

ISO 11611:2024-06 (E)

Protective clothing for use in welding and allied processes

Contents

Page

Foreword.....	v
Introduction.....	vii
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	2
4 General and design requirements.....	5
4.1 General.....	5
4.2 Protective clothing.....	5
4.3 Size designation and fit.....	5
4.4 Additional protective garments.....	5
4.5 Pockets and flap closures.....	6
4.6 Closures and seams.....	6
4.7 Hardware.....	6
5 Sampling and pre-treatment.....	6
5.1 Sampling.....	6
5.1.1 General.....	6
5.1.2 Sampling procedure on fabric materials for the UV transmission measurement.....	7
5.2 Pre-treatment of material.....	8
5.3 Ageing.....	9
5.4 Conditioning.....	9
6 General performance requirements.....	9
6.1 Classification.....	9
6.2 Tensile strength.....	9
6.3 Tear strength.....	10
6.4 Burst strength of knitted materials and seams.....	10
6.5 Seam strength.....	10
6.6 Dimensional change of textile materials.....	10
6.7 Limited flame spread.....	10
6.7.1 General.....	10
6.7.2 Testing in accordance with ISO 15025:2016, Procedure A (code letter A1).....	11
6.7.3 Testing in accordance with ISO 15025:2016, Procedure B (code letter A2).....	12
6.8 Impact of spatter (small splashes of molten metal).....	12
6.9 Heat transfer (radiation).....	12
6.10 Electrical resistance.....	13
6.11 Fat content of leather.....	13
6.12 Protection against UV radiation.....	13
6.13 Performance requirements.....	13
7 Marking.....	14
7.1 General.....	14
7.2 Procedure and examples of markings:.....	15
8 Information supplied by the manufacturer.....	16
8.1 General.....	16
8.2 Intended use.....	16
8.3 Improper use.....	17
8.4 Care and maintenance.....	17

9	Test report	17
	Annex A (informative) General explanations related to the UV protective characteristics of welders' protective clothing and to the measuring methods used	18
	Annex B (normative) Classification system of the type of welders' clothing (Class 1/Class 2, UV protection period class for welding process groups 'A', 'B'and 'C')	19
	Annex C (normative) Test procedure for the protective effect against UV radiation emitted by welding processes	21
	Annex D (normative) Instructions for calculating the effectively transmitted total irradiance E_{eff} and the resulting maximum time of use related to the exposure limit value H_{eff} of 30 J/m², by using the determined worst-case UV transmission spectra of fabrics for welding protective garments	23
	Annex E (normative) Spectral distribution and maximum effectively emitted total irradiance E_e of the selected representative welding processes in Table B.2	27
	Annex F (normative) Spectral weighing function $S_{\text{eff}}(\lambda)$ for use in Table D.1, column F	33
	Annex G (normative) Determination of property values for rating and classification	38
	Annex H (informative) Uncertainty of Measurement	39
	Annex I (informative) Summary of conducted Round Robin trials in the development of the UV transmission test procedure	41
	Bibliography	43