

DIN EN ISO 22674:2016-09 (E)

Dentistry - Metallic materials for fixed and removable restorations and appliances (ISO 22674:2016)

Contents		Page
Europeanforeword		4
7.9	Linear thermal expansion	19
8	Test methods	19
8.1	Information, instructions and marking	19
8.2	Chemical composition	20
8.3	Mechanical testing	20
8.3.1	Apparatus	20
8.3.2	Test procedure	20
8.4	Proof stress of 0,2 % non-proportional extension	21
8.4.1	Calculation	21
8.4.2	Mean value	21
8.5	Percentage elongation after fracture	21
8.5.1	Calculation	21
8.5.2	Mean value	21
8.6	Elastic modulus measurement	21
8.6.1	Tensile strain method	21
8.6.2	Flexure method in three- or four-point bending mode	22
8.6.3	Acoustic resonance method	24
8.7	Calculation of elasticity parameters from acoustic measurement	25
8.7.1	General	25
8.7.2	Elastic modulus	26
8.7.3	Shear modulus	26
8.7.4	Poisson ratio	27
8.8	Density	27
8.8.1	Preparation of test specimens	27
8.8.2	Reagents	27
8.8.3	Apparatus	27
8.8.4	Procedure	27
8.9	Corrosion resistance by the static immersion procedure of ISO 10271:2011	27
8.9.1	Preparation of test specimens	27
8.9.2	Reagents	27
8.9.3	Apparatus	27
8.9.4	Test solution	28
8.9.5	Test procedure	28
8.9.6	Analysis	28
8.9.7	Treatment of data	28
8.10	Sulfide tarnish test (cyclic immersion)	28
8.11	Sulfide tarnish test (static immersion)	28
8.12	Solidus and liquidus temperatures (dental casting alloys) or melting point (commercially pure metals)	28
8.12.1	Cooling curve method	28
8.12.2	Thermal analysis method	29
8.13	Linear thermal expansion	30
9	Information and instructions for use	30
9.1	Information	30
9.2	Processing instructions	31
10	Marking and labelling	31

10.1	Marking	31
10.2	Labelling of the package	31
Annex A (informative) Tensile testing of a non-cast Type 0 metallic material that is intended for use in a thickness between 0,1 mm and 0,5 mm		33
Annex B (normative) Calculation of uncertainty for elasticity measurement		36
Annex C (informative) Measurement of Poisson ratio		40
Bibliography		42
7.7	Corrosion resistance	19
7.8	Tarnish resistance and colour	19