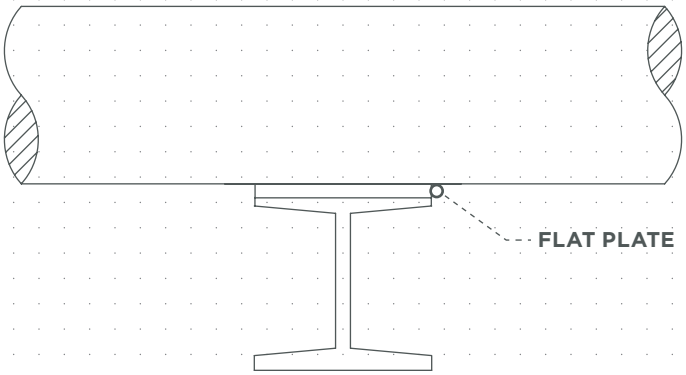
# ProTek Flat Plate

## TECHNICAL DATA SHEET

### TECHNICAL DATA

| | |
|---|---|
| **PRODUCT NAME** | ProTek Flat Plate |
| **USES** | Multiple applications, such as a non-metallic bearing surface for corrosion-prone areas |
| **DESCRIPTION** | Made from the same corrosion-resistant composite material as our ProTek Wear Pads, the flat plate can be installed in minutes. |




### FEATURES

» Protects structure or surface from wear caused by pipe movement or other forces
» Low cost of installation: no welding, hot work permits or highly skilled personnel required
» Product helps minimize maintenance and operational costs throughout the lifetime of the piping system
» Can be adhered to any flat surface or structure
» Product can also be used as a shim to correct for height inconsistencies

### PROPERTIES

| | |
|---|---|
| **COMPOSITION** | APP-VEFR |
| **MAXIMUM LOAD** | 54,000 lbs |
| **TEMPERATURE LIMITS** | -60°F to 400°F |

### ACCESSORIES

» Epoxy – 6 oz. cartridge (EX-100)
» Static mixing nozzle (EX-200)
» Epoxy applicator gun (EX-500)

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## PHYSICAL PROPERTIES

| MECHANICAL PROPERTIES | | | | | |
|---|---|---|---|---|---|
| | | Longitudinal Direction | | Transverse Direction | |
| **Property** | **Method** | **Result** | **Units** | **Result** | **Units** |
| **ULTIMATE TENSILE STRENGTH** | ASTM D638 | 35,000 | psi | 10,000 | psi |
| **ULTIMATE COMPRESSIVE STRENGTH** | ASTM D695 | 35,000 | psi | 20,000 | psi |
| **ULTIMATE FLEXURAL STRENGTH** | ASTM D790 | 35,000 | psi | 14,000 | psi |
| **TENSILE MODULUS** | | 3.0 | psi x $10^6$ | 1.0 | psi x $10^6$ |
| **COMPRESSIVE MODULUS** | | 2.5 | psi x $10^6$ | 1.2 | psi x $10^6$ |
| **FLEXURAL MODULUS** | | 2.0 | psi x $10^6$ | 1.0 | psi x $10^6$ |
| **ULTIMATE SHEAR STRENGTH** | | 7,000 | psi | 6,000 | psi |
| **ULTIMATE BEARING STRESS** | | 35,000 | psi | 35,000 | psi |
| **IZOD IMPACT STRENGTH (SAMPLE THICKNESS 1/8")** | ASTM D256 | 30 | ft-lbs per inch of notch | 5 | ft-lbs per inch of notch |
| **BARCOL HARDNESS** | ASTM D2583-75 | | | 50 | |

| ELECTRICAL PROPERTIES | | | |
|---|---|---|---|
| **Property** | **Method** | **Result** | **Units** |
| **ELECTRIC STRENGTH, SHORT TERM IN OIL, 1/8"** | ASTM D1491 | 200 | vpm |
| **ELECTRIC STRENGTH, SHORT TERM IN OIL** | | 35 | KV/inch |
| **DIELECTRIC CONSTANT, 60 Hz[1]** | ASTM D150 | 5.2 | |
| **DISSIPATION FACTOR, 60 Hz[1]** | ASTM D150 | 0.03 | |
| **ARC RESISTANCE[2]** | ASTM D495 | 120 | seconds |

| THERMAL PROPERTIES | | | |
|---|---|---|---|
| **Property** | **Method** | **Result** | **Units** |
| **THERMAL COEFFICIENT OF EXPANSION[2]** | ASTM D696 | 5 x $10^{-6}$ | inches/inch/°F |
| **THERMAL CONDUCTIVITY** | ASTM C-1776-76 | 4 | BTU per sq. ft./hr/°F |
| **SPECIFIC HEAT** | | 0.28 | BTU/lb/°F |

| FULL SECTION IN BENDING | | |
|---|---|---|
| **Property** | **Result** | **Units** |
| **MODULUS OF ELASTICITY** | 3.0 | psi x $10^5$ |
| **TENSILE STRENGTH** | 25,000 | psi |
| **COMPRESSIVE STRENGTH** | 25,000 | psi |

| OTHER PROPERTIES | | | |
|---|---|---|---|
| **Property** | **Method** | **Result** | **Units** |
| **DENSITY** | ASTM D792 | 0.065 | Lbs/$In^3$ |
| **SPECIFIC GRAVITY** | ASTM D792 | 1.8 | |
| **WATER ABSORPTION, 24 HOUR IMMERSION** | ASTM D570 | 0.5 | Max % by weight |

[1]Specimen tested perpendicular to laminate face

[2]Indicated reported value measured in longitudinal direction

Note: Depending on the specific glass content and resin, the strength and stiffness properties may be higher.

Note: 1 psi = 6.894 KPa, 1 FT.-lb/in = 5.442 kg-m/m

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