Designation: D 1462 – 92 (Reapproved 1998)

AMERICAN SOCIETY FOR TESTING AND MATERIALS
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Standard Specification for Refined Soybean Oil[1]

This standard is issued under the fixed designation D 1462; 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 (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers refined soybean oil suitable for use in the paint and varnish industry.

2. Referenced Documents

2.1 *ASTM Standards:*

D 445 Test Method for Kinematic Viscosity of Transparent and Opaque Liquids [2]

D 555 Guide for Testing Drying Oils[3]

D 1475 Test Method for Density of Paint, Varnish, Lacquer, and Related Products[4]

D 1544 Test Method for Color of Transparent Liquids (Gardner Color Scale)[4]

D 1545 Test Method for Viscosity of Transparent Liquids by Bubble Time Method[3]

D 1639 Test Method for Acid Value of Organic Coating Materials[3]

D 1952 Test Method for Quantitative Determination of Break in Drying Oils[3]

D 1959 Test Method for Iodine Value of Drying Oils and Fatty Acids[3]

D 1960 Test Method for Loss on Heating of Drying Oils[3]

D 1962 Test Method for Saponification Value of Drying Oils, Fatty Acids, and Polymerized Fatty Acids[3]

D 1963 Test Method for Specific Gravity of Drying Oils, Varnishes, Resins, and Related Materials at 25/25°C[3]

D 1965 Test Method for Unsaponifiable Matter in Drying Oils, Fatty Acids, and Polymerized Fatty Acids[3]

D 1967 Test Method for Measuring Color After Heating of Drying Oils[3]

D 2090 Test Method for Clarity and Cleanness of Paint and Ink Liquids[3]

TABLE 1 Physical Properties

Property	Requirements	ASTM Method
Specific gravity, 25/25°C	0.917 to 0.924	D 1963, D 1475
Acid value, max	0.3	D 1639
Saponification value	189 to 195	D 1962
Unsaponifiable matter, max, %	1.5	D 1965
Iodine value (Wijs), min	126	D 1959
Loss on heating at 105 to 110°C, max, %	0.3	D 1960
Clarity	clear and transparent at 65°C	D 2090
Color (Gardner), max	6	D 1544
Color (after heating), max	4	D 1967
Break, max, %	0.02	D 1952
Viscosity, approximate stokes	0.32 to 0.50	D 1545, D 445

3. Properties

3.1 Refined soybean oil shall conform to the requirements in Table 1.

4. Test Methods

4.1 *Sampling*—Sampling shall be conducted in accordance with Test Method D 1466.

4.2 The properties enumerated in this specification shall be determined in accordance with the applicable ASTM test methods listed in Table 1. The significance of the test methods enumerated under properties in this specification is discussed in Guide D 555.

5. Keywords

5.1 drying oils; refined soybean oil; soybean oil

[1] This specification is under the jurisdiction of ASTM Committee D-1 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D01.32 on Drying Oils.

Current edition approved March 15, 1992. Published May 1992. Originally published as D 1462 – 57. Last previous edition D 1462 – 87.

[2] *Annual Book of ASTM Standards*, Vol 05.01.

[3] *Annual Book of ASTM Standards*, Vol 06.03.

[4] *Annual Book of ASTM Standards*, Vol 06.01.