



Test Report No.: 68.401.24.3846.01

Rev.: 01

Dated: 2024-12-31

Applicant:

Address:

Sample Description: Anti Cut Non Coated Glove

Model No.: /

Supplier:

Sample Received Date: 2024-12-23, Shenzhen

Test Period: From 2024-12-23 to 2024-12-30, Shenzhen

Purpose of examination: Verification of RoHS (Restriction of Hazardous Substances) directive 2011/65/EU and its amendment (EU) 2015/863 on submitted samples

Test Results: Refer to following page(s)

Remark: The result relates only to the items tested.

TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
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Disclaimer Measurement Uncertainty: Unless otherwise agreed upon, pass or fail verdicts are given based on the measured values without consideration of measurement uncertainties. Please note, every test method has a measurement uncertainty which has been evaluated by the laboratory according to ISO IEC 17025 requirements. By taking measurement uncertainties into account it might happen that measured values can neither be assessed as pass or fail.

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SUMMARY OF TEST RESULTS

| No. | Test Requested | Conclusion | Remarks |
|-----|--|------------|---------|
| 1. | Heavy Metal (Pb, Cd, Hg and Cr VI) Content | PASS | |
| 2. | Polybrominated Biphenyls (PBBs) and Polybrominated Diphenyl Ethers (PBDEs) Content | PASS | |
| 3. | Phthalates (DEHP, BBP, DBP and DIBP) Content | PASS | |





1. TESTED SUBJECT DESCRIPTION

| Test No. | Sample No. | Tested Material Description | Photo |
|----------|------------|-----------------------------|--|
| T1 | 001 | Grey/Black fabric gloves |  |





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2. TEST RESULT(S)

2.1 SCREENING TEST

Test method: With reference to EN 62321-1:2013, EN IEC 62321-2:2021, EN 62321-3-1:2014 and EN 62321-8:2017. For Heavy Metals and Flame Retardants, analyzed by Energy Dispersive X-ray Fluorescence Spectrometer (XRF); for phthalates, analyzed by Gas Chromatography and Mass Spectrometer (GC-MS).

| Sample No. | Heavy Metals and Flame Retardants | | | | | Phthalates | | | |
|------------|-----------------------------------|---------------------|----|----|----|------------|-----|-----|------|
| | Cd | Cr | Hg | Pb | Br | DEHP | BBP | DBP | DIBP |
| 001 | BL | Inc. ^(a) | BL | BL | BL | BL | BL | BL | BL |

Note:

- "BL" denotes below limit
- "Inc." denotes inconclusive
- "(a)" denotes further confirmation test was conducted, results are listed in 2.2.





-XRF screening limits in mg/kg for regulated elements in various matrices

| ELEMENT | POLYMER | | |
|---------|------------------------|--------------------------------------|-------------------------|
| | BL | INCONCLUSIVE | OL |
| Cd | $X \leq (70-3\sigma)$ | $(70-3\sigma) < X < (130+3\sigma)$ | $X \geq (130+3\sigma)$ |
| Pb | $X \leq (700-3\sigma)$ | $(700-3\sigma) < X < (1300+3\sigma)$ | $X \geq (1300+3\sigma)$ |
| Hg | $X \leq (700-3\sigma)$ | $(700-3\sigma) < X < (1300+3\sigma)$ | $X \geq (1300+3\sigma)$ |
| Br | $X \leq (300-3\sigma)$ | $X > (300-3\sigma)$ | NA |
| Cr | $X \leq (700-3\sigma)$ | $X > (700-3\sigma)$ | NA |

| ELEMENT | METAL | | |
|---------|------------------------|--------------------------------------|-------------------------|
| | BL | INCONCLUSIVE | OL |
| Cd | $X \leq (70-3\sigma)$ | $(70-3\sigma) < X < (130+3\sigma)$ | $X \geq (130+3\sigma)$ |
| Pb | $X \leq (700-3\sigma)$ | $(700-3\sigma) < X < (1300+3\sigma)$ | $X \geq (1300+3\sigma)$ |
| Hg | $X \leq (700-3\sigma)$ | $(700-3\sigma) < X < (1300+3\sigma)$ | $X \geq (1300+3\sigma)$ |
| Cr | $X \leq (700-3\sigma)$ | $X > (700-3\sigma)$ | NA |

| ELEMENT | COMPLEX MATERIAL | | |
|---------|------------------------|--------------------------------------|-------------------------|
| | BL | INCONCLUSIVE | OL |
| Cd | $X \leq (50-3\sigma)$ | $(50-3\sigma) < X < (150+3\sigma)$ | $X \geq (150+3\sigma)$ |
| Pb | $X \leq (500-3\sigma)$ | $(500-3\sigma) < X < (1500+3\sigma)$ | $X \geq (1500+3\sigma)$ |
| Hg | $X \leq (500-3\sigma)$ | $(500-3\sigma) < X < (1500+3\sigma)$ | $X \geq (1500+3\sigma)$ |
| Br | $X \leq (250-3\sigma)$ | $X > (250-3\sigma)$ | NA |
| Cr | $X \leq (500-3\sigma)$ | $X > (500-3\sigma)$ | NA |

-Screening limits in mg/kg for regulated phthalates in various matrices

| PHthalATES | BL | INCONCLUSIVE |
|------------|-----------|--------------|
| DEHP | $X < 600$ | $X \geq 600$ |
| BBP | $X < 600$ | $X \geq 600$ |
| DBP | $X < 600$ | $X \geq 600$ |
| DIBP | $X < 600$ | $X \geq 600$ |



2.2 HEAVY METAL CONTENT

Test method: With reference to EN 62321-4:2014 /A1:2017, EN 62321-5:2014, EN 62321-7-1:2015 and EN 62321-7-2:2017, analyzed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES) and Ultraviolet–visible spectrophotometer (UV-Vis).

[Reporting Limit: 2.0 mg/kg for Cadmium; 10.0 mg/kg or 0.10 µg/cm² for Hexavalent Chromium, 10.0 mg/kg for Lead and Mercury.]

| Sample No. | Result(s) | | | | |
|------------------|---------------|---------------------|-----------------------|---------------|------------|
| | Total Cadmium | Hexavalent Chromium | Hexavalent Chromium | Total Mercury | Total Lead |
| 001 | -- | <10.0 | / | -- | -- |
| Unit | mg/kg | mg/kg | µg/cm ² | mg/kg | mg/kg |
| RoHS Requirement | 100 | 1000 | Negative [#] | 1000 | 1000 |

Note:

- "mg/kg" denotes milligram per kilogram
- "µg/cm²" denotes micrograms per square centimeter
- "<" denotes less than
- "Negative" denotes the absorbance value of sample is < 0.10 µg/cm², the sample is considered to be negative for Hexavalent Chromium.
- "[#]" According to DIRECTIVE 2011/65/EU Article 4(1) and Annex II. While, positive means the presence of CrVI on tested areas and the result(s) was (were) regarded as in conflict with European Parliament and Council Directive 2011/65/EU, Article 4(1) and Annex II.
- "--" denotes tested by XRF, result is listed in 2.1

-----End of Report-----