

ASIAN DIN ABRASION TESTER (ROTARY DRUM TYPE)



In din method of determine abrasion resistance of vulcanized natural or synthetic, a cylindrical rubber test specimen is abraded against an abrasive surface mounted on a rotating cylindrical drum in such a manner that abrasion takes place on one of the flat ends of the test specimen which is held against the abrasive surface under a specified load while being traversed across it. The ratio of the volume loss of a standard rubber to the volume loss of the test rubber measured under the same conditions, expressed as a percentage, gives the abrasion resistance index of the rubber under test.

The **ASIAN Din Abrasion Tester** is designed to determine abrasion resistance index of natural and synthetic rubber in accordance with the above principle. It consists of test specimen holder with a cylindrical opening adjustable between 15.5 to 16.3 mm to clamp the test specimen with an arrangement to adjust the length of test specimen protruding out. The holder is mounted by a screw mechanism along a length of a rotating drum on which the abrasive cloth is fixed. The movement to the screw mechanism and drum is given by an electric motor, gearbox and chain mechanism to give the specified speed of rotation to the drum and the specified lateral movement to the test specimen holder. The swivel arm and test specimen holder are so disposed that the test specimen is pressed against the drum under the specified load with its center axis at an inclination of 3 degree to the perpendicular in the direction of rotation and placed above the longitudinal axis of drum. A rack and pinion arrangement to rotate the test specimen about its axis during the test (whenever desired) is also provided.

The abrasive cloth is firmly fixed to the drum using a suitable peel able adhesive with the ends of the abrasive cloth butt jointed together. The equipment is provided with limit switches which, in addition of giving over travel safety to the movement of test holder by preventing the lower edge of the test specimen holder to touch the abrasive cloth.

The equipment is built on rigid steel base and finished in grey metallic and bright chrome / zinc plating to give it a corrosion resistant finish.

Molding die, rotary type cutting die (hollow drill) for preparing test specimens and extra abrasive cloth are available as optional accessories.

TECHNICAL DATA

Dimensions of the specimen mm	: 16mm diameter with minimum height of 6
Dimensions of rotating drum	: 150 mm diameter with x about 460 mm long
Speed of rotation of drum	: 40 rpm
Lateral movement of test specimen holder	: 4.2 mm per revolution of drum
Rotation of test specimen	: 1 revolution per 50 revolutions of drum
Load on test specimen	: 5/10N
Total length of abrasion run	: 40 meters (about 84 revolutions)

RELATED STANDARD

ISO: 4649 – 1985
ASTM D5963
IS: 3400 (Part- III) - 1987