

# PetraForge® Thermal Barrier Coating TR-66-1

## Low CTE, Medium Temperature, Chemical Resistant, + High Reflectivity

PetraForge coatings are waterborne, Zero VOC, ceramic-like coatings that combine the formulation and process versatility of a polymer coating with the physical properties of an advanced ceramic. PetraForge coatings can be applied by dipping, wet spraying, and rolling processes. This coating was developed especially for refractory bricks.

### Features and Benefits

- High reflectivity (Providing up to 30% heat loss reduction with furnace temperature of 1000 °C)
- Low thermal conductivity (<1.0 W/mK)
- High hardness, scratch, and abrasion resistance
- Modular properties; different combinations of optical, thermal, and mechanical properties can be achieved depending on the requirements of the applications

### Downloads

- [PetraForge Thermal Barrier Coating TR-66-1.pdf](#)

### Applications

Furnaces, Thermal barrier coatings, heat shield protection for energy conservation, etc.

### Technical Specifications

Property	Measured Value	Testing Method
Coating Method	Rolling	
Specific Gravity of slurry (g/ml)	2.09±0.05	
Thickness (um)	200±50	Scanning Electron Microscope
Hardness (Mohs)	6.5±.5	Mohs Hardness (1-10)
Total Reflectivity at RT-550°C	70%	Calculation from Blackbody FTIR (ASTM E408-13)
Max Operating Temp (outside skin temp)*	550°C (1022 °F)	Tested in Furnace

\* The coating is intended to be applied to the cold side of the bricks in furnaces allowing for furnace interior temperatures >1100°C.