



Designation: D 6743 – 01^{ε1}

An American National Standard

Standard Test Method for Thermal Stability of Organic Heat Transfer Fluids¹

This standard is issued under the fixed designation D 6743; 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.

^{ε1} NOTE—Subscript “60” was inadvertently dropped from Paragraph 8.1 and replaced editorially in June 2003.

1. Scope

1.1 This test method covers the determination of the thermal stability of unused organic heat transfer fluids. The procedure is applicable to fluids used for the transfer of heat at temperatures both above and below their boiling point (refers to normal boiling point throughout the text unless otherwise stated). It is applicable to fluids with maximum bulk operating temperature between 260°C (500°F) and 454°C (850°F). The procedure shall not be used to test a fluid above its critical temperature. In this test method, the volatile decomposition products are in continuous contact with the fluid during the test. This test method will not measure the thermal stability threshold (the temperature at which volatile oil fragments begin to form), but instead will indicate bulk fragmentation occurring for a specified temperature and testing period. Because potential decomposition and generation of high pressure gas may occur at temperatures above 260°C (500°F), do not use this test method for aqueous fluids or other fluids which generate high-pressure gas at these temperatures.

1.2 DIN Norm 51528 covers a test method that is similar to this test method.

1.3 The applicability of this test method to siloxane-based heat transfer fluids has not been determined.

1.4 The values stated in SI are the standard. The values provided in parentheses are for information only.

1.5 *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.* For specific precautionary statements, see 7.2, 8.8, 8.9 and 8.10.

2. Referenced Documents

2.1 *ASTM Standards:*

¹ This test method is under the jurisdiction of ASTM Committee D02 on Petroleum Products and Lubricants and is the direct responsibility of Subcommittee D02.L0 on Industrial Lubricants.

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