

# ISO 2439:2008-12 (E)

## Flexible cellular polymeric materials - Determination of hardness (indentation technique)

---

| <b>Contents</b>                                                              |                                                                                                           | <b>Page</b> |
|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------|
| Foreword .....                                                               |                                                                                                           | iv          |
| <b>1</b>                                                                     | <b>Scope .....</b>                                                                                        | <b>1</b>    |
| <b>2</b>                                                                     | <b>Normative references .....</b>                                                                         | <b>1</b>    |
| <b>3</b>                                                                     | <b>Terms and definitions .....</b>                                                                        | <b>2</b>    |
| <b>4</b>                                                                     | <b>Principle .....</b>                                                                                    | <b>2</b>    |
| <b>5</b>                                                                     | <b>Apparatus .....</b>                                                                                    | <b>2</b>    |
| <b>6</b>                                                                     | <b>Test pieces .....</b>                                                                                  | <b>3</b>    |
| <b>6.1</b>                                                                   | <b>Shape and dimensions .....</b>                                                                         | <b>3</b>    |
| <b>6.2</b>                                                                   | <b>Samples showing orientation .....</b>                                                                  | <b>3</b>    |
| <b>6.3</b>                                                                   | <b>Conditioning .....</b>                                                                                 | <b>3</b>    |
| <b>7</b>                                                                     | <b>Procedure .....</b>                                                                                    | <b>3</b>    |
| <b>7.1</b>                                                                   | <b>General .....</b>                                                                                      | <b>3</b>    |
| <b>7.2</b>                                                                   | <b>Preliminary indentation for Methods A, B and C .....</b>                                               | <b>4</b>    |
| <b>7.3</b>                                                                   | <b>Method A -- Determination of the 40 %/30 s indentation hardness index .....</b>                        | <b>4</b>    |
| <b>7.4</b>                                                                   | <b>Method B -- Determination of the 25 %-40 %-65 %/30 s indentation hardness characteristics .....</b>    | <b>4</b>    |
| <b>7.5</b>                                                                   | <b>Method C -- Determination of the 40 % indentation hardness check .....</b>                             | <b>5</b>    |
| <b>7.6</b>                                                                   | <b>Method D -- Determination of the 25 %/20 s low indentation hardness index .....</b>                    | <b>5</b>    |
| <b>7.7</b>                                                                   | <b>Method E -- Determination of the compressive deflection coefficient and hysteresis loss rate .....</b> | <b>5</b>    |
| <b>8</b>                                                                     | <b>Repeat tests .....</b>                                                                                 | <b>7</b>    |
| <b>9</b>                                                                     | <b>Test report .....</b>                                                                                  | <b>7</b>    |
| <b>Annex A (informative) Test method parameters and typical graphs .....</b> |                                                                                                           | <b>8</b>    |
| <b>Annex B (informative) Precision of Method E .....</b>                     |                                                                                                           | <b>12</b>   |
| <b>Bibliography .....</b>                                                    |                                                                                                           | <b>14</b>   |