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Standard Specification for Refined Sunflower Oil¹

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1. Scope

1.1 This specification covers once-refined sunflower oil, technical grade, suitable for use in protective coatings.

2. Referenced Documents

2.1 *ASTM Standards:*

D 555 Guide for Testing Drying Oils²

D 1466 Test Method for Sampling Liquid Oils and Fatty Acids Commonly Used In Paints, Varnishes, and Related Materials²

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 1965 Test Method for Unsaponifiable Matter in Drying Oils, Fatty Acids, and Polymerized Fatty Acids²

D 1967 Test Method for Color After Heating of Drying Oils²

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

3. Properties

3.1 Sunflower oil shall be obtained solely from sunflower seed and shall be suitably processed to conform to the requirements given in **Table 1**.

TABLE 1 Properties of Once-Refined Sunflower Oil

Property	Requirement	ASTM Test Method
Specific gravity 25/25°C	0.918 to 0.921	D 1963
Acid value	0.3 max	D 1639
Saponification value	188 to 194	D 1962
Unsaponifiable matter, %	1.5 max	D 1965
Iodine value (Wijs)	134 to 144	D 1959
Loss on heating at 105°C, %	0.2 max	D 1960
Color	7 max	D 1544
Color after heating	2 max	D 1967
Quantitative break, %	0.02 max	D 1952
Clarity	clear and transparent at 25°C	D 2090

4. Sampling

4.1 Sample in accordance with Test Method D 1466.

5. Test Methods

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

6. Keywords

6.1 drying oils; sunflower oil

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

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