Influence of the Crucible on the Oxidative-Induction Time (OIT)

The oxidative-induction time (OIT) can be determined in standard aluminum or in open copper crucibles in accordance with ASTM D3895.

Comparison of the oxidative-induction time in open copper and aluminum crucibles, determined under isothermal conditions at 180°C in the DSC 204 F1 Phoenix.

This plot represents an OIT measurement on HDPE carried out in open copper (red) and Al (black) crucibles, respectively. It can clearly be seen that, under isothermal conditions, oxidation of HDPE begins approximately 23 min earlier in the copper crucible than in the Al crucible.