



Standard Specification for Safflower Oil¹

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1. Scope

1.1 This specification covers a safflower oil suitable for use in protective coatings.

2. Referenced Documents

2.1 *ASTM Standards:*

- D 555 Guide for Testing Drying Oils²
- D 1475 Test Method for Density of Paint, Varnish, Lacquer, and Related Products³
- D 1541 Test Method for Total Iodine Value of Drying Oils and Their Derivatives²
- D 1544 Test Method for Color of Transparent Liquids (Gardner Color Scale)³
- D 1639 Test Method for Acid Value of Organic Coating Materials²
- D 1952 Test Method for Quantitative Determination of Break in Drying Oils²
- D 1959 Test Method for Iodine Value of Drying Oils and Fatty Acids²
- D 1960 Test Method for Loss on Heating of Drying Oils²
- D 1962 Test Method for Saponification Value of Drying Oils, Fatty Acids, and Polymerized Fatty Acids²
- D 1963 Test Method for Specific Gravity of Drying Oils, Varnishes, Resins, and Related Materials at 25/25°C²
- D 1967 Test Method for Measuring Color After Heating of Drying Oils²

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² *Annual Book of ASTM Standards*, Vol 06.03.

³ *Annual Book of ASTM Standards*, Vol 06.01.

TABLE 1 Physical Properties

Property	Requirement	ASTM Method
Specific gravity, 25/25°C	0.922 to 0.927	D 1963, D1475
Refractive index, 25°C	1.4740 to 1.4750	...
Iodine value	140 to 150	D 1541, D1959
Acid value, max	3.0	D 1639
Saponification value	189 to 195	D 1962
Loss on heating at 105 to 110°C, max, %	0.3	D 1960
Break, max, %	0.003	D 1952
Clarity	clear and transparent at 65°C	D 2090
Color (Gardner), max	12	D 1544
Color after heating, max	5	D 1967

D 2090 Test Method for Clarity and Cleanness of Paint and Ink Liquids²

3. Properties

3.1 *Safflower Oil* shall be the oil obtained solely from safflower seed, shall be free of dirt or other contamination, and 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 methods of testing enumerated under properties in this specification is discussed in Guide D 555.

5. Keywords

5.1 drying oils; safflower oil

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