DIN EN ISO 8098:2023-04 (E)

Cycles - Safety requirements for bicycles f or young children (ISO 8098:2023)

Contents

Page

European foreword ... **4**

Foreword ... **5**

Introduction ... **6**

1 Scope ... **7**

2 Normative references ... **7**

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

4 Requirements and test methods ... **9**

4.1 Brake tests and strength tests — Special requirements ... 9
4.1.1 Brake tests to which special requirements apply ... 9
4.1.2 Strength tests to which special requirements apply ... 9
4.1.3 Numbers and condition of specimens for the strength tests ... 9
4.1.4 Tolerances ... 10
4.1.5 Fatigue test ... 10
4.1.6 Plastic material test ambient temperature ... 10
4.1.7 Impact test ... 10
4.2 Toxicity ... 10
4.3 Sharp edges ... 11
4.4 Security and strength of safety-related fasteners ... 11
4.4.1 Security of screws ... 11
4.4.2 Minimum failure torque ... 11
4.4.3 Quick-release devices ... 11
4.4.4 Foot location devices ... 11
4.4.5 Folding bicycle mechanism ... 11
4.5 Crack detection methods ... 11
4.6 Exposed protrusions ... 11
4.7 Brakes ... 12
4.7.1 Braking-systems ... 12
4.7.2 Hand-operated brakes ... 12
4.7.3 Attachment of brake assembly and cable requirements ... 14
4.7.4 Brake-block and brake-pad assemblies — Security test ... 15
4.7.5 Brake adjustment ... 15
4.7.6 Back-pedal brake ... 15
4.7.7 Braking-system — Strength tests ... 15
4.7.8 Braking performance ... 16
4.8 Steering ... 18
4.8.1 Handlebar — Dimensions and end fittings ... 18
4.8.2 Handlebar grips and end plugs ... 18
4.8.3 Handlebar-stem — Insertion depth mark or positive stop ... 20
4.8.4 Steering stability ... 20
4.8.5 Steering assembly — Static strength and security tests ... 20
4.8.6 Handlebar and stem assembly — Fatigue test ... 24
4.9 Frames ... 26
4.9.1 Frame and front fork assembly — Impact test (falling mass) ... 26
4.9.2 Frame and front fork assembly — impact test (falling frame) ... 27
4.10 Front fork ... 28
4.10.1 General ... 28

4.10.2 Front fork — Bending fatigue test ... 28
4.11 Wheel and tyre assembly ... 29
4.11.1 Wheel and tyre assembly — Rotational accuracy ... 29
4.11.2 Wheel and tyre assembly — Clearance ... 30
4.11.3 Wheel and tyre assembly — Static strength test ... 31
4.11.4 Wheels — Wheel retention ... 31
4.11.5 Tyre inflation pressure ... 32
4.11.6 Wheel and tyre assembly —Overpressure test ... 32
4.12 Pedals and pedal/crank drive system ... 32
4.12.1 Pedal tread ... 32
4.12.2 Pedal clearance ... 33
4.12.3 Pedal — Impact test ... 33
4.12.4 Pedal/pedal-spindle — Dynamic durability test ... 34
4.12.5 Drive system static strength test ... 35
4.12.6 Crank assembly — Fatigue tests ... 36
4.13 Saddles and seat-posts ... 37
4.13.1 Limiting dimensions ... 37
4.13.2 Seat-post — Insertion-depth mark or positive stop ... 37
4.13.3 Saddle and seat-post security test ... 38
4.13.4 Saddle — Static strength test ... 38
4.13.5 Saddle and seat-post assembly fatigue test ... 39
4.14 Chain-wheel and belt-drive protective device ... 40
4.15 Stabilizers ... 41
4.15.1 Mounting and dismounting ... 41
4.15.2 Dimensions ... 41
4.15.3 Vertical load test ... 42
4.15.4 Longitudinal load test ... 42
4.16 Luggage carriers ... 43
4.17 Lighting systems and reflectors ... 43
4.17.1 Front and rear light ... 43
4.17.2 Reflectors ... 43
4.17.3 Wiring harness ... 44
4.18 Warning device ... 44
5 Instructions ... **44**
6 Marking ... **45**
6.1 Requirement ... 45
6.2 Durability test ... 46
6.2.1 Requirement ... 46
6.2.2 Test method ... 46
Annex A (informative) **Steering geometry** ... **47**
Annex B (informative) **Verification of free fall velocity** ... **48**
Bibliography ... **49**