

IS 493 : PART 1 : 2019, Specification for general purpose machinery and spindle oils: Part 1 machinery oils (Second Revision)

General purpose machinery and spindle oils are specifically used for various types of non-critical (total loss) applications where the oil retention is for a small period of time. For more critical applications and high speed machinery anti-rust protection coupled with oxidation/thermal stability IS 11696 : 1986 may be followed. This standard was initially published in 1954 as IS 493 'Specification for general purpose machinery and spindle oils'. The Committee decided to bifurcate the standard into two parts based on their viscosity and was first revised in 1981. This standard (Part 1) prescribes the requirements and the methods of sampling and test for general purpose machinery oils for various types of non-critical (total loss) applications. The other part in this series is: Part 2 Spindle oil.

In the first revision (1981) requirements for viscosity, pour point, flash point, acidity and saponification value was modified. Additional requirements for colour was added. In order to meet the consumers' requirements, the grades have been increased from 5 to 8. In this second revision, the standard is updated including the clause for references.

Various physico-chemical properties including kinematic viscosity, flash point, saponification value and pour point and their test methods have been specified in the standard. These properties are critical in machinery oil for specific applications. Kinematic viscosity impacts lubrication and efficiency, flash point relates to safety and thermal stability, saponification value indicates chemical stability and pour point affects cold weather performance. Together, they help ensure optimal operation, safety, and longevity of machinery.

Implementing the specifications of IS 493 (Part 1) helps manufacturers produce high-quality machinery oils ensuring they meet necessary performance and safety criteria for various applications.

This standard does not cover oil compounded with fixed oils or soaps. This standard is not intended to cover oils containing additives but such oils are not precluded.