

**KES**

**Testing Method for IRHD  
& Vulcanized Rubbers**

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## 1. Scope of application

This standard shall specify the testing method of IRHD for small size of vulcanized rubbers.

**Remark** Range of measuring should be 30~85 of IRHD for standard, and should be applied to the range of 30 ~ 95 IRHD.

## 2. Definition of terms

The definitions of mainly terms used in this standard are shown in below table.

| Terms                        | Contents                             |
|------------------------------|--------------------------------------|
| IRHD                         | International Rubber Hardness Degree |
| Micro hardness degree tester | Micro Hardness Tester                |

## 3. General condition of test

### 3.1 Temperature and humidity of laboratory

- (1) Temperature of laboratory is  $23 \pm 2$  °C as a general rule, humidity is not regulated specially.
- (2) Testing temperature may be selected by agreement of concerned people, but the temperature should be written in test result.

### 3.2 Standard state of testing material

- (1) After 16 hours passed in vulcanization, it should be used for testing material.
- (2) Testing material should be in standard state regulated in 3.1 for 3 hours at least.

**Remark** In case of test by the condition of agreement of concerned people, testing material should leave alone for sufficient time.

## 4. Testing material

### 4.1 Dimension of testing material

- (1) The upper and bottom surface of testing material should be parallel.
- (2) It is a standard that thickness of testing material is  $2.0 \pm 0.5\text{mm}$ , width and length is over 4mm, but it should not excess support of testing material.
- (3) It may use for 0 ~ 4.0mm of thickness.

**Remark 1** Testing material (For example, oring), which shape is irregular or winding, may be used if there is agreement by concerned people. But comparison of measuring value with parallel testing material is impossible. In this case, write in addition shape of testing material and testing method by measurement of apparent hardness.

**Remark 2** Hardness test must execute at the position of over 2mm away from the end point of testing material.

**Remark 3** In case that thickness of testing material is below 1mm, testing material may overlap to obtain necessary thickness. But, do not overlap over 3 slices. In case that thickness of testing material is over 4mm, thickness should be below the regulation by grinding and lathe.

### 4.2 Making of testing material

- (1) Extract from vulcanized sheet of regular thickness.
- (2) In case that testing material is gathered in thick sheet, do grinding and lathe, make it in regular thickness. The surface of grinded testing material should be parallel. Do not overheat in grinding, and should not grind excessively.

## 5. Tester

Tester consists as follows, an example shows in figure 1.

- (1) Packing support for testing material