ISO 10477:2026-09 (E)

Dentistry - Polymer-based crown and veneering materials

Contents

Page

Foreword ..... **v**

Introduction ..... **vi**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

4 Classification **3**

5 Requirements **3**
5.1 General 3
5.2 Depth of cure 4
5.2.1 General 4
5.2.2 Depth of cure (only type 2 class 2 materials) 4
5.3 Surface finish 4
5.4 Flexural strength 4
5.5 Bond strength 5
5.5.1 Special bonding system without macromechanical retention 5
5.5.2 Values higher than 5 MPa 5
5.6 Water sorption 5
5.7 Solubility 5
5.8 Shade consistency 5
5.9 Colour stability 6

6 Sampling **6**
6.1 For all tests 6
6.2 For test of shade consistency 6
6.3 For test of colour stability 6

7 Measurement and test methods **6**
7.1 General 6
7.1.1 Ambient test conditions 6
7.1.2 Water 6
7.1.3 Preparation of test specimens 6
7.2 Visual inspection 7
7.3 Depth of cure (only for type 2, class 2 if not opaque resin) 7
7.3.1 Apparatus 7
7.3.2 Materials 8
7.3.3 Procedure and specimen preparation 9
7.3.4 Expression of results 9
7.4 Surface finish 9
7.4.1 Apparatus (for type 2 class 3 and type 4 materials) 9
7.4.2 Materials 9
7.4.3 Specimen preparation 9
7.4.4 Surface polishing 10
7.5 Flexural strength 10
7.5.1 Apparatus 10
7.5.2 Materials 11
7.5.3 Preparation of test specimens 11
7.5.4 Procedure 12
7.5.5 Expression of results 13
7.6 Bond strength (only type 1, type 2 classes 1 and 2 and type 3 materials) 13
7.6.1 Apparatus 13

7.6.2 Materials 14
7.6.3 Preparation of test specimens 15
7.6.4 Procedure 15
7.6.5 Expression of results 15
7.7 Water sorption and solubility 16
7.7.1 Apparatus 16
7.7.2 Materials 16
7.7.3 Preparation of test specimen 17
7.7.4 Procedure 17
7.7.5 Expression of results 18
7.8 Shade consistency and colour stability 19
7.8.1 General 19
7.8.2 Apparatus 19
7.8.3 Materials 19
7.8.4 Preparation of test specimens 20
7.8.5 Procedure 20
7.8.6 Colour comparison 21
7.8.7 Expression of results for shade consistency 21
7.8.8 Expression of results for colour stability 21
8 Packaging and labelling 21
8.1 Packaging 21
8.2 Labelling and instructions for use 21
Bibliography 25