

Prüfbericht - Nr.: 21128415 002

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Test Report No.:

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Auftraggeber: Weldas Europe B.V.
Client: De Poort 77, 4411 PB Rilland, Netherland

Gegenstand der Prüfung: Protective gloves for welders
Test item:

Bezeichnung: siehe Sonstiges
Identification: see other aspects
Serien-Nr.: 1027544
Serial No.:

Wareneingangs-Nr.: 744-700380/01
Receipt No.:
Eingangsdatum: 15.02.2007
Date of receipt:

Prüfört: TRPS / Prüfstelle für Produktsicherheit Leipzig
Testing location: Maximilianallee 4, 04129 Leipzig, Fon/Fax: +49 341 600 369-0 / -10

Prüfgrundlage: DIN EN 12477/09.2005, DIN EN 420/2003
Test specification:

Prüfergebnis: Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n).
Test Result: The test item passed the test specification(s).

Prüflaboratorium: TRPS / Prüfstelle für Produktsicherheit Leipzig
Testing Laboratory:

geprüft/ tested by:

kontrolliert/ reviewed by:

11.04.2007 Albrecht/Expert



11.04.2007

Knape/General Manager Leipzig



Datum	Name/Stellung	Unterschrift
Date	Name/Position	Signature

Datum	Name/Stellung	Unterschrift
Date	Name/Position	Signature

Sonstiges/ Other Aspects:

Art.	Typ	Performance levels:	mechanical	4133	thermal	413X3X
Art. 10-2000	Typ A			4233		423X4X
Art. 10-2900	Typ A			4133		41344X
Art. 10-2385	Typ A			3133		313X4X
Art. 10-2850	Typ A/B			4143		423X4X
Art. 10-2750	Typ A/B			4133		413X3X
Art. 10-2087	Typ A/B			4133		413X3X
Art. 10-2178	Typ A			3124		413X4X
Art. 10-2392	Typ A/B			3134		413X4X
Art. 10-2101	Typ A/B			3121		413X4X
Art. 10-1003	Typ A/B			2122		412X4X
Art. 10-1005	Typ A/B			2111		412X4X
Art. 10-1007	Typ B			2111		412X4X
Art. 10-1009	Typ B			2133		413X4X
Art. 10-2304	Typ A/B					

Abkürzungen: P(ass) = entspricht Prüfgrundlage
F(all) = entspricht nicht Prüfgrundlage
N/A = nicht anwendbar
N/T = nicht getestet

Abbreviations: P(ass) = passed
F(all) = failed
N/A = not applicable
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.

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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Used measuring instruments

Measuring	Device-Number Inventory-Number Serial-Number	next Calibration
Chromium VI content, Azo dye stuff		accredited test laboratory
Sizing	744 00 161	05/2008
Dexterity	744 00 197	05/2008

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

already certified articles:

10-2000 Test report M 9811321 E01, 744-800242, dtd. 22.05.1998,
 10-2087
 10-2178

10-2900 Test report M 9910845 E01, 744-900170, dtd. 07.04.1999
 10-2392

10-2385 Test report M 9910393 E01, 744-800515, dtd. 04.03.1999
 10-2850
 10-2750
 10-2101
 10-1003
 10-1005
 10-1007
 10-1009
 10-2304

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Art. 10-2750 Steersotuff straight thumb modelmaterial:

palm cow split side leather yellow, reinforced palm
back cow grain side leather
lining Comfoflex lining for backhand, nature cotton for cuff
cuff split leather



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" style="display: inline-table; vertical-align: middle;"><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	given (see M 9910393 E01)				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	/* AZ 24740 split leather yellow < 3 mg/kg split leather yellow < 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	-				N/A														
Comfort and efficiency Sizing	clause 3 EN 420, 5.1.2	<table border="1" style="display: inline-table; vertical-align: middle;"><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] XXL/11 360				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	type A and B given				P														

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Art. 10-2750 Steersotuff straight thumb model

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, leather: WVT: ≥ 5 mg/ (cm ² ·h). if protection level inhibits or excludes water vapour transmission, effect of perspiration is reduced if required, leather: WVA: ≥ 8 mg/cm ² for 8 h	given				P																
Abrasion resistance	clause 5.1	<table border="0"> <tr> <td>type A</td> <td>at least level 2</td> </tr> <tr> <td>type B</td> <td>at least level 1</td> </tr> </table> <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>	type A	at least level 2	type B	at least level 1	performance level	abrasion (cycles)	1	100	2	500	3	2000	4	8000	/* 21128415 001 breakthrough at about [cycles] Leather > 8000 lowest value for classification: > 8000				P perf. level 4		
type A	at least level 2																						
type B	at least level 1																						
performance level	abrasion (cycles)																						
1	100																						
2	500																						
3	2000																						
4	8000																						
Blade cut resistance	clause 5.2	<table border="0"> <tr> <td>type A</td> <td>at least level 1</td> </tr> <tr> <td>type B</td> <td>at least level 1</td> </tr> </table> <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>	type A	at least level 1	type B	at least level 1	performance level	blade cut resist. (index)	1	1,2	2	2,5	3	5,0	4	10,0	5	20,0	/* 21128415 001 index i: 1,4 1,4 1,3 1,4 1,4 index I: 1,4 lowest Index I for classification: 1,4				P perf. level 1
type A	at least level 1																						
type B	at least level 1																						
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	<table border="0"> <tr> <td>type A</td> <td>at least level 2</td> </tr> <tr> <td>type B</td> <td>at least level 1</td> </tr> </table> <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>	type A	at least level 2	type B	at least level 1	performance level	Tear [N]	1	10	2	25	3	50	4	75	/* 21128415 001 several values Leather 122 87 lowest value for classification: 87				P perf. level 4		
type A	at least level 2																						
type B	at least level 1																						
performance level	Tear [N]																						
1	10																						
2	25																						
3	50																						
4	75																						
Puncture resistance	clause 5.4	<table border="0"> <tr> <td>type A</td> <td>at least level 2</td> </tr> <tr> <td>type B</td> <td>at least level 1</td> </tr> </table> <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>	type A	at least level 2	type B	at least level 1	performance level	puncture [N]	1	20	2	60	3	100	4	150	/* 21128415 001 several values 146 156 lowest value for classification: 146				P perf. level 3		
type A	at least level 2																						
type B	at least level 1																						
performance level	puncture [N]																						
1	20																						
2	60																						
3	100																						
4	150																						

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Art. 10-2750 Steersotuff straight thumb model

Parameter	according EN 12477	Requirement	Test result	Remark																	
				P	F	N/A	N/T														
Burning behaviour	clause 5.5	type A at least level 2 type B at least level 1	/* 21128415 001 after flame time 0 s after glow time 4 s no seams opening no melted dropping no melting at inner layer no whole formation	P perf. level 4																	
		Performance after flame time [s] after glow time [s]																			
		<table border="1"> <tr><td>1</td><td>< 20</td><td>no requirements</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>	1	< 20	no requirements	2	< 10	< 120	3	< 3	< 25	4	< 2	< 5							
1	< 20	no requirements																			
2	< 10	< 120																			
3	< 3	< 25																			
4	< 2	< 5																			
		The seams at heated area do not open after burning time of 15 s.																			
Contact Heat	clause 5.6	type A at least level 1 type B at least level 1	/* 21128415 001 glove palm at 100 °C 42 s at 250 °C 17 s	P perf. level 2																	
		performance- contact temp. threshold level																			
		<table border="1"> <tr><td></td><td>T_C [°C]</td><td>t_c [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_C [°C]	t_c [s]	1	100	≥ 15	2	250	≥ 15	3	350	≥ 15	4	500	≥ 15				
	T_C [°C]	t_c [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	/* 21128415 001 glove palm 11 s glove back 14 s cuff 12 s	P perf. level 3																	
		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											
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	> 40 (see M 9811321 E01)	P perf. level 4																	
		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											
1	≥ 10																				
2	≥ 15																				
3	≥ 25																				
4	≥ 35																				
Dexterity	clause 5.9	type A at least level 1 type B at least level 4	pin:6,5 mm	P perf. 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									
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 > $10^5 \Omega$	/* STFI 2267/06 cuff $7,2 \times 10^9 \Omega$ back $2,8 \times 10^{10} \Omega$ palm $1,2 \times 10^{10} \Omega$	P																	


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Marking and Information according to EN 420/EN 12477 of gloves

Parameter	according EN 12477	Requirement	Test result	Remark			
				P	F	N/A	N/T
Marking	clause 6	- name, trade mark or other means of identification of the manufacturer - article identification - size - if required, best use before - EN 12477:2003 - figures: Protective gloves for welders: 	given				P
Information of the manufacturer	clause 7	- 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 label - information about penetration of UV-radiation and behaviour at arc welding - testing institute	given given given not applicable given given given given given given given				P