



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.

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