

# EU Type-examination Certificate

Number:  
**UE-000171/00**

## MID OCEAN BV

WELLENSIEKSTRAAT 2  
6718 XZ EDE - THE NETHERLANDS

Certificate issued by **Eurofins Textile Testing Spain, S.L. (Unipersonal)** as notified body nº 2865 in accordance with Annex V (Module B) of Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment (PPE).

### PPE Type **OVEN GLOVE**

**Reference** MO6647-03

**Variant(s)** MO6647-05

Description / Sizes: Mitten color black or red. One size

The protective equipment abovementioned complies with the essential health and safety requirements applicable, according to Annex II of Regulation (EU) 2016/425 as **Category II** PPE.

#### Harmonised standard(s):

- EN ISO 21420:2020
- EN 407:2020

#### Performance level(s) obtained:

- For thermal domestics risks:
- CONTACT HEAT LEVEL 2

#### Other technical specifications: ---

For Category III PPE, this EU type-examination certificate must be used in conjunction with one of the conformity assessment procedures base on internal production control plus supervised product checks at random intervals (Module C2) or based on the quality assurance of the production process (Module D), according to Regulation (EU) 2016/425.



Marta Nieto Araujo  
Certification director

Date of Issue: 05/07/2022  
Expiry date: 05/07/2027  
Renovation date: \_\_/\_\_/\_\_

## TECHNICAL REPORT FOR EU TYPE-EXAM CERTIFICATION of Personal Protective Equipment (PPE)

EU TYPE EXAMINATION Nº:

UE-000171/00

APPLICATION DATE:

28/04/2022

DATE OF ISSUE:

05/07/2022

APPLICANT:

MID OCEAN BV  
WELLENSIEKSTRAAT 2  
6718 XZ EDE - THE NETHERLANDS

PPE TYPE:

OVEN GLOVE

REFERENCE (PPE):

MO6647-03 / MO6647-05

INDEX:

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2. Certification scope
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ANNEX. - EU Type-Examination Certificate

## 1. PPE IDENTIFICATION

### 1.1 Description and photography

Mitten colour black or red with a plain side and a padded side.



### 1.2 Description of the components

PPE components according to the information supplied by the manufacturer, are:

- External fabric: 95% Polyester 5% Cotton
- Lining: 100% Polyester

### 1.3 Sizes

According to the information supplied by the manufacturer, this PPE is commercialized in the following sizes:

| Size     | Length of the user's hand (mm) | Perimeter of the user's hand (mm) |
|----------|--------------------------------|-----------------------------------|
| One size | 192-203                        | 229-255                           |

### 1.4 Samples given for certification

On date 20/04/2022 (20) twenty black gloves and (20) twenty red gloves and (20) twenty black gloves arrived at the laboratory.

## 2. CERTIFICATION SCOPE

- **EN ISO 21420:2020** Protective gloves - General requirements and test methods.
- **EN ISO 407:2004** Protective gloves and other hand protective equipments against thermal risks (heat and/or fire).

For the protection of the hands of the user against the following risks:

- Risk of burning due to contact heat.

## 3. DOCUMENTATION SUBMITTED

- Technical documentation, including the next points:
  - Complete description of the PPE and of its intended use
  - Assessment of the risks against which the PPE is intended to protect
  - List of the essential health and safety requirements that are applicable
  - Design and manufacturing drawings and schemes of the PPE and of its components and explanations
  - Reference of the harmonized standards and/ or other technical specifications
  - Reports on the tests carried out to verify the conformity of the PPE
  - A description of the means used by the manufacturer during the production (Module C)
    - Manufacturer's instructions
    - Marking
    - Declaration of conformity

#### 4. RELATIONSHIP BETWEEN THIS EUROPEAN STANDARD AND ANNEX II OF REGULATION (EU) 2016/425 ON PPE

- **EN ISO 21420:2020** Protective gloves - General requirements and test methods

| Essential Health and Safety Requirements, according to Annex II of Regulation (EU) 2016/425                             | Clause(s) / sub-clause(s) of the standard EN ISO 21420:2020 | Result                                             |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------|
| 1.2.1.1 Suitable constituent materials                                                                                  | 4.2                                                         | Meet <input checked="" type="checkbox"/>           |
|                                                                                                                         |                                                             | Not meet <input type="checkbox"/>                  |
|                                                                                                                         |                                                             | Not applicable <input type="checkbox"/>            |
| 1.2.1.3 Maximum permissible user impediment                                                                             | 5.2                                                         | Meet <input checked="" type="checkbox"/>           |
|                                                                                                                         |                                                             | Not meet <input type="checkbox"/>                  |
|                                                                                                                         |                                                             | Not applicable <input type="checkbox"/>            |
| 1.4 Manufacturer's instructions and information                                                                         | 7.3                                                         | Meet <input checked="" type="checkbox"/>           |
|                                                                                                                         |                                                             | Not meet <input type="checkbox"/>                  |
|                                                                                                                         |                                                             | Not applicable <input type="checkbox"/>            |
| 2.4 PPE subject to ageing                                                                                               | 4.3; 7.2.1.1 f) and 7.2.2 g)                                | Meet <input checked="" type="checkbox"/>           |
|                                                                                                                         |                                                             | Not meet <input type="checkbox"/>                  |
|                                                                                                                         |                                                             | Not applicable <input type="checkbox"/>            |
| 2.5 PPE which may be caught up during use                                                                               | 7.3.7                                                       | Meet <input checked="" type="checkbox"/>           |
|                                                                                                                         |                                                             | Not meet <input type="checkbox"/>                  |
|                                                                                                                         |                                                             | Not applicable <input type="checkbox"/>            |
| 2.6 PPE for use in potentially explosive atmospheres                                                                    | 4.4                                                         | Meet <input type="checkbox"/>                      |
|                                                                                                                         |                                                             | Not meet <input type="checkbox"/>                  |
|                                                                                                                         |                                                             | Not applicable <input checked="" type="checkbox"/> |
| 2.12 PPE bearing one or more identification markings or indicators directly or indirectly relating to health and safety | 7.2.1.1 d); 7.2.2 e) and 7.3.5                              | Meet <input checked="" type="checkbox"/>           |
|                                                                                                                         |                                                             | Not meet <input type="checkbox"/>                  |
|                                                                                                                         |                                                             | Not applicable <input type="checkbox"/>            |

- **EN ISO 407:2020** Protective gloves and other hand protective equipments against thermal risks (heat and/or fire).

| Essential Health and Safety Requirements, according to Annex II of Regulation (EU) 2016/425 | Clause(s) / sub-clause(s) of the standard EN 407:2020 | Result                                   |
|---------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------|
| 1.2.1 Absence of inherent risks and other nuisance factors                                  | 4.4.1                                                 | Meet <input checked="" type="checkbox"/> |
|                                                                                             |                                                       | Not meet <input type="checkbox"/>        |
|                                                                                             |                                                       | Not applicable <input type="checkbox"/>  |
| 1.3.2 Lightness and strength                                                                | 4.3                                                   | Meet <input checked="" type="checkbox"/> |
|                                                                                             |                                                       | Not meet <input type="checkbox"/>        |
|                                                                                             |                                                       | Not applicable <input type="checkbox"/>  |
| 1.4 Manufacturer's instructions and information                                             | 8                                                     | Meet <input checked="" type="checkbox"/> |
|                                                                                             |                                                       | Not meet <input type="checkbox"/>        |
|                                                                                             |                                                       | Not applicable <input type="checkbox"/>  |
| 2.7 PPE intended for rapid intervention or to be put on or removed rapidly                  | 4.4.1 and 8 i)                                        | Meet <input checked="" type="checkbox"/> |
|                                                                                             |                                                       | Not meet <input type="checkbox"/>        |
|                                                                                             |                                                       | Not applicable <input type="checkbox"/>  |

|                                                                                                                         |     |                |                                     |
|-------------------------------------------------------------------------------------------------------------------------|-----|----------------|-------------------------------------|
| 2.12 PPE bearing one or more identification markings or indicators directly or indirectly relating to health and safety | 7   | Meet           | <input checked="" type="checkbox"/> |
|                                                                                                                         |     | Not meet       | <input type="checkbox"/>            |
|                                                                                                                         |     | Not applicable | <input type="checkbox"/>            |
| 3.6 Protection against heat and/or fire                                                                                 | 4.5 | Meet           | <input checked="" type="checkbox"/> |
|                                                                                                                         |     | Not meet       | <input type="checkbox"/>            |
|                                                                                                                         |     | Not applicable | <input type="checkbox"/>            |

## 5. DEXTERITY

- **EN ISO 21420:2020** Protective gloves - General requirements and test methods

| Requirement                                                                                                          |                                     |
|----------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| After the evaluation of the dexterity according to point 5.2 of EN ISO 21420:2020, it is determined that the PPE is: |                                     |
| Level of performance 0                                                                                               | <input checked="" type="checkbox"/> |
| Level of performance 1                                                                                               | <input type="checkbox"/>            |
| Level of performance 2                                                                                               | <input type="checkbox"/>            |
| Level of performance 3                                                                                               | <input type="checkbox"/>            |
| Level of performance 4                                                                                               | <input type="checkbox"/>            |
| Level of performance 5                                                                                               | <input type="checkbox"/>            |

## 6. SUMMARY OF RESULTS

| LEGEND RESULTS |                |
|----------------|----------------|
| M              | Meet           |
| NM             | Not meet       |
| NA             | Not applicable |
| NT             | Not tested     |

### 6.1. EN ISO 21420:2020 Protective gloves. General requirements and test methods.

| TEST                                                          | BE APLICATED                                             | STANDARD                                  | REQUERIMENTS                                         | *UoM. | REPORT Nº          | RESULT |
|---------------------------------------------------------------|----------------------------------------------------------|-------------------------------------------|------------------------------------------------------|-------|--------------------|--------|
| <b>Determination of content in Chromium (VI)</b><br>point 4.2 | Each layer of material (Leather)                         | ISO 17075-1<br>o<br>ISO 17075-2           | EN ISO 21420:2020, point 4.2<br>≤ 3mg/kg             | NA    | NA                 | NA     |
| <b>Release of nickel</b><br>point 4.2                         | All metallic materials in contact with the skin          | EN 1811+A1:2015                           | EN ISO 21420:2020, point 4.2<br>< 0,5µg/cm² per week | NA    | NA                 | NA     |
| <b>Determination of pH</b><br>point 4.2                       | Black fabric /<br>Red fabric /<br>Non-woven /<br>Padding | Leather<br>ISO 4045<br>Others<br>ISO 3071 | EN ISO 21420:2020, point 4.2<br>> 3,5 and < 9,5      | ± 0,3 | AR-22-YL-004646-02 | M      |

|                                                                                   |                                                                |                                                 |                                                                                                                               |    |                        |         |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----|------------------------|---------|
| <b>Determination of azo colorants which release carcinogenic amines</b> point 4.2 | Black fabric /<br>Red fabric                                   | Textile<br>EN 14362-1<br>Leather<br>ISO 17234-1 | EN ISO 21420:2020, point 4.2<br>Shall be not detectable                                                                       | NA | AR-22-YL-004646-02     | M       |
| <b>Dimethylformamide (DMFa)</b> point 4.2                                         | PU                                                             | EN 16778                                        | EN ISO 21420:2020, point 4.2<br>≤ 1000 mg/kg (0,1% weight/weight)                                                             | NA | NA                     | NA      |
| <b>Determination of Polycyclic aromatic hydrocarbons (PAHs)</b> point 4.2         | Rubber or plastic materials in contact with the skin           | ISO / TS 16190                                  | EN ISO 21420:2020, point 4.2 and table 1<br>≤ 1 mg/kg (0,0001% by mass+ of this component)                                    | NA | NA                     | NA      |
| <b>Cleaning</b> point 4.3                                                         | Glove<br>25 washing cycles at 30°C, flat dry                   | -                                               | EN ISO 21420:2020, point 4.3 and 7.3.14                                                                                       | NA | AR-22-YL-004646-02     | ---     |
| <b>Electrostatic properties</b> point 4.4.1                                       | Exterior fabric / assembly                                     | EN 16350                                        | EN ISO 21420:2020, point 4.4.1<br>Additional electrostatic properties determined by the test standards EN 1149-1 or EN 1149-3 | NT | NT                     | NT      |
| <b>Dexterity</b> point 5.2                                                        | Glove                                                          | EN ISO 21420:2020, point 6.2                    | EN ISO 21420:2020, point 5.2 and table 2                                                                                      | NA | Point 5 of this report | Level 0 |
| <b>Marking</b> point 7.2.1.1 (d and f) and 7.2.2 (e and g)                        | EN ISO 21420:2020, point 7.2.1.1 (d and f) and 7.2.2 (e and g) |                                                 |                                                                                                                               | NA | NA                     | M       |
| <b>Information supplied by the manufacturer</b> point 7.3.5 and 7.3.7             | EN ISO 21420:2020, point 7.3.5 and 7.3.7                       |                                                 |                                                                                                                               | NA | NA                     | M       |

**6.2. EN ISO 407:2020** Protective gloves and other hand protective equipments against thermal risks (heat and/or fire).

| TEST                                         | BE APLICATED               | STANDARD                                           | REQUERIMENTS                      | *UoM. | REPORT Nº          | RESULT |
|----------------------------------------------|----------------------------|----------------------------------------------------|-----------------------------------|-------|--------------------|--------|
| <b>Tear resistance</b> point 4.3             | Outer fabric as received   | EN 407:2020, point 6.8                             | EN 407:2020, point 4.3<br>≥ 10 N  | ± 4 N | AR-22-YL-004646-02 | M      |
|                                              | Outer fabric after washing |                                                    |                                   | ± 3 N |                    |        |
| <b>Sizes</b> point 4.4                       | Glove                      | EN ISO 21420:2020                                  | EN 407:2020, point 4.4            | NA    | NA                 | NA     |
| <b>General Thermal performance</b> point 4.5 | Glove                      | EN 407:2020, point 4.5                             | EN 407:2020, point 4.5.1, Annex A | NA    | NA                 | M      |
| <b>Limited flame spread</b> point 4.5.2      | Glove                      | EN 407:2020, point 6.2<br>ISO 15025:2016, method A | EN 407:2020, point 4.5.2, table 2 | NT    | NT                 | NT     |
|                                              |                            |                                                    | Level                             |       |                    |        |
|                                              |                            |                                                    | 1                                 |       |                    |        |
|                                              |                            |                                                    | 2                                 |       |                    |        |
|                                              |                            |                                                    | 3                                 |       |                    |        |
|                                              |                            |                                                    | 4                                 |       |                    |        |

|                                                     |                                                                                                                  |                                                             |                                   |                |                   |                                              |                    |         |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------|----------------|-------------------|----------------------------------------------|--------------------|---------|
| Limited flame spread<br>point 4.5.2                 | Glove                                                                                                            | EN 407:2020,<br>point 6.2<br>ISO<br>15025:2016,<br>method B | EN 407:2020, point 4.5.2, table 2 |                |                   | NT                                           | NT                 | NT      |
|                                                     |                                                                                                                  |                                                             | Level                             | After flame    | After glow time s |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 1                                 | ≤ 15           | ---               |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 2                                 | ≤ 10           | ≤ 120             |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 3                                 | ≤ 3            | ≤ 25              |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 4                                 | ≤ 2            | ≤ 5               |                                              |                    |         |
| Limited flame spread<br>point 4.5.2                 | Seams and accessories                                                                                            | EN 407:2020,<br>point 6.2<br>ISO<br>15025:2016,<br>method A | EN 407:2020, point 4.5.2, table 2 |                |                   | NT                                           | NT                 | NT      |
|                                                     |                                                                                                                  |                                                             | Level                             | After flame    | After glow time s |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 1                                 | ≤ 15           | ---               |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 2                                 | ≤ 10           | ≤ 120             |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 3                                 | ≤ 3            | ≤ 25              |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 4                                 | ≤ 2            | ≤ 5               |                                              |                    |         |
| Contact heat<br>point 4.5.3                         | Padded side as received /<br>Plain side as received /<br>Padded side after washing /<br>Plain side after washing | EN 407:2020,<br>point 6.3<br>ISO 12127-1:2015               | EN 407:2020, point 4.5.3, table 3 |                |                   | ± 1,5 s /<br>± 2 s /<br>± 1,7 s /<br>± 1,9 s | AR-22-YL-004646-02 | Level 2 |
|                                                     |                                                                                                                  |                                                             | Level                             | Tc°C           | tt s              |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 1                                 | 100            | ≥ 15              |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 2                                 | 250            | ≥ 15              |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 3                                 | 350            | ≥ 15              |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 4                                 | 500            | ≥ 15              |                                              |                    |         |
| Convective heat<br>point 4.5.4                      | Glove                                                                                                            | ISO 9151:2016                                               | EN 407:2020, point 4.5.4, table 4 |                |                   | NT                                           | NT                 | NT      |
|                                                     |                                                                                                                  |                                                             | Level                             | HTI s          |                   |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 1                                 | ≥ 4            |                   |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 2                                 | ≥ 7            |                   |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 3                                 | ≥ 10           |                   |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 4                                 | ≥ 18           |                   |                                              |                    |         |
| Radiant heat<br>point 4.5.5                         | Glove                                                                                                            | ISO 6942:2002,<br>method B                                  | EN 407:2020, point 4.5.5, table 5 |                |                   | NT                                           | NT                 | NT      |
|                                                     |                                                                                                                  |                                                             | Level                             | HT t24 S       |                   |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 1                                 | ≥ 7            |                   |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 2                                 | ≥ 20           |                   |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 3                                 | ≥ 50           |                   |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 4                                 | ≥ 95           |                   |                                              |                    |         |
| Small splashes of molten metal<br>point 4.3         | Glove                                                                                                            | ISO 9150:1988                                               | EN 407:2020, point 4.5.6, table 6 |                |                   | NT                                           | NT                 | NT      |
|                                                     |                                                                                                                  |                                                             | Level                             | Nº of droplets |                   |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 1                                 | ≥ 10           |                   |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 2                                 | ≥ 15           |                   |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 3                                 | ≥ 25           |                   |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 4                                 | ≥ 35           |                   |                                              |                    |         |
| Large quantities of molten metal<br>point 4.3       | Glove                                                                                                            | ISO 9185:2007                                               | EN 407:2020, point 4.5.7, table 7 |                |                   | NT                                           | NT                 | NT      |
|                                                     |                                                                                                                  |                                                             | Level                             | Molten iron g. |                   |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 1                                 | ≥ 10           |                   |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 2                                 | ≥ 15           |                   |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 3                                 | ≥ 25           |                   |                                              |                    |         |
|                                                     |                                                                                                                  |                                                             | 4                                 | ≥ 35           |                   |                                              |                    |         |
| Marking<br>point 7                                  | Glove                                                                                                            | EN 407:2020, point 7                                        |                                   |                |                   | NA                                           | NA                 | M       |
| Information supplied by the manufacturer<br>point 8 | Glove                                                                                                            | EN 407:2020, point 8                                        |                                   |                |                   | NA                                           | NA                 | M       |

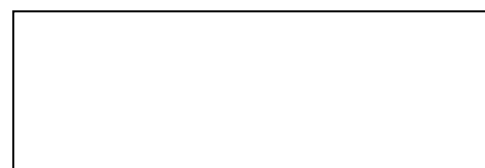
## 7. CONCLUSION

Based on the results obtained in the exams, evaluations and revisions the following can be deduced:

The PPE type **OVEN GLOVE** reference **MO6647-03 / MO6647-05**, classified as Category **II** Individual Protective Equipment and whose characteristics are stated in point 1 of this report, **COMPLIES** with the essential requirements established by Regulation (EU) 2016/425 of 9 March 2016 through the application of the standards and risks as stated in point 2 of this report.

Elche, 5<sup>th</sup> of July 2022

Signature of the conformity evaluator:



Analytical Report Nr.

AR-22-YL-004646-02

Sample code Nr.

560-2022-00004622

Date

18/05/2022

**ANALYTICAL REPORT****Client Information**

Mid Ocean Brands BV  
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Ede GLD the NETHERLANDS  
+31 0 342 426 992  
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For the attention of Ms. Bernadetta Kobluk

**Sample Information**

**Order Code:** EUAA70-00016912  
**Reception Date:** 29-Apr-2022  
**Analysis Starting Date:** 29-Apr-2022  
**Analysis Ending Date:** 16-May-2022  
**Sample code Nr.** 560-2022-00004622  
**Sample described as:** Oven gloves, red and black

**Requirements and decision rule**

**Customer requirements:** EN ISO 21420:2020; EN 407:2020  
**Decision Rule:** Binary Statement with Guard Band. Probability of False Acceptance <2,5%

**Information provided by the customer(2)**

**Client Reference:** MO6647  
**Sample Description:**  
**Purchase Order Number:**

((1) this report cancels and replaces the previous one, numbered AR-22-YL-004646-01/560-2022-00004622 dated 16/05/2022 which must be destroyed)

Reason for new version: Client reference is modified due to error at registration.

Analytical Report Nr.

AR-22-YL-004646-02

Sample code Nr.

560-2022-00004622

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**SAMPLE PICTURE**

**Analytical Report Nr.**

AR-22-YL-004646-02

**Sample code Nr.**

560-2022-00004622

**Date**

18/05/2022

**CONCLUSION:**

| TEST PROPERTY                                                                        | PASS | FAIL | REMARKS      |
|--------------------------------------------------------------------------------------|------|------|--------------|
| <b>Determination of azo dyes</b><br><b>EN ISO 14362-1:2017</b>                       |      |      |              |
| A - Black outer fabric as received                                                   | X    |      |              |
| B - Red outer fabric as received                                                     | X    |      |              |
| <b>Determination of pH of aqueous extract</b><br><b>ISO 3071:2020</b>                |      |      |              |
| A - Black outer fabric as received                                                   | X    |      |              |
| B - Red outer fabric as received                                                     | X    |      |              |
| C - White inner non-woven layer as received                                          | X    |      |              |
| D - Padding as received                                                              | X    |      |              |
| <b>Washing/Drying cycle</b><br><b>ISO 6330:2012</b>                                  |      |      |              |
| H - 25 washing cycles at 30°C; flat dry                                              |      |      | REFER RESULT |
| <b>Tear resistance of protective gloves</b><br><b>EN 388:2016+A1:2018, point 6.4</b> |      |      |              |
| G - Black+Red outer fabric as received                                               | X    |      |              |
| K - Black+Red outer fabric after washing                                             | X    |      |              |
| <b>Determination of contact heat transmission</b><br><b>ISO 12127-1:2015</b>         |      |      |              |
| E - Padded side as received                                                          | X    |      |              |
| F - Plain side as received                                                           | X    |      |              |
| I - Padded side after washing                                                        | X    |      |              |
| J - Plain side after washing                                                         | X    |      |              |

**Remark:** Test has been performed as per application request

Analytical Report Nr.

AR-22-YL-004646-02

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18/05/2022

**COMPONENT LIST:**

| COMPONENT ID | COMPONENT NAME                              | MATERIAL DESCRIPTION | COLOR     | REMARKS |
|--------------|---------------------------------------------|----------------------|-----------|---------|
| CUST 01      | A - Black outer fabric as received          | Fabric               | Black     | ---     |
| CUST 02      | B - Red outer fabric as received            | Fabric               | Red       | ---     |
| CUST 03      | C - White inner non-woven layer as received | Non-woven            | White     | ---     |
| CUST 04      | D - Padding as received                     | Padding              | White     | ---     |
| CUST 05      | E - Padded side as received                 | Fabric               | Black+Red | ---     |
| CUST 06      | F - Plain side as received                  | Fabric               | Black+Red | ---     |
| CUST 07      | G - Black+Red outer fabric as received      | Fabric               | Black+Red | ---     |
| CUST 08      | H - 25 washing cycles at 30°C; flat dry     | Fabric               | ---       | ---     |
| CUST 09      | I - Padded side after washing               | Fabric               | Black+Red | ---     |
| CUST 10      | J - Plain side after washing                | Fabric               | Black+Red | ---     |
| CUST 11      | K - Black+Red outer fabric after washing    | Fabric               | Black+Red | ---     |

**Analytical Report Nr.**

AR-22-YL-004646-02

**Sample code Nr.**

560-2022-00004622

**Date**

18/05/2022

| 1-CHEMICAL TESTS                                      | CAS No.   | RESULTS  | UNC. | LOQ                              | GUIDELINES        |
|-------------------------------------------------------|-----------|----------|------|----------------------------------|-------------------|
| <b>Determination of azo dyes</b>                      |           |          |      |                                  |                   |
| EN ISO 14362-1:2017                                   |           |          |      |                                  |                   |
| <b>Analyses on:A - Black outer fabric as received</b> |           |          |      | Analysis Ending Date: 11/05/2022 |                   |
| 4-Aminobiphenyl                                       | 92-67-1   | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| Benzidin                                              | 92-87-5   | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| 4-Chlorotoluidine                                     | 95-69-2   | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| 2-Naphthylamine                                       | 91-59-8   | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| p-Chloroaniline                                       | 106-47-8  | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| 2,4-Diaminoanisoie                                    | 615-05-4  | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| 4,4-Diaminodiphenylmethan                             | 101-77-9  | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| 3,3-Dichlorobenzidine                                 | 91-94-1   | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| 3,3-Dimethoxybenzidine                                | 119-90-4  | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| 3,3-Dimethylbenzidine                                 | 119-93-7  | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| 3,3-Dimethyl-4,4-diaminodiphenyl methane              | 838-88-0  | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| p-Cresidine                                           | 120-71-8  | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| 4,4-Methylene-bis-2-chloroaniline                     | 101-14-4  | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| 4-Aminophenileter                                     | 101-80-4  | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| 4,4-Thiodianilin                                      | 139-65-1  | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| o-Toluidin                                            | 95-53-4   | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| 2,4-Diaminotoluene                                    | 95-80-7   | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| 2,4,5-Trimethylaniline                                | 137-17-7  | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| o-Anisidine                                           | 90-04-0   | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| 2,4-Xylidine                                          | 95-68-1   | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| 2,6-Xylidine                                          | 87-62-7   | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| Aniline *                                             | 62-53-3   | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| 1-4-phenylenediamine *                                | 106-50-3  | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |
| 4-Chloro-o-toluidinium chloride *                     | 3165-93-3 | <5 mg/kg |      | 5                                | < 20 mg/kg ✓ PASS |

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| 1-CHEMICAL TESTS                                     | CAS No.    | RESULTS  | UNC. | LOQ | GUIDELINES                       |
|------------------------------------------------------|------------|----------|------|-----|----------------------------------|
| 2-Naphthylammoniumacetate *                          | 553-00-4   | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| 4-Methoxy-m-phenylene<br>Diammonium Sulphate *       | 39156-41-7 | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| 2,4,5-Trimethylaniline<br>hydrochloride *            | 21436-97-5 | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| <b>Analyses on: B - Red outer fabric as received</b> |            |          |      |     | Analysis Ending Date: 11/05/2022 |
| 4-Aminobiphenyl                                      | 92-67-1    | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| Benzidine                                            | 92-87-5    | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| 4-Chlorotoluidine                                    | 95-69-2    | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| 2-Naphthylamine                                      | 91-59-8    | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| p-Chloroaniline                                      | 106-47-8   | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| 2,4-Diaminoanisole                                   | 615-05-4   | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| 4,4-Diaminodiphenylmethane                           | 101-77-9   | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| 3,3-Dichlorobenzidine                                | 91-94-1    | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| 3,3-Dimethoxybenzidine                               | 119-90-4   | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| 3,3-Dimethylbenzidine                                | 119-93-7   | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| 3,3-Dimethyl-4,4-diaminodiphenyl<br>methane          | 838-88-0   | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| p-Cresidine                                          | 120-71-8   | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| 4,4-Methylene-bis-2-chloroaniline                    | 101-14-4   | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| 4-Aminophenylether                                   | 101-80-4   | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| 4,4-Thiodianilin                                     | 139-65-1   | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| o-Toluidin                                           | 95-53-4    | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| 2,4-Diaminotoluene                                   | 95-80-7    | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| 2,4,5-Trimethylaniline                               | 137-17-7   | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| o-Anisidine                                          | 90-04-0    | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| 2,4-Xylidine                                         | 95-68-1    | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| 2,6-Xylidine                                         | 87-62-7    | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| Aniline *                                            | 62-53-3    | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| 1-4-phenylenediamine *                               | 106-50-3   | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |
| 4-Chloro-o-toluidinium chloride *                    | 3165-93-3  | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS                |

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| 1-CHEMICAL TESTS                            | CAS No.    | RESULTS  | UNC. | LOQ | GUIDELINES        |
|---------------------------------------------|------------|----------|------|-----|-------------------|
| 2-Naphthylammoniumacetate *                 | 553-00-4   | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS |
| 4-Methoxy-m-phenylene Diammonium Sulphate * | 39156-41-7 | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS |
| 2,4,5-Trimethylaniline hydrochloride *      | 21436-97-5 | <5 mg/kg |      | 5   | < 20 mg/kg ✓ PASS |

Detection and quantification method: GC/MS

Sampling procedure: Section 9 EN ISO 14362-1:2017

Evaluation Procedure - Point 10.1 (EN ISO 14362-1:2017)

o-aminoazotoluene and 5-nitro-o-toluidine are further reduced to o-toluidine and 2,4-diaminotoluene.

Azo colorants that are able to form 4-aminoazobenzene, generate under the condition of this method aniline (CAS number 62-53-3) and 1,4 phenylenediamine (CAS-number 106-50-3). Due to detection limits, only aniline may be detected. The presence of these colorants should be tested by EN 14362-3.

## Determination of pH of aqueous extract

### ISO 3071:2020

#### Analyses on:A - Black outer fabric as received

Analysis Ending Date: 10/05/2022

|                                |         |         |                            |
|--------------------------------|---------|---------|----------------------------|
| Extractor solution pH value    | 6.1     | -       |                            |
| Extractor solution temperature | 20.3 °C | -       |                            |
| pH value (average)             | 6.8     | (± 0.3) | Between 3.5 and 9.5 ✓ PASS |

#### Analyses on:B - Red outer fabric as received

Analysis Ending Date: 10/05/2022

|                                |         |         |                            |
|--------------------------------|---------|---------|----------------------------|
| Extractor solution pH value    | 6.1     | -       |                            |
| Extractor solution temperature | 20.3 °C | -       |                            |
| pH value (average)             | 6.8     | (± 0.3) | Between 3.5 and 9.5 ✓ PASS |

#### Analyses on:C - White inner non-woven layer as received

Analysis Ending Date: 10/05/2022

|                                |         |         |                            |
|--------------------------------|---------|---------|----------------------------|
| Extractor solution pH value    | 6.1     | -       |                            |
| Extractor solution temperature | 20.3 °C | -       |                            |
| pH value (average)             | 6.8     | (± 0.3) | Between 3.5 and 9.5 ✓ PASS |

#### Analyses on:D - Padding as received

Analysis Ending Date: 10/05/2022

|                                |         |         |                            |
|--------------------------------|---------|---------|----------------------------|
| Extractor solution pH value    | 6.1     | -       |                            |
| Extractor solution temperature | 20.3 °C | -       |                            |
| pH value (average)             | 6.7     | (± 0.3) | Between 3.5 and 9.5 ✓ PASS |

Extractor solution: KCl

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| 1-CHEMICAL TESTS | CAS No. | RESULTS | UNC. | LOQ | GUIDELINES |
|------------------|---------|---------|------|-----|------------|
| 2-PHYSICAL TESTS | CAS No. | RESULTS | UNC. | LOQ | GUIDELINES |

## Washing/Drying cycle

ISO 6330:2012

**Analyses on:H - 25 washing cycles at 30°C; flat dry**

Analysis Ending Date: 13/05/2022

|                                     |                           |   |
|-------------------------------------|---------------------------|---|
| Number of washing cycles            | 25                        | - |
| Type of washing machine             | A                         | - |
| Temperature                         | 30 °C                     | - |
| Washing procedure                   | 3N                        | - |
| Drying method                       | C - Flat dry              | - |
| Detergent used                      | Reference 3               | - |
| Specimen and ballast total dry mass | 2 kg                      | - |
| Type of ballast                     | Type III - 100% Polyester | - |

## Tear resistance of protective gloves

EN 388:2016+A1:2018, point 6.4

**Analyses on:G - Black+Red outer fabric as received**

Analysis Ending Date: 13/05/2022

|                           |      |               |
|---------------------------|------|---------------|
| Specimen 1: maximum force | 29 N | -             |
| Specimen 2: maximum force | 28 N | -             |
| Specimen 3: maximum force | 32 N | -             |
| Specimen 4: maximum force | 37 N | -             |
| Lowest value              | 28 N | (± 4) N       |
|                           |      | > 10 N ✓ PASS |

**Analyses on:K - Black+Red outer fabric after washing**

Analysis Ending Date: 13/05/2022

|                           |      |               |
|---------------------------|------|---------------|
| Specimen 1: maximum force | 25 N | -             |
| Specimen 2: maximum force | 27 N | -             |
| Specimen 3: maximum force | 26 N | -             |
| Specimen 4: maximum force | 27 N | -             |
| Lowest value              | 25 N | (± 3) N       |
|                           |      | > 10 N ✓ PASS |

Specimen 1 and specimen 2:  
Glove length direction from cuff to finger tips.

**Eurofins Textile Testing Spain, S.L.U.**

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**2-PHYSICAL TESTS****CAS No.****RESULTS****UNC.****LOQ****GUIDELINES**

Specimen 3 and specimen 4:  
Glove cross direction, across the palm with.

Test conditions (23±2)°C, (50±5)% RH.  
Sample conditioning > 24 h.

Classification level:

Level 1 =10 N

Level 2 =25 N

Level 3 =50 N

Level 4 =75 N

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| 3-PPE TESTING                                                                    | CAS No. | RESULTS | UNC.                             | LOQ | GUIDELINES     |
|----------------------------------------------------------------------------------|---------|---------|----------------------------------|-----|----------------|
| <b>Determination of contact heat transmission</b>                                |         |         |                                  |     |                |
| <b>ISO 12127-1:2015</b>                                                          |         |         |                                  |     |                |
| <b>Analyses on:E - Padded side as received</b>                                   |         |         | Analysis Ending Date: 16/05/2022 |     |                |
| Contact temperature (Tc)                                                         |         | 250 °C  |                                  | -   |                |
| Threshold time (Tt) - S1                                                         |         | 24.7 s  |                                  | -   |                |
| Threshold time (Tt) - S2                                                         |         | 22.5 s  |                                  | -   |                |
| Threshold time (Tt) - S3                                                         |         | 24.0 s  |                                  | -   |                |
| Threshold time (Tt) - Average                                                    |         | 23.7 s  |                                  | -   |                |
| Threshold time (Tt) - Lowest                                                     |         | 22.5 s  | (± 1.5) s                        | -   | Tt>15 s ✓ PASS |
| Level 1: Tc=100°C<br>Level 2: Tc=250°C<br>Level 3: Tc=350°C<br>Level 4: Tc=500°C |         |         |                                  |     |                |
| <b>Analyses on:F - Plain side as received</b>                                    |         |         | Analysis Ending Date: 16/05/2022 |     |                |
| Contact temperature (Tc)                                                         |         | 250 °C  |                                  | -   |                |
| Threshold time (Tt) - S1                                                         |         | 31.6 s  |                                  | -   |                |
| Threshold time (Tt) - S2                                                         |         | 32.5 s  |                                  | -   |                |
| Threshold time (Tt) - S3                                                         |         | 29.6 s  |                                  | -   |                |
| Threshold time (Tt) - Average                                                    |         | 31.2 s  |                                  | -   |                |
| Threshold time (Tt) - Lowest                                                     |         | 29.6 s  | (± 2.0) s                        | -   | Tt>15 s ✓ PASS |
| Level 1: Tc=100°C<br>Level 2: Tc=250°C<br>Level 3: Tc=350°C<br>Level 4: Tc=500°C |         |         |                                  |     |                |
| <b>Analyses on:I - Padded side after washing</b>                                 |         |         | Analysis Ending Date: 16/05/2022 |     |                |
| Contact temperature (Tc)                                                         |         | 250 °C  |                                  | -   |                |
| Threshold time (Tt) - S1                                                         |         | 26.2 s  |                                  | -   |                |
| Threshold time (Tt) - S2                                                         |         | 30.4 s  |                                  | -   |                |
| Threshold time (Tt) - S3                                                         |         | 25.8 s  |                                  | -   |                |
| Threshold time (Tt) - Average                                                    |         | 27.5 s  |                                  | -   |                |
| Threshold time (Tt) - Lowest                                                     |         | 25.8 s  | (± 1.7) s                        | -   | Tt>15 s ✓ PASS |

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| 3-PPE TESTING                                                                    | CAS No. | RESULTS | UNC.      | LOQ | GUIDELINES                                                                                       |
|----------------------------------------------------------------------------------|---------|---------|-----------|-----|--------------------------------------------------------------------------------------------------|
| Level 1: Tc=100°C<br>Level 2: Tc=250°C<br>Level 3: Tc=350°C<br>Level 4: Tc=500°C |         |         |           |     |                                                                                                  |
| Remark:<br>Adhesion in the layers.                                               |         |         |           |     |                                                                                                  |
| <b>Analyses on: J - Plain side after washing</b>                                 |         |         |           |     |                                                                                                  |
| Analysis Ending Date: 16/05/2022                                                 |         |         |           |     |                                                                                                  |
| Contact temperature (Tc)                                                         |         | 250 °C  |           | -   |                                                                                                  |
| Threshold time (Tt) - S1                                                         |         | 31.2 s  |           | -   |                                                                                                  |
| Threshold time (Tt) - S2                                                         |         | 28.2 s  |           | -   |                                                                                                  |
| Threshold time (Tt) - S3                                                         |         | 29.1 s  |           | -   |                                                                                                  |
| Threshold time (Tt) - Average                                                    |         | 29.5 s  |           | -   |                                                                                                  |
| Threshold time (Tt) - Lowest                                                     |         | 28.2 s  | (± 1.9) s | -   | Tt>15 s  PASS |

Level 1: Tc=100°C  
Level 2: Tc=250°C  
Level 3: Tc=350°C  
Level 4: Tc=500°C

Remark:  
Adhesion in the layers.

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Signed for and on behalf of Eurofins Textile Testing Spain:

  
Eurofins Textile Testing Spain, S.L.U.  
C/ Carretera de Elche (Alicante)  
03097/S099

Report electronically validated by

**Maria Jesus Martinez Puig**

Chemical Lab manager

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**EXPLANATORY NOTE**

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- ◆ Test not covered by ENAC accreditation scope
  - Test is subcontracted within Eurofins group and is accredited
  - Test is subcontracted within Eurofins group and is not accredited
  - Test is subcontracted outside Eurofins group and is accredited
  - Test is subcontracted outside Eurofins group and is not accredited
- N/A = Not Applicable

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**End Of Report****Eurofins Textile Testing Spain, S.L.U.**

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