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Auftraggeber: <i>Client:</i>	Weldas Europe B.V. Blankenweg 18, 4612 RC Bergen op Zoom, Holland	
Gegenstand der Prüfung: <i>Test item:</i>	Protective gloves for welders	
Bezeichnung: <i>Identification:</i>	10-2755 10-2150	Serien-Nr.: <i>Serial No.:</i>
Wareneingangs-Nr.: <i>Receipt No.:</i>	744-801173/02 / 1038681	Eingangsdatum: <i>Date of receipt:</i>
		09.06.2008 30.07.2008
Prüfört: <i>Testing location:</i>	TRPS / Prüfstelle für Produktsicherheit Leipzig Maximilianallee 4, 04129 Leipzig, Fon/Fax: +49 341 600 369-0 / -10	
Prüfgrundlage: <i>Test specification:</i>	DIN EN 12477/09.2005, DIN EN 420/2003	
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>	TRPS / Prüfstelle für Produktsicherheit Leipzig	
geprüft/ tested by:	kontrolliert/ reviewed by:	
07.07.2009	Albrecht / Expert	07.07.2009
		
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:		
Article 10-2150	mechanical performance levels 2 1 2 2 thermal performance levels 4 2 3 X 4 X	
Article 10-2755	mechanical performance levels 2 1 4 3 thermal performance levels 4 3 3 X 4 X	
replaced test report dated on 26.08.2008		
Abkürzungen:	<i>P(ass) = entspricht Prüfgrundlage</i>	Abbreviations:
	<i>F(ail) = entspricht nicht Prüfgrundlage</i>	<i>P(ass) = passed</i>
	<i>N/A = nicht anwendbar</i>	<i>F(ail) = failed</i>
	<i>N/T = nicht getestet</i>	<i>N/A = not applicable</i>
		<i>N/T = not tested</i>
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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Used measuring instruments

Measuring	Device-Number Inventory-Number Serial-Number	next Calibration
chrom-VI-content, Azo dyestuff		accredited subcontractor

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

Material description/Picture

Protective gloves for welders

		<p>Article 10-2150</p> <p>glove palm: grain cowhide, glove back: split cowhide cuff: split cowhide lining: cotton</p>
		<p>Article 10-2755</p> <p>glove palm: grain cowhide with COMFOflex lining glove back: split deerskin with aluminated PFR rayon cuff: split cowhide lining cuff: cotton</p>

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Test results

Protective gloves for welders according to DIN EN 12477
Article 10-2150

Parameter	according EN 12477	Requirement	Test result	Remark																	
				P	F	N/A	N/T														
Glove design and construction General	clause 3 EN 420, 4.1	- in foreseeable conditions of use, protection at highest possible level - minimal time for put on/take off - overall not significantly decreased by seams	given			P															
Resistance to water penetration	clause 3 EN 420, 4.2	if required, leather: <table border="1"> <thead> <tr> <th>level</th> <th>penetration time [min]</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>30</td> </tr> <tr> <td>2</td> <td>60</td> </tr> <tr> <td>3</td> <td>120</td> </tr> <tr> <td>4</td> <td>180</td> </tr> </tbody> </table> textil:	level	penetration time [min]	1	30	2	60	3	120	4	180	-			N/A					
level	penetration time [min]																				
1	30																				
2	60																				
3	120																				
4	180																				
Innocuousness of protective gloves General	clause 3 EN 420, 4.3.1	- protection at use without harm to user - all substances contained which are known to cause allergies are named	given			P															
Determination of pH-value	clause 3 EN 420, 4.3.2	>3,5 and < 9,5	palm 4,1 back 4,6 cuff 4,3			P															
Determination of chromium (VI) content Azo dye stuff	clause 3 EN 420, 4.3.3	under detection limit 3 mg/kg under detection limit 30 mg/kg	/* TRPU AZ 43534, AZ 45553 chromium content: red split leather < 3 mg/kg grey split leather < 3 mg/kg yellow grain leather < 3 mg/kg Azo dye stuff: red split leather: p-Phenylendiamin: 10 mg/kg yellow grain leather < 30 mg/kg			P															
Determination of extractable protein content	clause 3 EN 420, 4.3.4	natural rubber: Lowry- test method: under detection limit	-			N/A															
Cleaning	clause 3 EN 420, 4.4	no negative influence of performance levels after cleaning	information at user instruction			P															
Comfort and efficiency Sizing	clause 3 EN 420, 5.1.2	<table border="1"> <thead> <tr> <th>Hand size</th> <th>minimum length [mm]</th> </tr> </thead> <tbody> <tr> <td>6</td> <td>300</td> </tr> <tr> <td>7</td> <td>310</td> </tr> <tr> <td>8</td> <td>320</td> </tr> <tr> <td>9</td> <td>330</td> </tr> <tr> <td>10</td> <td>340</td> </tr> <tr> <td>11</td> <td>350</td> </tr> </tbody> </table>	Hand size	minimum length [mm]	6	300	7	310	8	320	9	330	10	340	11	350	Size Length [mm] L (9) 360 XL (10) 360			P	
Hand size	minimum length [mm]																				
6	300																				
7	310																				
8	320																				
9	330																				
10	340																				
11	350																				
Special applications	clause 5.1.3	fit for special purpose (clearly stated in instruction for use) type of protective gloves after each test, the inside material have to be checked of damage	given			P															

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Parameter	according EN 12477	Requirement	Test result	Remark															
				P	F	N/A	N/T												
Water vapour transmission Water vapour absorption	EN 420, clause 5.3	if practicable, water vapour transmission allowed if required: WVT: $\geq 5 \text{ mg}/(\text{cm}^2\cdot\text{h})$. if protection level inhibits or excludes water vapour transmission, effect of perspiration is reduced if required: WVA: $\geq 8 \text{ mg}/\text{cm}^2$ for 8 h	glove palm: WVT 12,1 mg/cm ² h WVA 10,6 mg/cm ² glove back: WVT 10,3 mg/cm ² h WVA 22,3 mg/cm ²	P															
Abrasion resistance	clause 5.1	type A at least level 2 type B at least level 1 <table border="1"> <thead> <tr> <th>performance level</th> <th>abrasion (cycles)</th> </tr> </thead> <tbody> <tr><td>1</td><td>100</td></tr> <tr><td>2</td><td>500</td></tr> <tr><td>3</td><td>2000</td></tr> <tr><td>4</td><td>8000</td></tr> </tbody> </table>	performance level	abrasion (cycles)	1	100	2	500	3	2000	4	8000	breakthrough at about [cycles] palm: grain leather 2000 500 500 500 back: split leather 2000 2000 2000 2000 lining < 100 lowest value for classification: 500	P			perf. level 2 type A+B		
performance level	abrasion (cycles)																		
1	100																		
2	500																		
3	2000																		
4	8000																		
Blade cut resistance	clause 5.2	type A at least level 1 type B at least level 1 <table border="1"> <thead> <tr> <th>performance level</th> <th>blade cut resist. (index)</th> </tr> </thead> <tbody> <tr><td>1</td><td>1,2</td></tr> <tr><td>2</td><td>2,5</td></tr> <tr><td>3</td><td>5,0</td></tr> <tr><td>4</td><td>10,0</td></tr> <tr><td>5</td><td>20,0</td></tr> </tbody> </table>	performance level	blade cut resist. (index)	1	1,2	2	2,5	3	5,0	4	10,0	5	20,0	palm: grain leather with lining index i: 1,3 2,3 1,4 2,5 1,5 2,5 1,6 2,2 1,7 1,9 index I: 1,5 2,3 lowest Index I for classification: 1,5	P			perf. level 1 type A+B
performance level	blade cut resist. (index)																		
1	1,2																		
2	2,5																		
3	5,0																		
4	10,0																		
5	20,0																		
Tear resistance	clause 5.3	type A at least level 2 type B at least level 1 <table border="1"> <thead> <tr> <th>performance level</th> <th>Tear [N]</th> </tr> </thead> <tbody> <tr><td>1</td><td>10</td></tr> <tr><td>2</td><td>25</td></tr> <tr><td>3</td><td>50</td></tr> <tr><td>4</td><td>75</td></tr> </tbody> </table>	performance level	Tear [N]	1	10	2	25	3	50	4	75	several values palm: grain leather 52 44 51 25 palm: lining 23 17 10 24 lowest value for classification: 25	P			perf. level 2 type A+B		
performance level	Tear [N]																		
1	10																		
2	25																		
3	50																		
4	75																		
Puncture resistance	clause 5.4	type A at least level 2 type B at least level 1 <table border="1"> <thead> <tr> <th>performance level</th> <th>puncture [N]</th> </tr> </thead> <tbody> <tr><td>1</td><td>20</td></tr> <tr><td>2</td><td>60</td></tr> <tr><td>3</td><td>100</td></tr> <tr><td>4</td><td>150</td></tr> </tbody> </table>	performance level	puncture [N]	1	20	2	60	3	100	4	150	several values palm: grain leather with lining 127 97 115 125 lowest value for classification: 97	P			perf. level 2 type A+B		
performance level	puncture [N]																		
1	20																		
2	60																		
3	100																		
4	150																		

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Parameter	according EN 12477	Requirement	Test result	Remark																		
				P	F	N/A	N/T															
Burning behaviour	clause 5.5	type A at least level 3 type B at least level 2 Performance after flame time [s] after glow time [s] <table border="1"> <tr><td>1</td><td>< 20</td><td>no requirem.</td></tr> <tr><td>2</td><td>< 10</td><td>< 120</td></tr> <tr><td>3</td><td>< 3</td><td>< 25</td></tr> <tr><td>4</td><td>< 2</td><td>< 5</td></tr> </table> The seams at heated area do not open after burning time of 15 s.	1	< 20	no requirem.	2	< 10	< 120	3	< 3	< 25	4	< 2	< 5	after 3 s and 15 s: after flame time: 0 after glow time: 0 no seams opening no melting	P						
1	< 20	no requirem.																				
2	< 10	< 120																				
3	< 3	< 25																				
4	< 2	< 5																				
Contact Heat	clause 5.6	type A at least level 1 type B at least level 1 performance- contact temp. threshold level <table border="1"> <tr><td></td><td>T_G [°C]</td><td>time t_t [s]</td></tr> <tr><td>1</td><td>100</td><td>≥ 15</td></tr> <tr><td>2</td><td>250</td><td>≥ 15</td></tr> <tr><td>3</td><td>350</td><td>≥ 15</td></tr> <tr><td>4</td><td>500</td><td>≥ 15</td></tr> </table>		T_G [°C]	time t_t [s]	1	100	≥ 15	2	250	≥ 15	3	350	≥ 15	4	500	≥ 15	palm: grain leather with lining at temperature 250 °C threshold time: 19 s	P			
	T_G [°C]	time t_t [s]																				
1	100	≥ 15																				
2	250	≥ 15																				
3	350	≥ 15																				
4	500	≥ 15																				
Convective Heat	clause 5.7	type A at least level 2 type B at least level 0 Performance level Heat transfer index HTI <table border="1"> <tr><td>1</td><td>≥ 4</td></tr> <tr><td>2</td><td>≥ 7</td></tr> <tr><td>3</td><td>≥ 10</td></tr> <tr><td>4</td><td>≥ 18</td></tr> </table>	1	≥ 4	2	≥ 7	3	≥ 10	4	≥ 18	heat transfer index: palm: grain leather with lining 10 back: split leather with lining 13 cuff: split leather with lining 14	P										
1	≥ 4																					
2	≥ 7																					
3	≥ 10																					
4	≥ 18																					
Impact of molten metal drops	clause. 5.8	type A at least level 3 type B at least level 2 performance level number of drops <table border="1"> <tr><td>1</td><td>≥ 10</td></tr> <tr><td>2</td><td>≥ 15</td></tr> <tr><td>3</td><td>≥ 25</td></tr> <tr><td>4</td><td>≥ 35</td></tr> </table>	1	≥ 10	2	≥ 15	3	≥ 25	4	≥ 35	/* STFI 1329/08 back: > 35 cuff: > 35	P										
1	≥ 10																					
2	≥ 15																					
3	≥ 25																					
4	≥ 35																					
Dexterity	clause 5.9	type A at least level 1 type B at least level 4 Performance smallest diameter of level pin <table border="1"> <tr><td>1</td><td>11</td></tr> <tr><td>2</td><td>9,5</td></tr> <tr><td>3</td><td>8</td></tr> <tr><td>4</td><td>6,5</td></tr> <tr><td>5</td><td>5</td></tr> </table>	1	11	2	9,5	3	8	4	6,5	5	5	pin: 6,5 mm	P								
1	11																					
2	9,5																					
3	8																					
4	6,5																					
5	5																					
Optional Electrostatic properties (vertical resistance)	clause 3.4 and EN 1149-2	vertical resistance between inner and outer side > 10 ⁵ Ω	-				N/A															

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Parameter	according EN 12477	Requirement	Test result	Remark			
				P	F	N/A	N/T
Marking	clause 6	<ul style="list-style-type: none"> - name, trade mark or other means of identification of the manufacturer - article identification - size - if required, best use before - EN 12477:2005 - figures: Protective gloves for welders: 	given given given not required given given				P
Information of the manufacturer	clause 7	<ul style="list-style-type: none"> - name, trade mark or other means of identification of the manufacturer - glove type , name or code for identification - size - if the expected shelf-life of the gloves is reduced by aging, the expiration date have to be added - the pictograms - if protection is only given, for part of gloves, information have to be added - possible problems - instruction for use for gloves and also for use with combination of other PPE - care instructions - information about penetration of UV-radiation and behaviour at arc welding 	given given given information given given not applicable named given only written given				P