

Influence of temperature on CHIMASSORB 2020 migration in water (simulant A)

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Description

Influence of temperature on CHIMASSORB 2020 migration in water (simulant A) The migration of a hindered amine, CHIMASSORB 2020, was followed in three low density polyethylene films of 100 μm thickness containing respectively 2500 mg/kg, 5000 mg/kg and 7500 mg/kg in total immersion in water at temperatures of 23 degrees C, 60 degrees C and 100 degrees C for 24 months. The quantitative monitoring of the concentration of stabilizer in the film by FTIR has revealed low percentages of migration. The released amounts did not exceed in the worst case 18%, 8% and 4% at 100 degrees C, 60 degrees C and 23 degrees C, respectively The quantities released from the formulations containing 2500 mg/kg and 5000 mg/kg are below the Specific Migration Limit (SML = 5 mg/kg) making the use of this stabilizer in a long contact with water a priori without risk for the consumer. The migration kinetics follows with a ...