

Method of Test for  
Compressive Stress and Resilience  
Of Elastomeric Mortar  
OHD L-6

1. SCOPE

- 1.1 The purpose of this method is to determine the Compressive Stress and Resilience of elastomeric mortar.

2. APPARATUS

- 2.1 Specimen molds for 2 inch cubes.
- 2.2 Testing machine of sufficient capacity which provides the loading rate specified and is accurate within  $\pm 1$  percent.
- 2.3 Calipers readable to 0.001 inch.
- 2.4 Dial Gauge readable to 0.001 inch.
- 2.5 Timer readable to 1 minute intervals.

3. PROCEDURE

- 3.1 Prepare the specimen of elastomeric mortar in 2 inch cubes so as to have flat, parallel opposing faces free from irregularities.
- 3.2 Cure the specimen at room temperature ( $72 \pm 5$  F) for 7 days. Test the specimen at this temperature.
- 3.3 Measure and record the initial thickness of the specimen to the nearest .001 inch.
- 3.4 Place the specimen in the testing machine and apply a 100 lb. Initial load. Zero the dial gauge. Load the specimen at a rate of 0.15 inch per minute until the dial gauge indicates a deformation of 0.10 inch. Record and release the compressive load at this point and start the timer.
- 3.5 Allow the specimen to rebound for 5 minutes. Measure and record the final thickness of the specimen to the nearest 0.001 inch.

#### 4. CALCULATIONS

- 4.1 The Compressive Stress of elastomeric mortar is calculated to the nearest psi as follows:

$$CS = \frac{CL}{4}$$

where

CS = Compressive Stress in psi,  
CL = Compressive Load in lbs.  
4 = Initial Area of Cube in Square inches.

- 4.2 The Resilience of the elastomeric mortar is calculated to the nearest percent as follows:

$$R = \frac{0.10 + FT - IT}{0.10} \times 100$$

Where

R = Resilience in Percent,  
FT = Final Thickness in Inches,  
IT = Initial Thickness in Inches.

#### 5. REPORT

- 5.1 Report the Compressive Stress to the nearest psi.
- 5.2 Report the Resilience to the nearest percent.