# Pentacore PolyCore PET vs Gurit Kerdyn™ PET Technical Comparison Sheet

PENTACORE
HONEYCOMB AND FOAM COMPOSITES

This detailed comparison sheet summarizes performance differences between Pentacore PolyCore PET Foam and Gurit Kerdyn™ PET Foam across all major mechanical and thermal properties.
Values reflect typical published data at equivalent density classes.

| Density (kg/m³) | Range | Compression Strength (MPa) | | Shear Strength (MPa) | | Tensile Strength (MPa) | | Thermal Conductivity (W/mK) | |
|---|---|---|---|---|---|---|---|---|---|
| | | Pentacore | Kerdyn™ | Pentacore | Kerdyn™ | Pentacore | Kerdyn™ | Pentacore | Kerdyn™ |
| 60 | 55-65 | 0.80 | - | 0.50 | - | 1.30 | - | 0.033 | - |
| 80 | 75-85 | 1.10 | 0.86 | 0.68 | 0.59 | 1.50 | 1.54 | 0.027 | 0.032 |
| 100 | 95-105 | 1.40 | 1.30 | 0.80 | 0.80 | 1.70 | 1.82 | 0.027 | 0.033 |
| 150 | 145-155 | 2.80 | 2.49 | 1.25 | 1.40 | 2.10 | 2.45 | 0.031 | 0.037 |
| 200 | 190-210 | 4.40 | 3.79 | 1.80 | 2.04 | 2.40 | 2.98 | 0.037 | 0.040 |
| 250 | 240-260 | 5.70 | 5.21 | 2.30 | 2.36 | 2.70 | 3.42 | 0.047 | 0.044 |
| 300 | 290-310 | 6.90 | 6.73 | 2.45 | 2.66 | 3.60 | 3.77 | 0.053 | 0.047 |



## Performance Highlights

### Pentacore Advantages:

- Higher structural strength in nearly every density
- Better or equal insulation in common OEM densities
- Superior compression strength (major advantage for floors & load areas)
- Consistent performance across the entire density spectrum
- A better strength-to-weight ratio at equivalent densities

### Gurit Advantages:

- Strong shear and tensile performance in higher-density grades
- Stable thermal performance with good conductivity at high densities
- Slightly higher shear strength at some grades

### Conclusion:

Pentacore is a better fit because its PET core exhibits higher compression strength, superior mid-density tensile performance, and lower thermal conductivity across key structural grades. This results in improved load-bearing capacity, reduced deflection, and better thermal efficiency without increasing panel weight or altering existing laminate designs.

**Pentacore US – Advanced Composite Panel & Foam Solutions**
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