

Ecully, 14 avril 2000

Our own ref : LD/AO
Your letter of :
Ref :



DUDLEY DUNCAN

DOUBLE 'D' KNITTING & GLOVE INC
22500 JAMESON DRIVE
CALABASAS, CALIFORNIA 91302-5852
U.S.A.

TEST REPORT N° 1006

Sample supplied on 16/03/2000 parcel 7008

Purpose of the request : General requirement according to EN 420,
Mechanical test according to EN 388.
on protective glove.

Deputy Manager


Jacques POULENARD

Responsible for the test


Lionel DUCLAUX

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It includes 13 pages and 3 annexe(s).

*The COFRAC agreement is available only for the test methods covered by the accreditation.

On the assumption that a test report is written in a foreign language, only the document written in french shall be deemed authentic.

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CENTRE TECHNIQUE INDUSTRIEL (LOI DU 22 JUILLET 1948 - ARRÊTÉ DU 4 MAI 1950)

**PROTECTIVE GLOVES AGAINST MECHANICAL RISKS**

NF EN 388

COFRAC Pr 123

Ref. of the glove MAX PRO DD 7

For Sizing- WF 2X400)

Abrasion resistance

	<u>Number of cycles</u>	<u>Level</u>
Abrasion tester type Martindale	100	1
4 test specimen taken from 4 gloves of the same glove series	500	2
Abradant : Abrasive paper EAC 117 glass grade F2 GRIT 100	2000	3
Pressure : 9 kPa	8000	4

Classification is made by the lowest value

Number of cycles				Level
2000	1500	2500	3000	2

Blade cut resistance

2 test specimen taken from the palm area of 2 gloves of the same glove series	Index ≥ 20 : level 5
5 tests on each test specimen	Index ≥ 10 : level 4
Load : 5 N	Index ≥ 5 : level 3
Maxi cutting speed : about 10 cm/s	Index $\geq 2,5$: level 2
	Index $\geq 1,2$: level 1

RESULTS

Test 1	Test 2	Test 3	Test 4	Test 5	Average	Level
47,6	54,3	40,2			47,4	5

Test can't be done according EN 388 – Level 5 according to expert opinion

Tear resistance

	<u>Resistance in N</u>	<u>Level</u>
4 test specimen taken from 4 gloves of the same glove series		
2 in the direction fo the glove from cuff to finger tips		
2 perpendicularly	10	1
	25	2
The tear resistance is taken as the highest peak recorded	50	3
Classification is determined by taking the lowest value	75	4

Resistance in N

	Resistance in N		Level
	Lengthwise	Widthwise	
External layer	*500,3	*428,5	4
* break of a tongue		446,0	483,5

Puncture resistance

	<u>Resistance in N</u>	<u>Level</u>
4 circular test specimen with a diameter of 40 mm taken from 4 gloves of the same glove series		
Speed 100 mm/min	20	1
	60	2
Classification is determined by the lowest value	100	3
	150	4

Resistance in N				Level
55,7	52,0	43,7	59,8	1

- **Performance levels obtained** are as follows :

- General requirements, comfort and efficiency : EN 420 :

. General requirements :	pH :	pass
. Comfort and efficiency :	Sizes :	6, 7, 8, 9, 10*
	Dexterity :	level 3
	Water vapour permeability :	X

* *Sizes according the opinion of an expert.*

- Mechanical tests : EN 388 :

. Abrasion resistance :	level 2
. Cut resistance:	level 5
. Tear resistance :	level 4
. Puncture resistance :	level 1

- **EC Marking** is made on a label sewn into the overedge color and is as follows :

DOUBLE "D" Knitting & GLOVE INC.
MAX PRO
CE
6(XS) or 7(S) or 8(M) or 9(L) or 10 (XL)

- The compliance with the essential requirements as listed in Appendix II of the directive 89/686, subsection 1.1 - 1.2 - 1.3 - 1.4 - 2.2 - 3.3 was controlled by using the following harmonised standards :

- . EN 420 for general requirements
- . EN 388 for protection against mechanical risks

All alteration of the product has to be the subject of a revision, recorded in the life document enclosed in annex.

Date 2000 April the 19th

Manager of I T F - DR Lyon



INSTITUT TEXTILE
DE FRANCE

Michelle JARRIGEON

BP 60 69132 ECULLY CEDEX

Tél. (33) 04 72 86 16 00 Fax. (33) 04 78 43 39 66

N.B. : Any modification brought to a brandnew material which is the purpose of the present EC Type Examination Certificate should be brought to the knowledge of the entitled organisation in pursuance of the section R 233-62 of the Labour and Social Welfare laws.



PROTECTIVE GLOVES AGAINST MECHANICAL RISKS

NF EN 388

COFRAC Pr 123

Ref. of the glove MAX PRO DD 7

For Sizing- WF 2X400)

Abrasion resistance

	<u>Number of cycles</u>	<u>Level</u>
Abrasion tester type Martindale	100	1
4 test specimen taken from 4 gloves of the same glove series	500	2
Abradant : Abrasive paper EAC 117 glass grade F2 GRIT 100	2000	3
Pressure : 9 kPa	8000	4

Classification is made by the lowest value

Number of cycles				Level
2000	1500	2500	3000	2

Blade cut resistance

2 test specimen taken from the palm area of 2 gloves of the same glove series	Index ≥ 20 : level 5
5 tests on each test specimen	Index ≥ 10 : level 4
Load : 5 N	Index ≥ 5 : level 3
Maxi cutting speed : about 10 cm/s	Index $\geq 2,5$: level 2
	Index $\geq 1,2$: level 1

RESULTS

Test 1	Test 2	Test 3	Test 4	Test 5	Average	Level
47,6	54,3	40,2			47,4	5

Test can't be done according EN 388 – Level 5 according to expert opinion

Tear resistance

	<u>Resistance in N</u>	<u>Level</u>
4 test specimen taken from 4 gloves of the same glove series	10	1
. 2 in the direction fo the glove from cuff to finger tips	25	2
. 2 perpendicularly	50	3
The tear resistance is taken as the highest peak recorded	75	4
Classification is determined by taking the lowest value		

Resistance in N

	Lengthwise		Widthwise		Level
External layer	*500,3	*428,5	446,0	483,5	4
* break of a tongue					

Puncture resistance

	<u>Resistance in N</u>	<u>Level</u>
4 circular test specimen with a diameter of 40 mm taken from 4 gloves of the same glove series	20	1
Speed 100 mm/min	60	2
Classification is determined by the lowest value	100	3
	150	4

Resistance in N				Level
55,7	52,0	43,7	59,8	1

In enforcement of the directive 89/686/CEE dated from 21 December 1989 concerning harmonisation of state member regulations with regard to personal protective equipment, and of the executive orders n° 92-765, 766 and 768 date from 29 July 1992 transposing this directive into French law,

INSTITUT TEXTILE DE FRANCE

Direction Régionale LYON

Avenue Guy de Collongue

BP 60

69132 ECULLY CEDEX

entitled by decree of the " Ministère du Travail, de l'Emploi et de la Formation Professionnelle " dated from 11/08/92

identified by the number 0072

(published in OJEC)

assigns

THE EC TYPE EXAMINATION CERTIFICATE

n° 0072/560/162/04/00/0069

to the following model of personal Protective Equipment :

- **Protective glove** **MID PRO#DD10-WC**

- **Manufacturer :** **DOUBLE "D" KNITTING & GLOVE, INC**
22500 JAMESON DRIVE
CALABASAS, CALIFORNIA 91302-5852
USA

- **Required by :** **DOUBLE "D" KNITTING & GLOVE, INC**
22500 JAMESON DRIVE
CALABASAS, CALIFORNIA 91302-5852
USA



***Interpretation according to the standard
NF EN 388 - July 1994
Protective gloves against mechanical risks***

Sample reference : MID PRO DD 10 WC(For Sizing- WF 400)

GENERAL REQUIREMENTS NF EN 420 (SEPTEMBER 1994)

	<i>Spécifications</i>	<i>Values</i>	<i>Conformity/ Class</i>
4.4.2 pH -----	3,5 < > 9,5	6,8	Pass
4.4.3 Cr VI content (mg/kg)-----	< 2	/	/
5.1.2 Sizes -----	6 à 11		6-7-8-9-10*
5.2 Dexterity -----	0 ⇔ 5	6,5	4
5.3.1 Water vapor permeability -mg/(cm ² .h) (option)-----	> 2	/	/
5.3.2 Water vapor absorption (mg/cm ²) (option)-----	> 8	/	/

PROTECTIVE GLOVES AGAINST MECHANICAL RISKS NF EN 388 (JULY 1994)

	<i>Spécifications</i>	<i>Values</i>	<i>Conformity/ Class</i>
6.1 Abrasion resistance (Number of cycles)-----	1 ⇔ 4	800	1
6.2 Blade cut resistance-----	1 ⇔ 5	25,0	4
6.3 Tear resistance (N)-----	1 ⇔ 4	237,6	4
6.4 Puncture resistance (N)-----	1 ⇔ 4	93,1	2

* Conformity according the opinion of an expert.



- **Performance levels obtained** are as follows :

- General requirements, comfort and efficiency : EN 420 :

. General requirements :	pH :	pass
. Comfort and efficiency :	Sizes :	6, 7, 8, 9, 10*
	Dexterity :	level 4
	Water vapour permeability :	X

* *Sizes according the opinion of an expert.*

- Mechanical tests : EN 388 :

. Abrasion resistance :	level 1
. Cut resistance:	level 4
. Tear resistance :	level 4
. Puncture resistance :	level 2

- **EC Marking** is made on a label sewn into the overedge color and is as follows :

DOUBLE "D" Knitting & GLOVE INC.

MID PRO

CE

6(XS) or 7(S) or 8(M) or 9(L) or 10 (XL)

- The compliance with the essential requirements as listed in Appendix II of the directive 89/686, subsection 1.1 - 1.2 - 1.3 - 1.4 - 2.2 - 3.3 was controlled by using the following harmonised standards :

- . EN 420 for general requirements
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All alteration of the product has to be the subject of a revision, recorded in the life document enclosed in annex.



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DE FRANCE**

Date 2000 April the 19th

Avenue Guy de Collongu

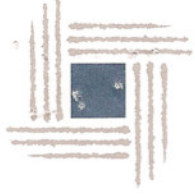
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Michelle JARRIGEON

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identified by the number 0072

(published in OJEC)

assigns

THE EC TYPE EXAMINATION CERTIFICATE

n° 0072/560/162/04/00/0068

to the following model of personal Protective Equipment :

- **Protective glove** **LITE PRO#DD13-WC**

- **Manufacturer :** **DOUBLE "D" KNITTING & GLOVE, INC**
22500 JAMESON DRIVE
CALABASAS, CALIFORNIA 91302-5852
USA

- **Required by :** **DOUBLE "D" KNITTING & GLOVE, INC**
22500 JAMESON DRIVE
CALABASAS, CALIFORNIA 91302-5852
USA

- Description :

The glove forming the subject of the present Certificate consists as follows :

. Glove is ambidextrous and knitted with four fingers and one thumb, it is of a seamless construction. Glove is knitted on an automated knitting machine 13 gage. Glove has a wrist with elastic and coloured yarn that designated the size of the glove. Its colour is white.

. This glove is knitted with a yarn constructed of the following materials : a core of .002 stainless steel wire + one end 220 denier flat polyester + bottom cover consisting of .002 stainless steel wire + top cover of 3/150 textured polyester.

. It is protective against mechanical risks.

. It presents a very good tear resistance, a good cut resistance and a good enough puncture resistance.

. Not any component could cause allergies or health hazards.

. Store the equipment into the original packaging, avoid heat, moisture and sun light.

. It can be cleaned by washing at 50° C, bleaching is possible.





- **Performance levels obtained** are as follows :

- General requirements, comfort and efficiency : EN 420 :

. General requirements :	pH :	pass
. Comfort and efficiency :	Sizes :	6, 7, 8, 9, 10*
	Dexterity :	level 5
	Water vapour permeability :	X

* *Sizes according the opinion of an expert.*

- Mechanical tests : EN 388 :

. Abrasion resistance :	level 0
. Cut resistance:	level 3**
. Tear resistance :	level 4
. Puncture resistance :	level 2

** *Conformity according the opinion of an expert.*

- **EC Marking** is made on a label sewn into the overedge color and is as follows :

DOUBLE "D" Knitting & GLOVE INC.
LITE PRO
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