IS 15355 : 2018/ISO 8789 : 2009 Rubber Hoses and Hose Assemblies for Liquefied Petroleum Gas (L.P.G) in Motor Vehicles — Specification

1. Product Definition

This standard defines **rubber hoses and hose assemblies** used in motor vehicles for LPG transport. These hoses are suitable for operating at **pressures up to 3.0 MPa (30 bar)** and within **temperatures of -40°C to +80°C**. The construction includes a smooth-bore lining, reinforced layers (textile or corrosion-resistant metal), and an **oil and weather-resistant rubber cover** to maintain durability and prevent leakage in varying conditions.

2. Quality Parameters

To meet user expectations for safety, durability, and performance, the standard specifies rigorous quality parameters:

- **Materials and Construction**: Hoses must have a uniform, durable lining and cover that is resistant to **oil, weather, and gas permeation**. The cover also includes pin-pricking to prevent bubble formation.
- **Pressure and Temperature Tolerance**: Hoses must withstand a **proof pressure of 7.5 MPa** and a **burst pressure of 15.0 MPa**, along with **ozone resistance and flexibility** tests at sub-zero temperatures.
- **Dimensions and Concentricity**: The **internal diameter** and concentricity are precisely controlled for uniform performance, with tolerances based on hose size.
- **Fitting Requirements**: The hose fittings should be made from **stainless steel, brass, or corrosion-resistant materials** and should enable assembly without cover removal.
- **Leakage Prevention**: Hoses undergo tests for **permeability to propane gas** to ensure gas containment, and fittings are checked for secure assembly.

3. Keywords

LPG Hoses, Rubber Hose Assemblies, Pressure Resistance, Temperature Tolerance, Oil Resistance, Weather-Resistant, Gas Permeability, Burst Pressure, and Flexibility.

This specification provides a comprehensive guide for manufacturing and testing LPG hoses, ensuring safety, durability, and compliance for motor vehicle applications in varying environmental conditions.