



Handi As
Mr. Magne Karlsen
Magnus Barfots vei 5
4633 KRISTIANSAND S
Noorwegen



Your notice of
08-08-2017

Your reference

Date
08-12-2017

Analysis Report 17.04623.01

Required tests :

EN 388-6.1 (2016)	Determination of the abrasion resistance on Martindale with emery paper
EN 388-6.3 (2016)	Determination of tearing resistance - gloves
EN 388-6.2 (2016)	Determination of the blade cut resistance
ISO 9151 (2016)	Convective heat
EN ISO 6942 (2002)	Radiant heat
EN 348 (1992)	Small splashes of molten metal.
EN 407-6.3 (2004)	Burning behaviour
EN 388-6.4 (2016)	Determination of the puncture resistance
EN 702 (1994)	Contact heat
EN 702 (1994)	contact heat

Identification number	Information given by the client	Date of receipt
T1717357	Glove 2030/10	08-08-2017
T1717358	Glove 2014/10	08-08-2017
T1717359	Glove 1053/10	08-08-2017
T1717360	Glove 1080/10	08-08-2017
T1717361	Glove 1083/10	08-08-2017
T1717362	Glove 1153/10	08-08-2017
T1717363	Glove 2010/10	08-08-2017
T1717364	Glove 1043/10	08-08-2017
T1717365	Glove 1040/10	08-08-2017

CENTEXBEL • textile competence centre • www.centexbel.be • www.vkc.be

Inrichting erkend bij toepassing van de besluitwet van 30-01-1947 • Établissement reconnu par application de l'arrêté-loi du 30-01-1947
GENT • Technologiepark 7 • BE-9052 Zwijnaarde, Belgium • phone +32 9 220 41 51 • fax +32 9 220 49 55 • gent@centexbel.be
GRÂCE-HOLLOGNE • Rue du Travail 5 • BE-4460 Grâce-Hollogne, Belgium • phone +32 4 296 82 00 • g-h@centexbel.be
KORTRIJK • Etienne Sabbelaan 49 • BE-8500 Kortrijk, Belgium • phone +32 56 281828 • fax +32 56 281830 • info@vkc.be
VAT BE 0459.218.289 • IBAN BE44 2100 4729 6545 • BIC GEBABEBB



Christophe Cousyn

Order responsible

This report may be reproduced, as long as it is presented in its entire form, without written permission of Centexbel.
The results of the analysis cover the received samples. Centexbel is not responsible for the representativeness of the samples.
In assessing compliance with the specifications, we did not take into account the uncertainty on the test results.

CENTEXBEL • textile competence centre • www.centexbel.be • www.vkc.be

Inrichting erkend bij toepassing van de besluitwet van 30-01-1947 • Établissement reconnu par application de l'arrêté-loi du 30-01-1947
GENT • Technologiepark 7 • BE-9052 Zwijnaarde, Belgium • phone +32 9 220 41 51 • fax +32 9 220 49 55 • gent@centexbel.be
GRÂCE-HOLLOGNE • Rue du Travail 5 • BE-4460 Grâce-Hollogne, Belgium • phone +32 4 296 82 00 • g-h@centexbel.be
KORTRIJK • Etienne Sabbelaan 49 • BE-8500 Kortrijk, Belgium • phone +32 56 281828 • fax +32 56 281830 • info@vkc.be
VAT BE 0459.218.289 • IBAN BE44 2100 4729 6545 • BIC GEBABEBB



Handi As
Mr. Magne Karlsen
Magnus Barfots vei 5
4633 KRISTIANSAND S
Noorwegen

Your notice of
12-05-2017

Your reference

Date
13-06-2017

Analysis Report 17.02859.01

Required tests :

EN 420 6.1 (2003) + A1 (2009)

EN 388-6.3 (2016)

EN 388-6.1 (2016)

EN 388-6.2 (2016)

Determination of the dimensions of gloves

Determination of tearing resistance - gloves

Determination of the abrasion resistance on Martindale
with emery paper

Determination of the blade cut resistance

Identification number	Information given by the client	Date of receipt
T1710351	Glove 1052	12-05-2017
T1710352	Glove 1053	12-05-2017

Christophe Cousyn

Order responsible

This report may be reproduced, as long as it is presented in its entire form, without written permission of Centexbel.
The results of the analysis cover the received samples. Centexbel is not responsible for the representativeness of the samples.
In assessing compliance with the specifications, we did not take into account the uncertainty on the test results.

CENTEXBEL • textile competence centre • www.centexbel.be • www.vkc.be
Inrichting erkend bij toepassing van de besluitwet van 30-01-1947 • Établissement reconnu par application de l'arrêté-loi du 30-01-1947
GENT • Technologiepark 7 • BE-9052 Zwijnaarde, Belgium • phone +32 9 220 41 51 • fax +32 9 220 49 55 • gent@centexbel.be
GRÂCE-HOLLOGNE • Rue du Travail 5 • BE-4460 Grâce-Hollogne, Belgium • phone +32 4 296 82 00 • g-h@centexbel.be
KORTRIJK • Etienne Sabbelaan 49 • BE-8500 Kortrijk, Belgium • phone +32 56 281828 • fax +32 56 281830 • info@vkc.be
VAT BE 0459.218.289 • IBAN BE44 2100 4729 6545 • BIC GEBABEBB



Reference: T1710352 - Glove 1053

Determination of the dimensions of gloves

Date of ending the test 29-05-2017
Standard used EN 420 6.1 (2003) + A1 (2009)
Product standard EN 420 (2003) + A1 (2009)
Deviation from the standard The circumference is measured on the outside of the glove
Number of gloves 2 x 2

	Size		Total length (mm)	Length of the top of the middle finger until the wrist (mm)	Circumference (mm)
#1	10	left	300	205	275
#2	10	right	305	208	275
#3	10	left	300	205	280
#4	10	right	305	207	285

Performed in the physical lab Ghent under the responsibility of Filip Ghekiere



Reference: T1710352 - Glove 1053

Determination of tearing resistance - gloves

Date of ending the test 06-06-2017
Standard used EN 388-6.3 (2016)
Product standard EN 388 (2016)

Deviation from the standard -
Conditioning 23°C, relative humidity 50%
Apparatus Instron, type CRE, class 0,5
Cell 100 N
Rate 100 mm/min
Number of test specimens 2 (Length direction)
2 (Width direction)
Calculation Automatic - the highest peak

Outer layer	Tear resistance (N)
Length	43.9*
Length	> 75.0
Width	47.4*
Width	> 75.0
Minimum	43.9 N

Inner layer	Tear resistance (N)
Length	40.4*
Length	34.1*
Width	40.2
Width	30.0
Minimum	30.0 N

Remark * = Tear transfer

Classification level				
Level 1	Level 2	Level 3	Level 4	Level 5
10 N	25 N	50 N	75 N	-

Performed under accreditation in the physical lab Ghent under the responsibility of Filip Ghekiere



Reference: T1710352 - Glove 1053

Determination of the blade cut resistance

Date of ending the test 06-06-2017
Standard used EN 388-6.2 (2016)
Product standard EN 388 (2016)
Deviation from the standard -
Conditioning 23°C, relative humidity 50%
Apparatus Coupetest
Number of test specimens 2

On all layers together

Direction /

	Ref. fabric	Test specimen 1	Ref. fabric	Index
#1	1.1	0.6	1.0	1.57
#2	1.0	0.6	1.0	1.60
#3	1.0	0.7	1.0	1.70
#4	1.0	0.5	1.3	1.43
#5	1.3	0.6	1.2	1.48
Average	1.1	0.6	1.1	1.6

Direction \

	Ref. fabric	Test specimen 2	Ref. fabric	Index
#1	1.2	0.6	1.2	1.50
#2	1.2	1.1	1.1	1.96
#3	1.1	1.2	1.2	2.04
#4	1.2	1.4	1.4	2.08
#5	1.4	1.5	1.5	2.03
Average	1.2	1.2	1.3	1.9

Classification level				
Level 1	Level 2	Level 3	Level 4	Level 5
1.2	2.5	5.0	10.0	20.0



Reference: T1717359 - Glove 1053/10

Determination of the puncture resistance

Date of ending the test 06-09-2017
Standard used EN 388-6.4 (2016)
Product standard EN 388 (2016)
Deviation from the standard -
Conditioning 23°C, relative humidity 50%
Apparatus Instron, type CRE, class 0,5
Cell 1 kN
Perforation speed 100 mm/min
Used spike Test spike of steel with rounded top
Maximum displacement 50 mm
Number of test specimens 4

On all layers together

Specimen	Force (N)
#1	109
#2	57.6
#3	120
#4	75.9
Minimum	57.6 N

Classification level				
Level 1	Level 2	Level 3	Level 4	Level 5
20 N	60 N	100 N	150 N	-

Performed under accreditation in the physical lab Ghent under the responsibility of Filip Ghekiere

Reference: T1717359 - Glove 1053/10

Determination of the puncture resistance

Date of ending the test 06-09-2017
Standard used EN 388-6.4 (2016)
Product standard EN 388 (2016)

Deviation from the standard -
Conditioning 23°C, relative humidity 50%
Apparatus Instron, type CRE, class 0,5
Cell 1 kN
Perforation speed 100 mm/min
Used spike Test spike of steel with rounded top
Maximum displacement 50 mm
Number of test specimens 4

On all layers together

Specimen	Force (N)
#1	109
#2	57.6
#3	120
#4	75.9
Minimum	57.6 N

Classification level				
Level 1	Level 2	Level 3	Level 4	Level 5
20 N	60 N	100 N	150 N	-

Performed under accreditation in the physical lab Ghent under the responsibility of Filip Ghekiere



Reference: T1710352 - Glove 1053

Determination of the abrasion resistance on Martindale with emery paper

Date of ending the test 06-06-2017
Standard used EN 388-6.1 (2016)
Product standard EN 388 (2016)

Deviation from the standard -
Conditioning 23°C, relative humidity 50%
Apparatus Martindale Wear and Abrasion Tester
Used pressure 9 kPa
Abradant Klingspor PL31B Gritt 180
Number of test specimens 4
Specimens tested by 4

Outer layer	Number of cycles to breakdown the specimen
#1	500 >< 2000
#2	2000 >< 8000
#3	2000 >< 8000
#4	2000 >< 8000
Minimum	500 >< 2000

Inner layer	Number of cycles to breakdown the specimen
#1	0 >< 100
#2	0 >< 100
#3	0 >< 100
#4	0 >< 100
Minimum	0 >< 100

Classification level				
Level 1	Level 2	Level 3	Level 4	Level 5
100 cycli	500 cycli	2000 cycli	8000 cycli	-

Performed under accreditation in the physical lab Ghent under the responsibility of Filip Ghekiere



Reference: T1710351 - Glove 1052

Determination of the dimensions of gloves

Date of ending the test 29-05-2017
Standard used EN 420 6.1 (2003) + A1 (2009)
Product standard EN 420 (2003) + A1 (2009)
Deviation from the standard The circumference is measured on the outside of the glove
Number of gloves 1 x 2

	Size		Total length (mm)	Length of the top of the middle finger until the wrist (mm)	Circumference (mm)
#1	9	left	273	185	260
#2	9	right	275	186	260

Performed in the physical lab Ghent under the responsibility of Filip Ghekiere