Aromatics
Analysis of DOWTHERM

Application Note

Materials Testing & Research

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Introduction
Gas chromatography with an Agilent CP-Wax 52 CB column separates diphenyl and diphenyloxide (DOWTHERM organic heat transfer fluid) in 24 minutes.
Conditions

Technique: GC-capillary

Column: Agilent CP-Wax 52 CB, 0.32 mm x 50 m fused silica
        WCOT CP-Wax 52 CB (df = 0.2 μm)
        (Part no. CP7753) (+ retention gap 0.53 mm x 2.5 m)

Temperature: 60 °C (5 min) → 205 °C. 15 °C/min; 205 °C (10 min)

Carrier Gas: He, 100 kPa (1.0 bar, 14.3 psi)

Injector: On-column

Detector: FID
        T = 275 °C

Sample Size: 0.5 μL

Sample Size: CS₂

Peak identification

1. diphenyl
2. diphenyloxide (phenylether)
3. docosane (I.S.)