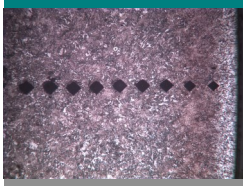
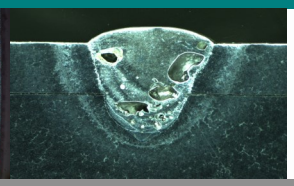
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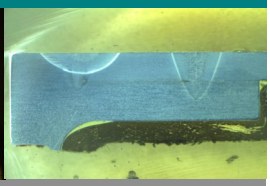

ASTM D 2196

Test Methods for Rheological Properties of Non-Newtonian Materials by Rotational (Brookfield type) Viscometer

These test methods cover the determination of the apparent viscosity and the shear thinning and thixotropic properties of non-Newtonian materials in the shear rate range from 0.1 to 50 s-1. Test method A consists of determining the apparent viscosity of coatings and related materials by measuring the torque on a spindle rotating at a constant speed in the material. Test Methods B and C consist of determining the shear thinning and thixotropic (time-dependent) rheological properties of the materials. The viscosities of these materials are determined at a series of prescribed speeds of a rotational-type viscometer. The agitation of the material immediately preceding the viscosity measurements is carefully controlled.

Test Method A is used for determining the apparent viscosity at a given rotational speed, although viscosities at two or more speeds give better characterization of a non-Newtonian material than does a single viscosity measurement.

With Test Methods B and C, the extent of shear thinning is indicated by the drop in viscosity with increasing viscometer speed. The degree of thixotropy is indicated by comparison of viscosities at increasing and decreasing viscometer speeds (Test Method B), viscosity re3covery (Test Method B), or viscosities before and after high shear (combination of Test Methods B and C). The high-shear treatment in Test Method C approximates shearing during paint application. The viscosity behavior measured after high shear is indicative of the characteristics of the paint soon after application.

(D2196, D-2196, D 2196)

New Hampshire Materials Laboratory, Inc
www.nhml.com • info@nhml.com
Tel: 800-334-5432 or 603-692-4110 • Fax: 603-692-4008