The hardest thermal spray coating in the world!
- thermal spray of SiC made possible
ThermaSiC – Silicon Carbide based powder for thermal spray

Seram Coatings’ product ThermaSiC enables SiC (Silicon Carbide) to be applied as a coating by thermal spraying for the first time. ThermaSiC provides superior coating performance in corrosive and abrasive environments as well as at high temperatures (up to 1500° C in air and 2400° C in inert atmosphere). As SiC is one of the worlds hardest synthetic materials (only exceeded by diamond, cubic boron nitride and boron carbide) and possesses lower density than competing solutions such as WC (tungsten carbide), ThermaSiC gives your products a longer lifetime, lower maintenance costs as well as giving you a competitive advantage.

Compared to vacuum deposition methods (PVD or CVD), thermal spray of ThermaSiC provides faster deposition rates and efficiency and has a significantly lower cost. In addition ThermaSiC is specially designed to be used in atmospheric thermal spray conditions suppressing the need for expensive and size limiting vacuum chambers.

ThermaSiC is patent pending and owned by Seram Coatings AS and is currently being proven in pilot projects in several industries. We are ready to supply material for tests and pilots and welcome a discussion based on your needs.

Key properties of ThermaSiC thermal spray coatings:

- Superior corrosion and abrasion protection – also at high temperature (up to 1500° C in air and 2400° C in inert atmosphere)
- Very high hardness: up to 1900 HV (and we aim for even higher)
- High resistance against most kinds of wear types
- High thermal conductivity (superior to stainless steel)
- Low density (ca. 3g/cm³) – builds less weight to substrate
- Very attractive properties and pricing compared to CVD/PVD and WC-based coatings

Seram Coatings is the only supplier of SiC-based thermal spray coatings. ThermaSiC can be applied with key thermal spray processes such as for example atmospheric plasma spray, detonation gun and HVOF.