REPORT

Contact person RISE
Erika Callsen
Chemistry and Materials
+46 10 516 56 67
erika.callsen@ri.se

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Reference
2P04283

Npa Nordiskt Papper AB
Svarvaregatan 11
341 34 LJUNGBY

Test of protective clothing (Covid-19)

(1 appendix)

1. Commission

The commission was to test protective clothing against liquid chemicals (Type 4) according to SS EN 14605 regarding the situation of Covid-19.

2. Test object

The protective clothing NPA ISOLATION GOWN with thumb loops with article number 05023 was to be tested according to SS EN 14605. The isolation gown is transparent with a thickness of 30 µm. Picture and description of the test object can be seen in product data sheet with name productsheet.pdf (appendix 1).

3. Method

3.1. Movements

Seven movements is performed according to SS EN 14605, part 4.3.4.1 General and preliminary testing, see below.

Movement 1: kneel on both knees, lean forward and place both hands on the floor (45 ± 5) cm in front of the knees, crawl forward and backwards on hands and knees for a distance of three metres in each direction.

Movement 2: climb a vertical ladder at least four steps, rungs to be as encountered on a typical ladder.

Movement 3: position hands at chest level, palms out; reach directly overhead, interlock thumbs, extend arms fully upwards.

Movement 4: kneel on right knee, place left foot on floor with left knee bent (90 ± 10) °; touch thumb of right hand to toe of left shoe. Repeat movement with alternate posture, i.e. by kneeling on left knee and placing the right foot on the floor with knee bent at 90°;

Movement 5: extend arms fully in front of body, lock thumbs together, twist upper body (90 ± 10) ° left and right.

Movement 6: stand with feet shoulder width apart, arms at side; raise arms until they are parallel to the floor in front of the body; squat down as far as possible.

Movement 7: kneel as in movement 4, left arm hanging loosely at side; raise arm fully overhead. Repeat movement with alternate posture by alternating arms.

3.2. Innocuousness and information about the product

Innocuousness according SS EN 13688 shall be checked of test object.

Documents and information of the test object protective clothing with article number 05023 shall be checked according to SS EN 14605 section 6.

3.3. Cracking

Determination of resistance to damage of protective clothing with article number 05023 by flexing is done according to EN ISO 7854:1995 method B.

3.4. Tear resist

Determination of tear resistance of protective clothing with article number 05023 is done according to SS-EN ISO 9073-4:1997.

3.5. Tensile strength

Determination of maximum force and elongation at maximum force of protective clothing with article number 05023 is done using the strip method SS EN ISO 13934-1:2013.

3.6. Puncture

The mechanical properties of protective clothing with article number 05023 is tested with puncture resistance according to SS-EN 863:1995.

3.7. Permeation

Determination of resistance of protective clothing with article number 05023 to permeation by liquids according to ISO 6529:2013 method A.

3.8. Seam strength

Determination of maximum force of protective clothing with article number 05023 to seam rupture using the grab method according to ISO 13935-2:2014.

4. Results

4.1. Movements

All movements according to SS EN 14605, part 4.3.4.1 General and preliminary testing, were done and there were no signs of cracking of the product and all movements could be done with simplicity.

4.2. Innocuousness and information of the product

The innocuousness was checked according to SS-EN 13688 and according to the documents sent by manufacturer no harmful substances could be found in the garment.

Documents and information of the test object protective clothing with article number 05023 can be seen in appendix 1.

How the manufacturer is going to mark the product has not been seen by RISE. The marking need the reference by performed test SS EN 14605, product identification and also marking Covid-19.

No pictogram marking has been seen by RISE.

4.3. Cracking

Determination of resistance to damage of protective clothing was done according to EN ISO 7854:1995 method B and the result can be seen in appendix 2. The product is approved and meet the requirement to withstand > 1000 cycles.

4.4. Tear resist

Determination of tear resistance of the protective clothing was done according to SS-EN ISO 9073-4:1997. The test results can be seen in appendix 3. The product meet the requirement in SS-EN ISO 9073-4:1997 of >10 N (Result: 11 N).

4.5. Tensile strength

Determination of maximum force and elongation at maximum force of protective clothing was done using the strip method SS EN ISO 13934-1:2013. The result from the performed test can be seen in appendix 4. The product meet the requirement of SS EN ISO 13934-1:2013 of > 30 N (Result: 45 N).

4.6. Puncture

The mechanical properties of protective clothing was tested with puncture resistance according to SS-EN 863:1995. The test results can be seen in appendix 5. The product meet the requirement according SS-EN 863:1995 to of > 5 N (Result: 6 N).

4.7. Permeation

Determination of resistance of protective clothing to permeation by liquids was done according to ISO 6529:2013 method A. The results can be seen in appendix 6. The product meet the requirement according to ISO 6529:2013 method A.

4.8. Seam strength

Determination of maximum force of protective clothing to seam rupture using the grab method was done according to ISO 13935-2:2014. The results can be seen in appendix 7. The product meet the requirement according to ISO 13935-2:2014 of > 30 N (Result: 38 N).

RISE Research Institutes of Sweden AB
Chemistry and Materials - Corrosion and Surface Protection

Performed by

Signed by: Erika Callsen
Reason: Jag är författare till det här dokumentet
Date & Time: 2020-05-19 09:12:56 +02:00

Erika Callsen

Examined by

Signed by: Konrad Tarka
Reason: I have reviewed this document
Date & Time: 2020-05-19 01:26:11 +02:00

Konrad Tarka

Appendix

1. productsheet.pdf
2. Cracking EN ISO 7854_.xlsx
3. 2P04283-01 NPA Rivtest EN ISO 9073-4 1997.pdf
4. 2P04283-01 NPA Dragtest EN ISO 13934-1 2013.pdf
5. 2P04283-01 NPA Punktering EN 863 1995.pdf
6. 2P04283 NPA Paper permeabilitetsresultat.pdf
7. 2P04283-01 NPA Sömtest EN ISO 13935-2 2014.pdf

Appendix 1