

Invention relates to production of composite heat-insulating refractory materials for creating insulating, thermally stable coatings. Composite heat-insulating refractory material contains the following ingredients in the following proportions, wt.%: sol-gel binder, comprising modified metakaolin waste in an amount of 1–5 wt.% – 15–36; hollow aluminosilicate microspheres - 50-72; complex plasticizer based on lithium carbonate and synthetic polyelectrolyte - 2-10; water - 5-20. Material has low density and low thermal conductivity coefficient, with minimal linear changes, as well as high compressive strength.