

**RESISTANCE TO LOW TEMPERATURE IMPACT****Application**

This method is used to determine the resistance to impact at low temperatures of polyurethane foams, foam-backed plastic, molded plastic, etc.

Apparatus Required**Test Equipment**

Refer to Figure 1, consisting of a fixture and a test stand with a ring.

Rubber Ball

Weight: 4.5 kg; diameter: 127 mm; durometer hardness: 60 +/- 5 Shore A

Source: Drechsler and Horst GmbH
Postfach 40 560
2 000 Hamburg 54
Germany

Steel Ball

225 +/- 5 g, 38 mm diameter

Convection Oven

Capable of maintaining a temperature of 80 +/- 2 °C.

Cold Box

Capable of maintaining a temperature of -40 +/- 2 °C.

Gloves

1 pair, strong fabric.

Conditioning and Test Conditions

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 °C and 50 +/- 5% relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

Date	Action	Revisions
2006 06 21	Revised	Step 4, 5 L. Schmalz
2001 04 02	Revised	Editorial – no technical change A. Cockman
1990 03 09		





Procedure

Method A - Rubber Ball

1. Place the component into the oven for 24 h at 80 +/- 2 °C.
2. Remove the component from the oven and condition it for 2 h at 23 +/- 2 °C and 50 +/- 5% relative humidity.
3. Place a section of the component having a minimum length of 200 mm on the fixture so that the area to be tested is normal to the direction of impact.
4. Place the assembly, (not the rubber ball) together with the gloves, into the cold box for 24 h at the temperature specified in the applicable Engineering Materials Specification.
5. At the end of 24 h, position the assembly on the base of the stand in such a manner that the released rubber ball drops exactly on the area to be tested. The distance between the ring and the test equipment must be 600 +/- 10 mm.
6. Release the rubber ball through the ring.
7. After conditioning the assembly at 23 +/- 2 °C and 50 +/- 5% relative humidity for 2 h, assess the specimen as defined by the applicable Engineering Materials Specification with the unaided eye from a distance of 300 mm.

Method B - Steel Ball

1. Same as Method A except use a 225 g steel ball.

Chemicals, materials, parts, and equipment referenced in this document must be used and handled properly. Each party is responsible for determining proper use and handling in its facilities.