



Designation: D5551 – 95 (Reapproved 2006)

## Standard Test Method for Determination of the Cloud Point of Oil<sup>1</sup>

This standard is issued under the fixed designation D5551; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### 1. Scope

1.1 This test method covers the determination of the cloud point of oils used in the softening and stuffing of leather and in the manufacture of fat liquors and other softening and stuffing compounds. This test method was derived from Test Methods D97 and D2500.

1.2 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

### 2. Referenced Documents

2.1 *ASTM Standards:*<sup>2</sup>

D97 Test Method for Pour Point of Petroleum Products

D2500 Test Method for Cloud Point of Petroleum Products

E1 Specification for ASTM Liquid-in-Glass Thermometers

### 3. Terminology

3.1 *cloud point*—that temperature, expressed as a multiple of 1°C (2°F), at which a cloud or haze of wax crystals appears at the bottom of the test jar when the oil is cooled under prescribed conditions.

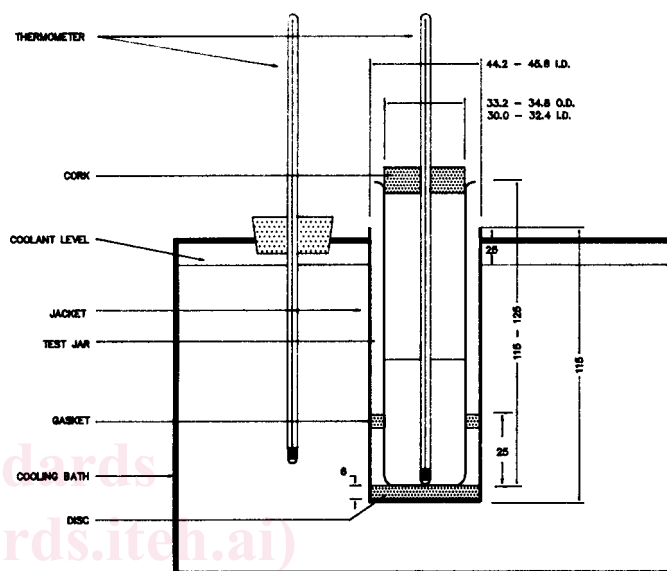
### 4. Significance and Use

4.1 This test method is intended to determine the cloud point of oils used in the softening and stuffing of leather, as well as those used in the manufacture of products for such purpose. The cloud point of oils is measured for the purpose of quality assurance.

<sup>1</sup> This test method is under the jurisdiction of ASTM Committee D31 on Leather and is the direct responsibility of Subcommittee D31.08 on Fats and Oils. This test method was developed in cooperation with the American Leather Chemists Assn. (Method H 18-1957).

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.



NOTE 1—All dimensions in millimeters.

FIG. 1 Apparatus for Cloud Point Test

### 5. Apparatus

5.1 *Test Jar*, clear cylindrical glass, flat bottom, 30- to 33.5-mm inside diameter, and 115- to 125-mm height. To indicate sample height the jar should be marked with a line 54 ± 3 mm above the inside bottom.

5.2 *Thermometers*, having ranges shown below and conforming to the requirements prescribed in Specification E1 for thermometers:

Thermometer	Temperature Range	Thermometer Number	
		ASTM	IP
High cloud and pour	-38 to +50°C	5C	1C
Low cloud and pour	-80 to +20°C	6C	2C
Melting point	+32 to +127°C	61C	63C

5.2.1 Since separation of liquid column thermometers occasionally occurs and may escape detection, thermometers should be checked immediately prior to the test and used only if they prove accurate within ± 1°C (for example, ice point).

5.3 *Cork*, to fit the test jar, bored centrally for the test thermometer.

5.4 *Jacket*, metal or glass, watertight, cylindrical, flat bottom, 115 mm in depth, 42- to 50-mm inside diameter. It must