

**Produkte Products** 

> Prüfbericht - Nr.: Seite 1 von 12 21173205 001

Test Report No.:

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Auftraggeber:

Weldas

Client:

Blankenweg 18, 4612 RC Bergen op Zoom,

Holland

Test item:

Gegenstand der Prüfung: Protective clothing for welding and allied processes

Bezeichnung:

LAVA Brown Clothing

Serien-Nr.:

3026196

Identification:

(14 Items)

Serial No .:

Wareneingangs-Nr.:

Receipt No.:

556-11-0920

Eingangsdatum:

27.06.2011

Date of receipt:

Prüfort:

TRLP / Prüfstelle für Textilien/PSA Leipzig

Testing location:

Maximilianallee 4, 04129 Leipzig, Fon/Fax: +49 341 600 369-0 / -10

Prüfgrundlage: Test specification: DIN EN ISO 11611:2008 (EN ISO 11611:2007)

DIN EN 340:2004 (EN 340:2003)

Prüfergebnis:

Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n).

Test Result:

The test item passed the test specification(s).

Prüflaboratorium:

TRLP / Prüfstelle für Textilien/PSA Leipzig

Testing Laboratory:

geprüft/ tested by:

kontrolliert/ reviewed by:

28.09.2011

Albrecht /Sachverständige

28.09.2011

Knape / Laborleiter Leipzig

Datum

Name/Stellung Name/Position

Unterschrift Signature

Datum Date

Name/Stellung Name/Position

Unterschrift Signature

Sonstiges/ Other Aspects:

Welders clothing class 2 /A1

Abkürzungen: P(ass) F(ail)

entspricht Prüfgrundlage entspricht nicht Prüfgrundlage

Abbreviations:

P(ass) passed

N/A

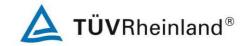
nicht anwendbar

F(ail) failed N/A

N/T nicht getestet not applicable not tested

Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.

This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.



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# Verwendete Meßgeräte/Prüfmittel

Measuring	Device-Number Inventory-Number Serial-Number	next Calibration
Clothing design / Sizes	7440161	01/2012
Flame spread	7440106	01/2012
Tensile strenght	7440191	03/2012
Tear strength	7440191	03/2012
Seam strength	7440191	03/2012
Fat content of leather		chemical laboratory Cologne
Azo-colourants		chemical laboratory Cologne
Colour fastness to perspiration	7440181	08/2012
pH value		chemical laboratory Cologne
Chromium-VI-content of leather		chemical laboratory Cologne
Convective Heat	7440129	07/2012
Radiant Heat	7440174	12/2012
Impact of splatter		accredited subcontractor
Electrical resistance	7440199	08/2012

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



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## Material description/ picture

Welders clothing made of side split cow leather in combination with fabrics made of flame retardant cotton.







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### **Test results**

#### according to EN ISO 11611

parameter	acc. to ISO 11611	requirement	test result	note P F N/A N/T
General	section 4.1 ISO 13688 (EN 340)	General requirements which are not specifically covered in this International Standard shall be in accordance with ISO 13688.  Welders' protective clothing shall be designed without electrical conduction from the outside to the inside, e.g. by metal fasteners.  Conformity shall be checked by visual inspection.	given	Р
Protective clothing	section 4.1.1	Welders' protective suits shall completely cover the upper and lower torso, neck, arms and legs. Suits shall consist of: a) a single garment, e.g. an overall or boiler suit; b) or a two-piece garment, consisting of a jacket and a pair of trousers.  The jacket of a two-piece suit shall provide a minimum overlap of 20 cm between the jacket and the top of the trousers. This minimum overlap shall be maintained in all positions and in movements encountered during welding.  Conformity shall be checked by visual inspection and practical testing, such as physical measurement of the overlap in all positions and movements normally encountered during welding.	given	P
Additional protective clothing	section 4.1.2	Welder's protective garments may be designed to provide extra protection for specific areas of the body when worn in addition to a suit according to 4.1.1, e.g. neck curtain, hoods, sleeves, apron and gaiters.  Performance testing of partial protective garments shall be carried out on the complete assembly. Additional protective clothing such as hoods, sleeves, apron and gaiters shall cover the intended areas if worn with a suit of appropriate size and shall also meet the requirements of this International Standard.	given	P
sizes	section 4.2 ISO 13688 (EN 340)	Garment sizes shall be in accordance with the requirements of ISO 13688.	given	Р





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#### according to EN ISO 11611

parameter	acc. to ISO 11611	requirement	test result	note P F N/A N/T
Pockets	section 4.3	Where garments are constructed with pockets, the pockets shall be constructed to the following design: a) pockets with external openings shall be made of material(s) conforming to 6.7 and 6.8.	given	Р
		b) external opening pockets including pass through openings shall be flapped except for:  - side pockets below the waist which do not extend more than 10° forward of the side seam;  - a single rule pocket with an opening not greater than 75 mm placed		
		behind the side seam on one or both legs and measured flat;  c) all flaps shall be stitched down or capable of fastening the pocket closed. They shall be 20 mm wider than the opening (10 mm on each side) to prevent the flap		
		from being tucked into the pocket.  Conformity shall be checked by visual inspection and physical measurement.		
Closures and seams	section 4.4	Closures shall be designed with a protective cover flap on the outside of the garment. The maximum distance between buttonholes shall be 150 mm. If zippers are used, the slide fastener shall be designed to lock when completely closed. Cuffs may be provided with closures to reduce their width. The closure and any fold which it creates shall be on the underside of the cuff. Cuffs shall not have turn-ups.  Neck openings shall be provided with closures.  Trousers or one-piece suits shall not have turn-ups. They may have side slits which shall have a means of closure and the slit and closure shall be covered.  Overlapping seams on the outside of the garment shall be downward facing and overstitched.	given	P



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#### General safety standard according to EN ISO 11611

parameter	acc. to ISO 11611	requirement	test result	P F	note N/A	N/T
Pre-treatment	section 5.2	Prior to testing, the protective clothing shall be pre-treated. Leather shall not be pre-treated.  If a manufacturer indicates that the performance of the garment is intended for a single use only, then the tests shall only be carried out on new material.  Before each test the cleaning of the protective clothing shall be in line with the manufacturer's instructions, on the basis of standardized processes. If the number of cleaning cycles is not specified, five cleaning cycles shall be performed.  Performance tests specified in 6.7 shall also be executed after the maximum number of cleaning procedures indicated by the manufacturer.	COST FOSUIT		N/A	14/1
Tensile strength	section 6.1 ISO 13934-1 or ISO 3376	Woven outer textiles shall have a minimum tensile strength of 400 N. Leather shall have a minimum tensile strength of 80 N.	Leather: direction 1: 514 N direction 2: 594 N  Outer textile green: lengthwise: 555 N crosswise: 663 N		Р	
Tear strength	section 6.2 ISO 13937-2 or ISO 3377-1	Woven outer textiles and leather materials shall have a minimum tear strength of 20 N. The tear strength of leather shall be determined in two directions at right angles in the plane of the material	Leather: direction 1: 131 N direction 2: 119 N  Outer textile green: lengthwise: 26 N crosswise: 22 N		Р	
Burst strength of knitted materials	section 6.3 ISO 13938-1	The burst strength of knitted outer material shall be a minimum of 200 kPa.			N/A	
Seam strength	section 6.4 ISO 13935-2	The seam strength for textiles shall be at least 225 N for textiles and 110 N for leather.	938 N		Р	
Dimensional change of textile materials	section 6.5 ISO 5077	The dimensional change of woven textile materials shall not exceed $\pm$ 3 % when tested after a pretreatment The dimensional change of knitted textile materials shall not exceed $\pm$ 5 % when tested after a pretreatment.			N/A	
Requirements for leather	section 6.6 ISO 4048	Fat content The fat content of leather shall not exceed 15 %.	/* AZ 95716 lighter brown 4,3 % brown 7,2 %		Р	



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#### General safety standards according to EN ISO 11611

noromotor	acc. to	roquiroment	toot recult	note P F N/A N/T
parameter	ISO 11611	requirement	test result	P F N/A N/T
Flame spread	section . 6.7 ISO 15025 procedure A or procedure B	Each material or material assembly and each type of seam used in welders' protective clothing shall be tested, using either Procedure A (code letter A1), or Procedure B (code letter A2), or both, in accordance with the existent risk during the foreseen use.  Materials and material assemblies shall meet the following requirements:  a) no specimen shall give flaming to the top or either side edge; b) no specimen shall give hole formation; c) no specimen shall give flaming or molten debris; d) the mean value of afterflame time shall be u 2 s; e) the mean value of afterglow time shall be u 2 s.	Leather: afterflame time: Os afterglow time: Os hole formation: none molten debris: none seams: intact  Outer textile green: afterflame time: Os afterglow time: Os hole formation: none molten debris: none	P
Impact of spatter	section 6.8 ISO 9150	each material or material garment assemblies shall require – at least 15 drops of molten metal to raise the temperature behind the test specimen by 40 K for Class 1 and – 25 drops of molten metal to raise the temperature behind the test specimen by 40 K for Class 2 Material which ignites does not fulfil this test	/* 2011 1490 Leather: > 35 drops  Outer textile green: 25 drops	Р
Heat transfer (radiation)	section. 6.9 ISO 6942	each material or material garment assemblies shall require at a heat flux density of 20 kW/m2, the radiant heat transfer index (RHTI for 24 °C) shall be:  - for Class 1: RHTI 24 W 7 s; - for Class 2: RHTI 24 W 16 s.	RHTI 24 [s]  Leather: 30 s meets class 2  Outer textile green: 16 s meets class 2	Р
Electrical resistance	section 6.10 EN 1149-2	When the material assembly is tested under an applied potential of (100 $\pm$ 5) V, the electrical resistance shall be greater than $~10^5~\Omega.$	at $(20 \pm 2)$ °C and relative humidity of $(85 \pm 5)$ %  Leather: $30.3 \times 10^6 \Omega \\ 53.4 \times 10^6 \Omega$ Outer textile green: $5.9 \times 10^5 \Omega \\ 5.8 \times 10^5 \Omega$	Р

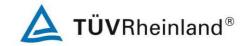


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#### General safety standards according to EN 340: 2003

	according to			note
parameter	EN 340	requirement	/* AZ 93397	P F N/A N/T
Innocuousness	section 4.2 a	content of Cr(VI) < 3 mg/kg	< 3 mg/kg	Р
	section 4.2 b	release of nickel < 0,5 μg/cm² per week		N/A
	section 4.2 c	pH value between 3,5 and 9,5	Leather: 3,5 / 4,1 Outer textile green: 5,2 Lining: 6,2	Р
	ISO 13688	colour fastness against perspiration minimum level 4	colour staining         alkaline         acidic           CA         5         5           CO         5         5           PA         4-5         4-5           PES         5         5           PAN         5         5           WO         5         4-5           change in colour         4         4	Р
	section 4.2 e	Azo- colourants Not detectable (n.d.)	/* AZ 93397 < 5 mg/kg	Р
Possible harmful effect	section. 6.11.1	No component of the clothing shall be known to produce any harmful effect on the wearer. This shall be	given	Р
		verified by checking technical safety sheets of the individual materials and components		
design	section 4.3	Correct put on and fit	given	Р
		All body parts are protectet even in movement	given	Р
		Protective unit even with other protective equipment items	given	Р
Wearing comfort	section 4.4 ISO 13688		given	Р
aging colour fastness dimensional change	section 5 ISO 13688	according to special requirement according to manufacturer's data, ± 3%	lengthwise % crosswise %	N/A
size marking	section 6 ISO 13688	minimum information:  garment control measures jacket, coat, chest measurement vest, height trousers waist mesurement, height apron waist mesurement . or chest measurement . or chest measurement . height protective equipment waist mesurement, chest measurement, height vaist mesurement, height waist mesurement, height, weight or waist-shoulder-lenght	jacket size chest measurement height M 100 cm 76 cm L 112 cm 81 cm XL 124 cm 86 cm XXL 136 cm 91 cm XXXL 148 cm 96 cm XXXXL  dungarees size waist measurement height M 60 cm 136 cm L 60 cm 140 cm XL 60 cm 144 cm XXL 60 cm 148 cm XXXL 80 cm 152 cm XXXXL 80 cm 156 cm	P



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#### Marking according to EN ISO 11611

parameter	acc. to ISO 11611	requirement	test result	note P F N/A N/T
<b>Marking</b> genaeral	section 7 ISO 13688 (EN 340)	Welders' protective clothing, for which compliance with this International Standard is claimed, shall be marked in accordance with ISO 13688	given	Р
details		- official language for the country of destionation - attached at the article or at the label - visible and readable - resistance angainst suitable care procedures and with the following information:	given given given given	
		- name, trade name or different version for the identification of the manufacturer - title of the product type, code - size marking	Weldas given given	
		<ul> <li>a) classification:</li> <li>Class 1:</li> <li>the number of this International Standard</li> <li>ISO 11611) followed by the pictogram and the indication "Class 1" and the indication "A1" or "A2" or "A1 + A2" as appropriate</li> </ul>	given	
		- Class 2: the number of this International Standard (ISO 11611) followed by the pictogram and the indication "Class 2" and the indication "A1" or "A2" or "A1 + A2" as appropriate  - where garments contain parts of both classes, these shall be identified as shown above with their classification; any additional protective clothing used shall be identified as shown above with their classification	class 2 A1	
		b) If the garment is intended for a single use only, the information: "For single use only"	N/A	
		c) instructions for cleaning shall be marked (e.g. on a label).	given	
		- pictogram and performance levels	given	Р





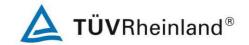
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### Information according to EN ISO 11611

parameter	acc. to ISO 11611	requirement	test result	Р	r F	note N/A	N/T
Information supplied by the manufacturer	section 8 EN 340						
genaeral	section 8.1	When welders' protective clothing is delivered to the consumer, instructions for use shall be provided in accordance with ISO 13688.  The manufacturer shall give as much information as possible on known factors of durability, especially on durability to cleaning. See ISO 13688 for further details.  In the case that applying a finish can restore the protective properties, the maximum number of cleaning cycles before re-application of the finish shall be clearly indicated in the information notice.	given			Р	
Intended use	section 8.2	At least the following basic information shall be provided: a) any guidance on the appropriate choice of class of welders' protective clothing, (see Annexes A and B); b) any identified hazards against which the clothing is intended to protect (e.g. flames, molten metal spatter, radiant heat and short term, accidental electrical contact); c) a warning that for operational reasons not all welding voltage carrying parts of arc welding installations can be protected against direct contact; d) for protective clothing, a warning that additional partial body protection may be required, e.g. for welding overhead; e) a warning that the garment is only intended to protect against brief inadvertent contact with live parts of an arc welding circuit, and that additional electrical insulation layers will be required where there is an increased risk of electric shock; garments meeting the requirements of 6.10 are designed to provide protection against short term, accidental contact with live electric conductors at voltages up to approximately 100 V d.c.; f) aprons should cover the front body of the user at least from side seam to side seam; g) using additional partial protective garments, the basic garment shall meet at least Class 1	given			P	





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#### Information according to ISO 11611

parameter	acc. to ISO 11611	requirement	test result	Р	r F	note N/A	N/T
Improper use	section 8.3	Attention shall be drawn to the hazards of improper use.  a) The level of protection against flame will be reduced if the welders' protective clothing is contaminated with flammable materials. b) An increase in the oxygen content of the air will reduce considerably the protection of the welders' protective clothing against flame. Care should be taken when welding in confined spaces, e.g. if it is possible that the atmosphere may become enriched with oxygen. c) The electrical insulation provided by clothing will be reduced when the clothing is wet, dirty or soaked with sweat. d) For two-piece protective clothing, a warning that both items shall be worn together to provide the specified level of protection. e) For additional body protection, a warning that the garment is intended for use in addition to protective clothing providing protection against welding hazards. f) Warnings, regarding other limitations of a garment, as identified by the manufacturer.	given		•	P	19/1
Care and maintenance	section 8.4	Instructions shall be given to advise the user on cleaning procedures, the maximum number of cleaning cycles, maintenance, inspection and repair of the garment where practical.  Manufacturers shall include the information that welder's protective clothing be cleaned regularly in accordance with the manufacturer's recommendations. After cleaning, the clothing should be inspected.	given			P	