

## Formation of Phases in Ti-Al System at 800 °C

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**In this work, kinetics of the intermediary phase formation in Ti-Al system during reactive sintering at 800 °C was investigated. Because it is very difficult to determine the kinetics on the powder mixture, special model system was utilized. This model consisted of solid titanium and molten aluminium and the intermediary phase formation was observed on the interface solid – liquid state at various times. Only  $\text{TiAl}_3$  phase formed during the test. The thickness of the layer was changing and based on these results it can be estimated how the process is controlled. It was revealed that the formation of  $\text{TiAl}_3$  phase is controlled by the rate of chemical reaction and the incubation period is 5 and 75 min.**

**Keywords:** Kinetics, Intermediary Phases, Aluminides, Reactive Sintering

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