

EDS

Engineering,
GM DAEWOO Auto & Technology
Standards

TEST METHOD FOR THE IMPACT STRENGTH OF PLASTIC STANDARD TEST PIECE

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1. SCOPE

This standard is used to determine the IZOD impact strength of plastic standard test pieces

2. DEFINITION

2.1. Unnotched impact strength : The unnotched impact strength is the striking energy absorbed by the unnotched test piece relative to the width of the test piece.

2.2. Notch impact strength : The notch impact strength is the striking energy absorbed by the notched test piece relative to the width of the test piece.

2.3. Relative notch impact strength : The relative notch impact strength is the ratio obtained from the notch impact strength and the impact strength.

2.4. Estimated net IZOD impact strength : For the specimen of less than 2.7kgf · cm/cm of notch, the estimated impact strength to correct the toss energy

3. TEST PIECES

3.1. Dimensions of unnotched and notched test pieces to determine impact strength are as shown in Table 1 and Fig. 1.

Table 1. Dimensions for unnotched and notched test pieces(mm)

Test pieces	Length (C)	Width (W)	Thickness of unnotched test pieces (E)	Residual thickness of notched test pieces (A)
Dimension	60.3~63.5	3~12.7	12.7 ± 0.15	10.16 ± 0.05

3.2. Dimensions of notch of the notched test pieces are described as follows.

- └ Angle of the notch : $45 \pm 1^\circ$
- └ Radius of curvature : 0.25 ± 0.05 mm

3.3. Unless otherwise specified, at least 5 pieces are tested and record the thickness of test pieces.

4. CONDITIONING

4.1. Follow the conditioning requirements specified in the drawing or material standard. Unless otherwise specified, leave the test pieces under the condition of $(23 \pm 2)^\circ\text{C}$ in temperature and $(50 \pm 5)\%$ in relative humidity for minimum 40 hours prior to the test.

4.2. For some hygroscopic materials, such as nylons, it requires sealing the specimens in water vapor-impermeable containers as soon as molded and not removing them until ready for testing.