# DIN EN ISO 13997:2023-12 (E)

## Protective clothing - Mechanical properties - Determination of resistance to cutting by sharp objects (ISO 13997:2023)

## Contents


Page

European foreword ..... 3

Foreword ..... 4

Introduction ..... 5

1 Scope ..... 6

2 Normative reference ..... 6

3 Termsanddefinitions ..... 6

4 Sampling ..... 7
4.1 General ..... 7
4.2 Textiles and other materials ..... 7
4.3 Gloves ..... 8
4.4 Conditioning ..... 8

5 Test method ..... 9
5.1 Principle ..... 9
5.2 Test apparatus ..... 10
5.2.1 Rigid framework ..... 11
5.2.2 Force application system ..... 12
5.2.3 Specimen holder mount ..... 12
5.2.4 Specimen holder ..... 12
5.2.5 Specimen securing clamp ..... 12
5.2.6 Blades ..... 13
5.2.7 Blade holder ..... 14
5.2.8 Cutting-motion system ..... 14
5.2.9 Cut-stroke length measurement system ..... 14
5.3 Calibration ..... 14
5.3.1 Beam balancing procedure ..... 14
5.3.2 Cutting speed adjustment ..... 15
5.3.3 Validation of blades ..... 15
5.4 Test procedure ..... 16
5.4.1 Specimen mounting ..... 16
5.4.2 Test procedure for measuring the cutting stroke length ..... 17
5.4.3 Test procedure for determining the calculated cutting force ..... 17
5.4.4 Calculations ..... 18

6 Test report ..... 18

Annex A (informative) Inter-laboratory test data analysis ..... 20

Annex B (normative) Calculated cutting force determination ..... 22

Annex C (normative) Testing of the calibration material (see 5.3.3.1) ..... 27

Bibliography ..... 28