# DIN EN ISO 10477:2018-10 (E)

## Dentistry - Polymer-based crown and veneering materials (ISO 10477:2018)

## Contents

Page


**European foreword** ... **4**

**Foreword** ... **5**

**Introduction** ... **6**

**1 Scope** ... **7**

**2 Normative references** ... **7**

**3 Terms and definitions** ... **7**

**4 Classification** ... **8**

**5 Requirements** ... **8**
5.1 General ... 8
5.2 Depth of cure ... 9
5.2.1 General ... 9
5.2.2 Depth of cure, Type 2, Class 2 materials ... 9
5.3 Surface finish ... 9
5.4 Flexural strength ... 9
5.5 Bond strength ... 10
5.5.1 Special bonding system without macromechanical retention ... 10
5.5.2 Values higher than 5 MPa ... 10
5.6 Water sorption ... 10
5.7 Solubility ... 10
5.8 Shade consistency ... 10
5.9 Colour stability ... 10
5.10 Biocompatibility ... 10

**6 Sampling** ... **10**
6.1 For all tests ... 10
6.2 For test of shade consistency ... 11
6.3 For test of colour stability ... 11

**7 Measurement and test methods** ... **11**
7.1 General ... 11
7.1.1 Test conditions ... 11
7.1.2 Water ... 11
7.1.3 Preparation of test specimens ... 11
7.2 Visual inspection ... 11
7.3 Depth of cure ... 11
7.3.1 Apparatus ... 11
7.3.2 Materials ... 12
7.3.3 Procedure ... 12
7.3.4 Expression of results ... 12
7.4 Surface finish ... 12
7.5 Flexural strength ... 13
7.5.1 Apparatus ... 13
7.5.2 Materials ... 14
7.5.3 Preparation of test specimens ... 14
7.5.4 Procedure ... 15
7.5.5 Expression of results ... 15

7.6 Bond strength ..... 16
7.6.1 Apparatus ..... 16
7.6.2 Materials ..... 17
7.6.3 Preparation of test specimens ..... 17
7.6.4 Procedure ..... 18
7.6.5 Expression of results ..... 18
7.7 Water sorption and solubility ..... 18
7.7.1 Apparatus ..... 18
7.7.2 Materials ..... 19
7.7.3 Preparation of test specimen ..... 19
7.7.4 Procedure ..... 20
7.7.5 Expression of results ..... 20
7.8 Shade consistency and colour stability ..... 21
7.8.1 General ..... 21
7.8.2 Apparatus ..... 22
7.8.3 Materials ..... 22
7.8.4 Preparation of test specimens ..... 22
7.8.5 Procedure ..... 22
7.8.6 Colour comparison ..... 23
7.8.7 Expression of results for shade consistency ..... 23
7.8.8 Expression of results for colour stability ..... 23
**8 Packaging and labelling ..... 23**
8.1 Packaging ..... 23
8.2 Labelling ..... 23
8.2.1 General ..... 23
8.2.2 Labelling of outer pack ..... 23
8.2.3 Labelling of containers ..... 24
**9 Instructions for use ..... 24**