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| Auftraggeber: <i>Client:</i> | Weldas B.V. Blankenweg 18, 4612 RC Bergen op Zoom, Holland | | |
| Gegenstand der Prüfung: <i>Test item:</i> | Schutzkleidung für Schweißen und verwandte Verfahren <i>Protective clothing for welding and allied processes</i> | | |
| Bezeichnung: <i>Identification:</i> | 44-5530, 44-5600 | Serien-Nr.: <i>Serial No.:</i> | 3056538 |
| Wareneingangs-Nr.: <i>Receipt No.:</i> | 556- 12-1060 | Eingangsdatum: <i>Date of receipt:</i> | 30.07.2012 |
| Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of test item at delivery:</i> | optisch einwandfrei <i>in optically good condition</i> | | |
| Prüfört: <i>Testing location:</i> | TÜV Rheinland LGA Products GmbH Maximilianallee 2, 04129 Leipzig, Fon/Fax: +49 341 600 369-0 / -10 | | |
| Prüfgrundlage: <i>Test specification:</i> | DIN EN ISO 11611: 2008 (EN ISO 11611: 2007), DIN EN 340: 2004 (EN 340: 2003) | | |
| Prüfergebnis: <i>Test Result:</i> | Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n). <i>The test item passed the test specification(s).</i> | | |
| Prüflaboratorium: <i>Testing Laboratory:</i> | TRLP / Prüfstelle für Textilien und PSA Leipzig | | |
| geprüft/ tested by: | kontrolliert/ reviewed by: | | |
| 20.02.2013 | M.Schultz/ Expert | 20.02.2013 | C.Albrecht/ Expert |
|  | | |  |
| Datum <i>Date</i> | Name/Stellung <i>Name/Position</i> | Unterschrift <i>Signature</i> | Datum <i>Date</i> |
| | | | Name/Stellung <i>Name/Position</i> |
| | | | Unterschrift <i>Signature</i> |
| Sonstiges/ Other Aspects: | | | |
| Replaces test report of 05.10.2012 | | | |
| Revised article identification. | | | |
| Abkürzungen: | P(ass) = entspricht Prüfgrundlage | Abbreviations: | P(ass) = passed |
| | F(ail) = entspricht nicht Prüfgrundlage | | F(ail) = failed |
| | N/A = nicht anwendbar | | N/A = not applicable |
| | N/T = nicht getestet | | N/T = 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. | | | |
| <i>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.</i> | | | |

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Verwendete Meßgeräte/Prüfmittel / *Equipmentlist*

| Messung / <i>Measuring</i> | Gerätenummer/Ident.-Nummer Barcode-Nummer <i>Equipment number</i> | nächste Kalibrierung/Überwachung <i>next calibration/ surveillance</i> |
|-----------------------------------|--|---|
| Clothing design / Sizes | 7440161 | 01/2014 |
| Flame spread | 7440106 | 01/2013 |
| Tensile strength | 7440191 | 03/2013 |
| Tear strength | 7440191 | 03/2013 |
| Seam strength | 7440191 | 03/2013 |
| Fat content of leather | | TRLP chemical laboratory Cologne Report-no. AZ 123199 |
| Azo-colorants | | TRPL chemical laboratory Cologne Report-no. AZ 123197 |
| Pentachlorophenol | | TRPL chemical laboratory Cologne Report-no. AZ 123197 |
| pH-value | | TRPL chemical laboratory Cologne Report-no. AZ 123197 |
| Chromium-VI-content of leather | | TRPL chemical laboratory Cologne Report-no. AZ 123197 |
| Radiant Heat | 7440174 | 12/2012 |
| Impact of splatter | | accredited subcontractor STFI report-no. 2112 1794 |
| Electric resistance | 7440140 | 09/2013 |

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

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Artikelbeschreibung / Article description/Picture

| | |
|--|--|
|  | <p>Grain Golden Brown leather jacket Art. 44-5530</p> <p>Größen/ sizes: L – XXXL</p> <p>EN ISO 11611:2007 Class 2</p> |
|  | <p>Grain Golden Brown overall (bib and brace) Art. 44-5600</p> <p>Größen/ sizes: L – XXXL</p> <p>EN ISO 11611:2007 Class 2</p> |

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Test results

Design in according to ISO 11611

| Parameter | acc. to ISO 11611 | Requirement | Test result | Remark | | | |
|----------------------------|--------------------------------------|--|-------------------------|--------|---|-----|-------------|
| | | | | 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 | | | | P |
| 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 single garment, e.g. an overall or boiler suit; - 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 |
| Design | EN 340/ 4.3 | Correct put on and fit All body parts are protected even in movement Protective unit even with other protective equipment items | given given given | | | | P P P |
| Wearing comfort | EN 340/ 4.4 ISO 13688 | Level of comfort shall be consistent. - with the level of protection against hazard which is provided - the ambient conditions - the level of the users activity - the anticipated duration of the use Protective clothing shall not: - have rough, sharp or hard surfaces that irritate or injure the user - be so tight that blood flow is restricted - be so loose and heavy so that it interferes with movements - where permissible use of materials with low water vapour resistance and/ or high airpermeability | given | | | | P |

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|--|---------------------|
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| Parameter | acc. to ISO 11611 | Requirement | Test result | Remark | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------|--|---|-------------|------------------|--------------------|----------------|----------|----------------|---------|----------------|-------|----------------------------------|----------------------|--|---|------|-------------------|--------|---|--|--|---|-----|----|----|-----|----|-----|-----|----|------|-----|----|-------|--|--|------|-------------------|--------|---|--|--|---|----|-----|----|----|-----|-----|-----|-----|------|-----|-----|-------|--|--|--|--|---|
| | | | | P | F | N/A | N/T | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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, 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. | --- | | | | N/A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sizes | section 4.2 ISO 13688 (EN 340) | minimum information: <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 5px;"> <thead> <tr> <th>garment</th> <th>control measures</th> </tr> </thead> <tbody> <tr> <td>jacket, coat, vest</td> <td>chest / height</td> </tr> <tr> <td>trousers</td> <td>waist / height</td> </tr> <tr> <td>overall</td> <td>chest / height</td> </tr> <tr> <td>apron</td> <td>waist / height or chest / height</td> </tr> <tr> <td>protective equipment</td> <td>waist/ chest/ height, weight or waist- houlder- lenght</td> </tr> </tbody> </table> additional the pictogram is to use | garment | control measures | jacket, coat, vest | chest / height | trousers | waist / height | overall | chest / height | apron | waist / height or chest / height | protective equipment | waist/ chest/ height, weight or waist- houlder- lenght | jacket <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>size</th> <th>chest measurement</th> <th>height</th> </tr> </thead> <tbody> <tr><td>M</td><td></td><td></td></tr> <tr><td>L</td><td style="text-align: center;">112</td><td style="text-align: center;">81</td></tr> <tr><td>XL</td><td style="text-align: center;">124</td><td style="text-align: center;">86</td></tr> <tr><td>XXL</td><td style="text-align: center;">136</td><td style="text-align: center;">91</td></tr> <tr><td>XXXL</td><td style="text-align: center;">148</td><td style="text-align: center;">96</td></tr> <tr><td>XXXXL</td><td></td><td></td></tr> </tbody> </table> trousers <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>size</th> <th>waist measurement</th> <th>height</th> </tr> </thead> <tbody> <tr><td>M</td><td></td><td></td></tr> <tr><td>L</td><td style="text-align: center;">92</td><td style="text-align: center;">100</td></tr> <tr><td>XL</td><td style="text-align: center;">95</td><td style="text-align: center;">104</td></tr> <tr><td>XXL</td><td style="text-align: center;">103</td><td style="text-align: center;">106</td></tr> <tr><td>XXXL</td><td style="text-align: center;">105</td><td style="text-align: center;">112</td></tr> <tr><td>XXXXL</td><td></td><td></td></tr> </tbody> </table> | size | chest measurement | height | M | | | L | 112 | 81 | XL | 124 | 86 | XXL | 136 | 91 | XXXL | 148 | 96 | XXXXL | | | size | waist measurement | height | M | | | L | 92 | 100 | XL | 95 | 104 | XXL | 103 | 106 | XXXL | 105 | 112 | XXXXL | | | | | P |
| garment | control measures | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| jacket, coat, vest | chest / height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| trousers | waist / height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| overall | chest / height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| apron | waist / height or chest / height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| protective equipment | waist/ chest/ height, weight or waist- houlder- lenght | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| size | chest measurement | height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L | 112 | 81 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| XL | 124 | 86 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| XXL | 136 | 91 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| XXXL | 148 | 96 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| XXXXL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| size | waist measurement | height | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L | 92 | 100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| XL | 95 | 104 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| XXL | 103 | 106 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| XXXL | 105 | 112 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| XXXXL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| Parameter | acc. to ISO 11611 | Requirement | Test result | Remark | | | |
|---------------------------|----------------------|--|--|--------|---|-----|-----|
| | | | | P | F | N/A | N/T |
| Pockets | section 4.3 | <p>Where garments are constructed with pockets, the pockets shall be constructed to the following design:</p> <p>a) pockets with external openings shall be made of material(s) conforming to 6.7 and 6.8.</p> <p>b) external opening pockets including pass through openings shall be flapped except for:</p> <ul style="list-style-type: none"> - 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 <p>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.</p> <p>Conformity shall be checked by visual inspection and physical measurement.</p> | <p>given</p> <p>given</p> <p>given</p> | | | | P |
| Closures and seams | section 4.4 | <p>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.</p> <p>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.</p> <p>Overlapping seams on the outside of the garment shall be downward facing and overstitched.</p> | <p>given</p> | | | | P |

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| Parameter | acc. to ISO 11611 | Requirement | Test result | Remark | | | | | | | | | | | | |
|---|--|--|---|--------|----------------|-----------------|--------------|------|------|------|------------|------|--|--|--|--------------|
| | | | | 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. Following requirements shall be meet: 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 < 2 s; e) the mean value of afterglow time shall be < 2 s. | Flame spread Leather: After flame time < 2 s After glow time < 2 s No flaming to side or top No hole formation No molten debris | | | | P | | | | | | | | | |
| | | | Flame spread Band yellow: After flame time < 2 s After glow time < 2 s No flaming to side or top No hole formation No molten debris | | | | P | | | | | | | | | |
| Impact of splatter | 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 – 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 | <table border="1"> <thead> <tr> <th></th> <th>leather yellow</th> </tr> </thead> <tbody> <tr> <td rowspan="4">Amount of drops</td> <td>> 35</td> </tr> <tr> <td>> 35</td> </tr> <tr> <td>> 35</td> </tr> <tr> <td>> 35</td> </tr> <tr> <td>Mean value</td> <td>> 35</td> </tr> </tbody> </table> | | leather yellow | Amount of drops | > 35 | > 35 | > 35 | > 35 | Mean value | > 35 | | | | P Class 2 |
| | leather yellow | | | | | | | | | | | | | | | |
| Amount of drops | > 35 | | | | | | | | | | | | | | | |
| | > 35 | | | | | | | | | | | | | | | |
| | > 35 | | | | | | | | | | | | | | | |
| | > 35 | | | | | | | | | | | | | | | |
| Mean value | > 35 | | | | | | | | | | | | | | | |
| Heat transfer (radiation) | section. 6.9 ISO 6942 | at a heat flux density of 20 kW/m ² , the radiant heat transfer index (RHTI for 24 °C) each material or material garment assemblies shall be: - for Class 1: RHTI 24 W 7 s - for Class 2: RHTI 24 W 16 s | RHTI 24: 29 s 31 s mean value: 30 s Class 2 | | | | P Class 2 | | | | | | | | | |
| Electrical resistance | section 6.10 EN 1149-2 | > 10 ⁵ Ω | at (20 ± 2) °C and relative humidity of (85 ± 5)% 1,0 x 10 ⁵ 1,7 x 10 ⁵ 1,7 x 10 ⁵ 1,6 x 10 ⁵ 1,4 x 10 ⁵ | | | | P | | | | | | | | | |
| Innocuousness Possible harmful effect | section 6.11 section. 6.11.1 | No component of the clothing shall be known to produce any harmful effect on the wearer. This shall be verified by checking technical safety sheets of the individual materials and components. | /* Additional: Pentachlorophenol customer requirement Split leather yellow < 0,1 mg/ kg (limit value acc. to restriction ordinance on chemicals: 5 mg/ kg) | | | | P | | | | | | | | | |
| pH-value | section 6.11.2, EN 340/ 4.2 c, ISO 3071 or ISO 4045 | between 3,5 and 9,5 | /* Leather yellow 3,8 | | | | P | | | | | | | | | |
| Content of Cr(VI) | section 6.11.3 EN 340/ 4.2 a, ISO 17075 | shall be less than the detection limit | /* Leather yellow < 3 mg/kg | | | | P | | | | | | | | | |
| Release of Nickel | EN 340/ 4.2 b | < 0,5 µg/cm ² per week | --- | | | | N/A | | | | | | | | | |
| Colour fastness to perspiration Azo-dyestuff | EN 340/ 4.2 d EN 340/ 4.2 e | minimum level 4 at grey scale not detectable (< 30 mg/kg) | --- /* Not detectable (< 5 mg/kg) | | | | N/A P | | | | | | | | | |

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Information according to ISO 11611

| parameter | acc. to ISO 11611 | requirement | test result | note | | | |
|--|----------------------|---|--|------|---|-----|-----|
| | | | | P | F | N/A | N/T |
| Information supplied by the manufacturer | section 8 EN 340 | | | | | | |
| general | section 8.1 | Welders' protective clothing shall be delivered to the consumer with instructions for use. The manufacturer shall give as much information as possible on known factors of durability, especially on durability to cleaning. 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 | | | | P |
| 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 given given given given given | | | | P |

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| Parameter | acc. to ISO 11611 | Requirement | Test result | Remark | | | |
|----------------------|----------------------|---|---|--------|---|-----|-----|
| | | | | P | F | N/A | N/T |
| Improper use | section 8.3 | <p>Attention shall be drawn to the hazards of improper use.</p> <p>a) The level of protection against flame will be reduced if the welders' protective clothing is contaminated with flammable materials.</p> <p>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.</p> <p>c) The electrical insulation provided by clothing will be reduced when the clothing is wet, dirty or soaked with sweat.</p> <p>d) For two-piece protective clothing, a warning that both items shall be worn together to provide the specified level of protection.</p> <p>e) For additional body protection, a warning that the garment is intended for use in addition to protective clothing providing protection against welding hazards.</p> <p>f) Warnings, regarding other limitations of a garment, as identified by the manufacturer.</p> | <p>given</p> <p>given</p> <p>given</p> <p>given</p> <p>given</p> <p>given</p> | | | | P |
| Care and maintenance | section 8.4 | <p>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.</p> <p>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.</p> | given | | | | P |