

APPLICATION SHEET

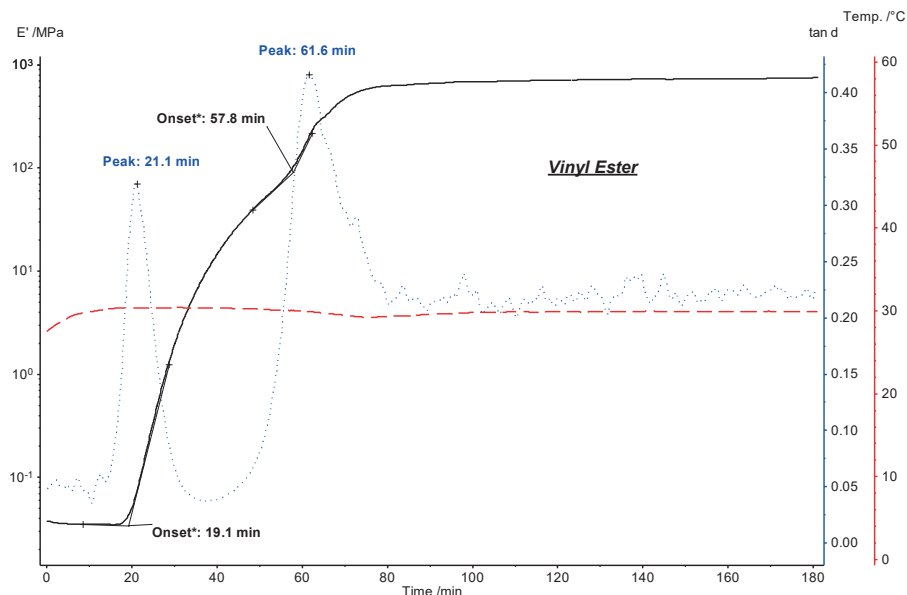
Polymers · Automotive
DMA 242 E Artemis

Vinly Ester Resin

Introduction

Vinyl ester resins have properties intermediate between those of epoxy resins and unsaturated polyester resins.

After curing, they have similar good thermal and mechanical properties like epoxy resins. In comparison with unsaturated polyester resins, they feature very good chemical resistance. They are mainly used in transport products.



Test Conditions

Temperature range:	isotherm, 30°C, 3 hours
Sample holder:	special sample holder for liquids
Frequency:	1 Hz
Amplitude:	±50 μm
Atmosphere:	static air
Proportional factor:	0
Max. dynamic force:	7.2 N
Sample preparation:	mixing of resin and catalyst (98:2)

Test Results

The storage modulus increases after 19 minutes, indicating the beginning of the curing process. It corresponds to a peak at 21 minutes in the tan δ curve. A second step during curing was detected at 58 minutes (onset temperature of the storage modulus curve). The related peak in the tan δ curve was determined at 62 minutes. Curing is finished after approximately 72 minutes when the storage modulus has become nearly constant. 0.30 J/(g·K).