbs/tire x 4 = 32 ton axle.
TYPAVE25 “filled” capacity = 6561 psi x 81 sq.in. = 531,441 lbs/tire x 4 = 1063 ton axle load.

Note:
Actual load bearing capacities of pavements using these productsmust provide for a rigid base to receive and accommodate the design loads planned - which are transferred from the surface to the base course by the rings. All load figures provided above for TYPAVE25 and are based upon lab tests conducted by TRI Environmental, Inc., Austin, Texas using its laboratory resources.

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