

ISO 17541:2014-09 (E)

Plastics - Quantitative evaluation of scratch-induced damage and scratch visibility

| Contents | Page |
|-------------------------------------------------------------------------------------------------------------|------|
| Foreword | iv |
| 1 Scope | 1 |
| 2 Normative references | 1 |
| 3 Terms and definitions | 1 |
| 4 Principle | 3 |
| 5 Apparatus | 3 |
| 5.1 General description | 3 |
| 5.2 Scratch tip | 3 |
| 5.3 Load and position sensors | 4 |
| 5.4 Test load | 4 |
| 5.5 Test speed | 4 |
| 5.6 Specimen stage | 4 |
| 6 Test specimens | 5 |
| 6.1 General | 5 |
| 6.2 Shape and dimensions | 5 |
| 6.3 Preparation | 5 |
| 6.4 Conditioning | 5 |
| 6.5 Number of test specimens | 5 |
| 7 Procedure | 5 |
| 7.1 Test atmosphere | 5 |
| 7.2 Scratch tip | 5 |
| 7.3 Method A (constant load condition) | 5 |
| 7.4 Method B (linearly increasing load condition) | 6 |
| 7.5 Scratch testing | 6 |
| 8 Interpretation of result | 7 |
| 8.1 General | 7 |
| 8.2 Scratch strength and scratch resistance | 7 |
| 8.3 Single-damage (SD) | 7 |
| 8.4 Multiple-damage (MD) | 8 |
| 9 Test report | 10 |
| Annex A (informative) 3-D colour model | 12 |
| Annex B (informative) Example for quantitative determination of scratch damage and scratch visibility | 13 |
| Bibliography | 17 |