
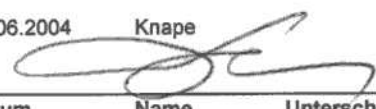


<b>Prüfbericht - Nr.:</b> 21114006 001 <i>Test Report No.</i>		Seite 1 von 7 Page 1 of 7	
<b>Auftraggeber:</b> WELDAS EUROPE B. V. <i>Client:</i> De Poort 77, 4411 PB Rilland, Holland			
<b>Gegenstand der Prüfung:</b> Protective clothing for use in welding and allied processes <i>Test item:</i>			
<b>Bezeichnung:</b> <i>Identification:</i>	DOO-RAG 's CAPS HELMET HOODS and CAPS	<b>Serien-Nr.:</b> <i>Serial No.</i>	1007109
<b>Wareneingangs-Nr.:</b> <i>Receipt No.:</i>	744-400296 03	<b>Eingangsdatum:</b> <i>Date of receipt:</i>	09.03.2004
<b>Prüfört:</b> <i>Testing location:</i>	TRPS / Prüfstelle für Produktsicherheit Leipzig Maximilianallee 4, 04129 Leipzig, Fon/Fax: +49 341 60 56 06-0 / -5		
<b>Prüfgrundlage:</b> <i>Test specification:</i>	EN 340: 2003, prEN ISO 11611: 2003 RL 89/686/EWG appendix II		
<b>Prüfergebnis:</b> <i>Test Result</i>	Der vorstehend beschriebene Prüfgegenstand wurde geprüft und entspricht oben genannter Prüfgrundlage. The a. m. test item passed.		
<b>Prüflaboratorium/Testing Laboratory</b> geprüft/tested by:		<b>kontrolliert/checked by</b>	
15.06.2004	Zaremba	15.06.2004	Knappe
_____	_____	_____	_____
<small>Datum Date</small>	<small>Name Name</small>	<small>Unterschrift Signature</small>	<small>Datum Date</small>
			
<b>Sonstiges/Other Aspects:</b>			
<b>items:</b>	DOO-RAG	23-3612, 23-3613	flame retardant fabric
	CAPS	23-*514, 23-*515	flame retardant fabric
	HELMET HOODS and CAPS	23-6690, 23-6680	flame retardant fabric
class 2			
<b>Abkürzungen:</b> ok / P = entspricht Prüfgrundlage fail / F = entspricht nicht Prüfgrundlage n.a. / N = nicht anwendbar		<b>Abbreviations:</b> ok / P = passed fail / F = failed n.a. / N = not applicable	
<b>Dieser Prüfbericht bezieht sich nur auf den o.g. Prüfgegenstand und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden.</b> This test report relates to the a. m. test item. Without permission of the test center this test report is not permitted to be duplicated in extracts.			

### Used measuring instruments

Measuring	Device-Number Inventory-Number Serial-Number	next Calibration
specific design	744 00 161	05/2005
pH-value	744 00 146	before each measuring
tensile strength	744 00191	01/2005
tear strength	744 00191	01/2005
seam strenght	744 00191	01/2005
dimensional change	744 00173	09/2004
flame spread		before each test 04/2005
impact of small molten metal drops		accredited subcontractor
heat transmission (radiation)		accredited subcontractor
electrical resistance		accredited subcontractor

Test results of accredited laboratories of competent subcontractor are marked with \*.

**TEST REPORT**

**Protective clothing for use in welding and allied processes according to prEN ISO 11611: 2003**

**Design according pr EN ISO 11611**

(General requirements, which are not specifically covered in this standard shall be in accordance with EN 340 )

Article **HELMET HOODS and CAPS 23-6690, 23-6680** flame retardant fabric

Parameter	according to prEN ISO 11611: 2003	Requirement	Test result	Remark P F N
<b>General</b>	clause 4.1	general according to EN 340 shall be designed to avoid electrical conduction from the outside to the inside; metal fasteners shall be covered.	given	P
<b>Suits</b>	clause 4.1.1	must cover upper part of the body and abdomen, neck, arms and legs of wearer, completely; gaiters and head bonnets are include, but no other equipment objects to protection of head, hand and feets consist of following parts: a) a single garment b) a two-part garment, existing from jacket and pants	given	P
<b>Garments protecting patches</b>	clause 4.1.2	components can be executed so that they offer protection to definite areas of body carried parts, like neck guard, covering sleeve apron and gaiters, these in addition to a suit	given	P
<b>Sizes</b>	clause 4.2 EN 340	in accordance with the requirements of EN 340; Protective jackets shall be of sufficient length to overlap waistband 20cm	one size	P

Article **CAPS 23-\*514, 23-\*515** flame retardant fabric

Parameter	according to prEN ISO 11611: 2003	Requirement	Test result	Remark P F N
<b>General</b>	clause 4.1	general according to EN 340 shall be designed to avoid electrical conduction from the outside to the inside; metal fasteners shall be covered.	given	P
<b>Suits</b>	clause 4.1.1	must cover upper part of the body and abdomen, neck, arms and legs of wearer, completely; gaiters and head bonnets are include, but no other equipment objects to protection of head, hand and feets consist of following parts: a) a single garment b) a two-part garment, existing from jacket and pants	given	P
<b>Garments protecting patches</b>	clause 4.1.2	components can be executed so that they offer protection to definite areas of body carried parts, like neck guard, covering sleeve apron and gaiters, these in addition to a suit	given	P
<b>Sizes</b>	clause 4.2 EN 340	in accordance with the requirements of EN 340; Protective jackets shall be of sufficient length to overlap waistband 20cm	57, 58, 59, 60, 61 cm circumferential	P

Article DOO-RAG 23-3612, 23-3613 flame retardant fabric

Parameter	according to prEN ISO 11611: 2003	Requirement	Test result	Remark P F N
<b>General</b>	clause 4.1	general according to EN 340 shall be designed to avoid electrical conduction from the outside to the inside; metal fasteners shall be covered.	given	P
<b>Suits</b>	clause 4.1.1	must cover upper part of the body and abdomen, neck, arms and legs of wearer, completely; gaiters and head bonnets are include, but no other equipment objects to protection of head, hand and feets consist of following parts: a) a single garment b) a two-part garment, existing from jacket and pants	given	P
<b>Garments protecting patches</b>	clause 4.1.2	components can be executed so that they offer protection to definite areas of body carried parts, like neck guard, covering sleeve apron and gaiters, these in addition to a suit	given	P
<b>Sizes</b>	clause 4.2 EN 340	in accordance with the requirements of EN 340; Protective jackets shall be of sufficient length to overlap waistband 20cm	one size	P

## General safety requests according to prEN ISO 11611

Parameter	according to prEN ISO 11611: 2003	Requirement	Test result	Remark P F N.
Determination of pH-value	clause 4.1,	>3,5 and < 9,5	<u>textile</u> red 5,3 orange 5,3 green 5,4 blue 4,5 mixed test lining 5,6	P
Tensile strength	clause 6.1	outer material shall have a minimum tensile strength of 400 N.	<u>textile</u> lowest value warp 761,9 N weft 584,7 N	P
Tear strength	clause 6.2	outer materials shall have a minimum tear strength of 20 N.	<u>textile</u> lowest value warp 74,1 N weft 76,0 N	P
Seam strength	clause 6.3	Minimum seam strength: 300 N	<u>textile</u> lowest value seams 459,7 N	P
Dimensional change: textiles	clause 6.4	If textile outer materials give a dimensional change of more than 3 % in either the machine and cross direction, this fact shall be marked on the clothing and shall be referred to in the instructions for use	<u>textile</u> warp - 3,9% weft - 1,8 %	P
Flame spread	clause 6.6	When tested, outer material shall meet the following requirements: - no specimen shall give flaming to the top or either side edge - no specimen shall give hole formation - no specimen shall give flaming or milten debris - the mean value of afterflame time shall be $\leq 2s$ - the mean value of afterglow time shall be $\leq 2s$	given	P
Impact of molten metal drops	clause. 6.7	When tested garment assemblies shall require at least 15 drops of molten metal to raise the temperature behind the test specimen by 40 K. class 1 15 drops molten metal class 2 25 drops molten metall	textil 22 drops * class 2	P class 2
Heat transmission (radiation)	clause. 6.8	Heat transmission index ( $t_{24}$ ) at heat-flow density 20 kW/m <sup>2</sup> : class 1 > 12 s class 2 > 16 s	$t_{24} = 21 s$ * class 2	P class 2
Electrical resistance	clause. 6.9	> 10 <sup>5</sup> Ω	4 • 10 <sup>11</sup> Ω * class 2	P class 2

EEC Directive for Personal Protective Equipment (PPE), Council Directive of 21 December 1989, 89/686/EEC, Annex II BASIC HEALTH AND SAFETY REQUIEREMENTS		Test result	Remarks P F N
<b>1.</b>	<b>General requirements applicable to all PPE</b>		
<b>1.1</b>	<b>Design principles</b>		
1.1.1	Ergonomics	given	P
1.1.2	Levels and classes of protection		
1.1.2.1	Highest level of protection possible	protective clothing for use in welding processes	P
1.1.2.2	Classes of protection appropriate to different levels of risk	model: class: III	P
<b>1.2</b>	<b>Innocuousness of PPE</b>		
1.2.1	Absence of risks and other "inherent" nuisance factors	not any	P
1.2.1.1	Suitable constituent materials	yes,	P
1.2.1.2	Satisfactory surface condition of all PPE parts in contact with the user	given	P
1.2.1.3	Maximum permissible user impediment	not any	P
<b>1.3</b>	<b>Comfort and efficiency</b>		
1.3.1	Adaptation of PPE to user morphology	given, according to named sizes	P
1.3.2	Lightness and design strength	given	P
1.3.3	Compatibility of different classes or types of PPE designed for simultaneous use	not applicable	N
<b>1.4</b>	<b>Information supplied by the manufacturer</b>	on hand	P
<b>2</b>	<b>Additional requirements common to several classes or types of PPE</b>		
2.1	PPE incorporating adjustment systems	not applicable	N
2.2	PPE "enclosing" the parts of the body to be protected	protective clothing	P
2.3	PPE for the face, eyes and respiratory tracts	not applicable	N
2.4	PPE subject to ageing	given	P
2.5	PPE which may be caught up during use	not applicable	N
2.6	PPE for use in explosive atmospheres	not applicable	N
2.7	PPE intended for emergency use or rapid installation and/or removal	given	P
2.8	PPE for use in very dangerous situations	not applicable	N
2.9	PPE incorporating components which can be adjusted or removed by the user	not applicable	N
2.10	PPE for connection to another, external complementary device	not applicable	N
2.11	PPE incorporating a fluid circulation system	not applicable	N
2.12	PPE bearing one or more identification or recognition marks directly or indirectly relating to health and safety	pictogram „heat and fire“ „information“	P
2.13	PPE in the form of clothing capable of signalling the users presence visually	not applicable	P
2.14	"Multi-risk" PPE	not applicable	N

<b>EEC Directive for Personal Protective Equipment (PPE), Council Directive of 21 December 1989, 89/686/EEC, Annex II BASIC HEALTH AND SAFETY REQUIEREMENTS</b>		Test result	Remarks P F N
<b>3</b>	<b>Additional requirements specific to particular risks</b>		
<b>3.1</b>	<b>Protection against mechanical impact</b>		
3.1.1	Impact caused by falling or projecting objects and collision of parts of the body with an obstacle	not applicable	N
3.1.2	Falls		
3.1.2.1	Prevention of falls due to slipping	not applicable	N
3.1.2.2	Prevention of falls from a height	not applicable	N
3.1.3	Mechanical vibration	not applicable	N
<b>3.2</b>	<b>Protection against (static) compression of part of the body</b>	not applicable	N
<b>3.3</b>	<b>Protection against physical injury (abrasion, perforation, cuts, bites)</b>	not applicable	N
<b>3.4</b>	<b>Prevention of drowning (lifejacket, armbands and lifesaving suits)</b>	not applicable	N
3.4.1	Buoyancy aids	not applicable	N
<b>3.5</b>	<b>Protection against the harmful effects of noise</b>	not applicable	N
<b>3.6</b>	<b>Protection against heat and/or fire</b>		
3.6.1	PPE constituent materials and other components	yes	N
3.6.2	Complete PPE ready for use	yes	N
<b>3.7</b>	<b>Protection against cold</b>		
3.7.1	PPE constituent and other components	not applicable	N
3.7.2	Complete PPE ready for use	not applicable	N
<b>3.8</b>	<b>Protection against electric shock</b>	not applicable	N
<b>3.9</b>	<b>Radiation protection</b>		
3.9.1	Non-ionizing radiation	not applicable	N
3.9.2	Ionizing radiation		
3.9.2.1	Protection against external radioactive contamination	not applicable	N
3.9.2.2	Limited protection against external irradiation	not applicable	N
<b>3.10</b>	<b>Protection against dangerous substances and infective agents</b>		
3.10.1	Respiratory protection	not applicable	N
3.10.2	Protection against cutaneous and ocular contact	not applicable	N
<b>3.11</b>	<b>Safety devices for diving equipment</b>	not applicable	N