

BIRKOSIT® Dichtungskitt — Steam Turbine Sealing Application Note

Engineered Sealing Compound for Turbine Casings, Parting Planes and High-Energy Steam Joints

Application Context

Steam turbines operate under extreme conditions: very high temperature, high internal pressure, continuous thermal cycling, vibration, and large metal-to-metal joints. Any leakage at turbine parting planes or steam joints results in efficiency loss, safety risk, and costly rework. Sealing in such environments requires more than a general jointing paste — it requires an engineered sealing system.

Why BIRKOSIT for Steam Turbines

BIRKOSIT Dichtungskitt is a turbine-grade sealing compound designed specifically for high-temperature, high-pressure and dynamically loaded joints. It is widely used on turbine horizontal split casings, valve bodies, steam chests, compressors, pumps and other critical rotating equipment housings.

Key Technical Advantages

- Extreme temperature capability suitable for very high temperature steam environments (up to ~900°C).
- High pressure resistance suitable for heavily loaded joints and high-energy steam systems.
- Permanent elastic sealing behavior — tolerates vibration, casing breathing and thermal expansion/contraction without cracking or losing seal.
- Excellent surface adaptation — fills micro-irregularities on large machined parting planes and flange faces.
- Solvent-free sealing philosophy — no post-assembly shrinkage, no change in film thickness after assembly.
- Stable, predictable sealing film — what is applied remains in the joint.
- High-purity industrial formulation suitable for critical machinery and long-life assets.
- Allows immediate assembly and loading, while still permitting final alignment during erection.
- Designed for long maintenance intervals and long-term service, not short-term sealing.

Typical Turbine Applications

- HP / IP / LP turbine casing parting planes
- Steam chest and valve body joints
- High-pressure steam flanges
- Compressor and pump casings in turbine cycle
- Auxiliary system housings subjected to heat and vibration

BIRKOSIT is engineered for long-term sealing reliability in high-energy steam and critical rotating equipment applications, where thermal stability, pressure resistance and tolerance to vibration are essential.