

## IS 539 : 1974, Naphthalene (Second Revision)

**Naphthalene** is an organic compound with formula  $C_{10}H_8$ . It is the simplest polycyclic aromatic hydrocarbon, and is a **white crystalline solid** with a characteristic odour. It is found in coal tar, gasoline and diesel fuels, and is used to make mothballs, lubricants and other chemicals.

Users expect naphthalene to be pure, free from contaminants, and have a strong, consistent odor for effective use. It should be safe, non-toxic, and should not stain clothes.

Indian standard IS 539: 1974 prescribes the requirements and the methods of sampling and test for naphthalene for use as **moth-repellent, hides and skin preservatives** and as a chemical for the production of chemical for the production of organic intermediates in the manufacture of dyes, drugs etc.

This standard was first issued in 1955. In view of the growing demand by chemical industries for hot-pressed naphthalene, the standard was revised in 1965 to specify two separate grades of naphthalene in the standard i.e Grade 1, **Naphthalene, pure**; and Grade 2, **Naphthalene, hot-pressed**. Subsequently, the requirements for matter insoluble in benzene and non-volatile matter for both the grades of naphthalene were incorporated in the standard in its second revision in 1974.

Indian standard specifies various physio-chemical properties including **crystallising point, moisture, ash percent by mass, matter insoluble in benzene and non-volatile matter**. These parameters provide a comprehensive assessment of naphthalene quality helping to ensure better performance in its intended uses. Limits for **total sulphur** and **total nitrogen** have also been specified in the standard which are important for ensuring the chemical stability and performance of naphthalene.

The standard also provides separate annexes prescribing test methods for determination of crystallizing point, determination of moisture content, determination of ash, acid wash test, determination of matter insoluble in benzene, determination of non-volatile matter and sampling of naphthalene.