

DIN EN ISO 18526-3:2026-06 (E)

Eye and face protection - Test methods - Part 3: Physical and mechanical properties (ISO 18526-3:2020)

Contents		Page
Foreword		vi
Introduction		vii
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Preparatory information	1
5	General test requirements	2
6	Physical test methods	2
6.1	Physical inspection	2
6.1.1	Principle	2
6.1.2	Procedure	2
6.1.3	Test report	2
6.2	Field of view	3
6.2.1	Principle	3
6.2.2	Apparatus	3
6.2.3	Procedure	3
6.2.4	Test report	3
6.3	Area to be protected — Assessment from the frontal direction	4
6.3.1	Principle	4
6.3.2	Apparatus	4
6.3.3	Procedure	4
6.3.4	Test report	4
6.4	Area to be protected — Assessment from the lateral direction	4
6.4.1	Principle	4
6.4.2	Apparatus	4
6.4.3	Procedure	4
6.4.4	Test report	5
6.5	Retention by headbands and harnesses (sit and fit)	5
6.5.1	Principle	5
6.5.2	Procedure	5
6.5.3	Test report	5
6.6	Visual assessment of material and surface quality of lenses	5
6.6.1	Principle	5
6.6.2	Apparatus	5
6.6.3	Procedure	6
6.6.4	Test report	6
6.7	Resistance to thermal exposure	6
6.7.1	Principle	6
6.7.2	Procedure	7
6.7.3	Test report	7
6.8	Resistance to ultraviolet radiation	7
6.8.1	Principle	7
6.8.2	Solar ultraviolet radiation	7
6.8.3	Ultraviolet radiation from artificial sources	9
6.9	Resistance to corrosion	9
6.9.1	Principle	9

6.9.2	Reagents and materials	10
6.9.3	Procedure	10
6.9.4	Test report	10
6.10	Resistance to ignition	10
6.10.1	Principle	10
6.10.2	Apparatus	10
6.10.3	Procedure	10
6.10.4	Test report	11
6.11	Resistance to fogging of lenses or filters	11
6.11.1	Principle	11
6.11.2	Apparatus	11
6.11.3	Conditioning	12
6.11.4	Procedure	12
6.11.5	Test report	13
6.12	Protection against droplets	13
6.12.1	Principle	13
6.12.2	Reagents, material and apparatus	13
6.12.3	Procedure	13
6.12.4	Test report	14
6.13	Protection against streams of liquids	14
6.13.1	Principle	14
6.13.2	Reagents, materials and apparatus	14
6.13.3	Procedure	15
6.13.4	Test report	15
6.14	Protection against large dust particles	16
6.14.1	Test principle	16
6.14.2	Material and apparatus	16
6.14.3	Procedure	17
6.14.4	Test report	18
6.15	Protection against gases and fine dust	18
6.15.1	Principle	18
6.15.2	Apparatus	18
6.15.3	Procedure	19
6.15.4	Test report	19
6.16	Protection against radiant heat	19
6.16.1	Principle	19
6.16.2	Test apparatus	19
6.16.3	Preparation of the test sample	20
6.16.4	Procedure	20
6.16.5	Test report	21
6.17	Chemical resistance	21
6.17.1	Principle	21
6.17.2	Procedure	21
6.17.3	Test report	21
7	Mechanical test methods	21
7.1	General	21
7.2	Tests on unmounted lenses	22
7.2.1	Minimum robustness of unmounted lenses (static load test)	22
7.2.2	Drop ball test for unmounted lenses	25
7.3	Tests on complete eye protectors	27
7.3.1	Drop ball test for complete protectors	27
7.3.2	Ballistic impact test for complete protectors	28
7.3.3	High mass test for complete protectors	29
7.4	Resistance to surface damage due to flying fine particles	31
7.4.1	Principle	31
7.4.2	Material and apparatus	31
7.4.3	Preparation of reference samples for measurement of light scatter	33
7.4.4	Preparation of test samples	34
7.4.5	Procedure	34

7.4.6	Evaluation of narrow angle scatter of the test sample.....	34
7.4.7	Evaluation of wide angle scatter of the test sample.....	34
7.4.8	Test report.....	35
7.5	Penetration of vents and gaps.....	35
7.5.1	Principle.....	35
7.5.2	Apparatus.....	35
7.5.3	Procedure.....	36
7.5.4	Test report.....	36
7.6	Protection against molten metals and hot solids.....	36
7.6.1	Adherence of molten metal.....	36
7.6.2	Resistance to penetration of protector by hot solids.....	39
8	Marking and packaging.....	40
8.1	Principle.....	40
8.2	Procedure.....	40
8.3	Test report.....	40
9	Information to be supplied by the manufacturer.....	40
9.1	Principle.....	40
9.2	Procedure.....	40
9.3	Test report.....	40
10	Additional test methods for protectors during welding and related techniques.....	41
10.1	Dimension measurements of welding hand shields.....	41
10.1.1	Procedure.....	41
10.1.2	Test report.....	41
10.2	Drop test of welding protectors.....	41
10.2.1	Principle.....	41
10.2.2	Apparatus.....	41
10.2.3	Preparation of test samples.....	41
10.2.4	Procedure.....	41
10.2.5	Test report.....	41
10.3	Light tightness of welding protectors.....	42
10.3.1	Principle.....	42
10.3.2	Procedure.....	42
10.3.3	Test report.....	42
10.4	Electrical insulation of welding helmets and welding hand shields.....	42
10.4.1	Principle.....	42
10.4.2	Procedure.....	42
10.4.3	Test report.....	42
11	Additional test methods for mesh protectors.....	43
11.1	Number of apertures in a mesh.....	43
11.1.1	Principle.....	43
11.1.2	Procedure.....	43
11.1.3	Test report.....	43
11.2	Contact with metal parts.....	43
11.2.1	Principle.....	43
11.2.2	Procedure.....	43
11.2.3	Test report.....	43
	Annex A (normative) Application of uncertainty of measurement.....	44
	Annex B (normative) Long wavelength pass filter.....	47
	Annex C (informative) Full details of the apparatus for the streams of liquids test.....	49
	Bibliography.....	51