IS 9473:2002 RESPIRATORY PROTECTIVE DEVICES- FILTERING HALF MASKS TO PROTECT AGAINST PRTICLES

The product defined in **IS 9473:2002** is **respiratory protective devices** specifically filtering half masks designed to protect the wearer from **particles** such as **solid aerosols, liquid aerosols, or water-based aerosols**. These masks are commonly used in environments with dust, fumes, or other airborne particulate matter, particularly in occupational settings like construction, mining, or chemical industries.

Key quality parameters of the mask includes:

***Filtration efficiency*:** The masks should effectively filter out harmful particles and accordingly, the standard categorizes masks into **FFP1, FFP2, and FFP3** classes, with increasing levels of particle filtration performance.

***Breathing resistance*:** The mask should allow comfortable breathing, minimizing resistance during inhalation and exhalation. The standard sets the maximum permissible breathing resistances based on the type of mask.

***Fit and seal*:** The mask should fit snugly on the face to prevent leakage, ensuring that air passes through the filter material rather than around the edges.

***Durability and comfort*:** The materials must withstand wear without deformation and must not cause skin irritation or discomfort, especially during prolonged use.

The standard outlines testing methods for filtration efficiency, breathing resistance, and total inward leakage to ensure masks meet the expected **performance and safety criteria**. For instance, **sodium chloride and paraffin oil tests** assess the mask's ability to filter solid and liquid aerosols. **Practical performance tests** ensure the mask's usability under real-world conditions, while **material specifications** ensure that the mask is both durable and skin-safe.

Overall, IS 9473:2002 establishes rigorous guidelines to ensure filtering half masks provide reliable protection against particulate hazards, aligning with consumer expectations for safety, comfort, and durability.