



INNOVATIVE SOLUTIONS FOR CRITICAL ENVIRONMENTS

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CERTIFICATE OF ANALYSIS

Product Category:	Gloves
Substrate Material:	Nitrile
Part Number:	VTGNCRBtio2f12-MD
Lot Number:	230506-N078
Sample Received Date:	05-22-2023
Manufacturing Date:	05-06-2023
Test Date:	06-08-2023
Expiry Date:	05-06-2028 *Subject to storage and handling

Page 1 of 2

*Should not be exposed to direct sunlight, UV, light, high temperature, moisture and stored at well ventilated area.

Physical Inspection

Test Method: ASTM D5151 & ASTM D6319

1. Water Tight Test	Sampling	AQL	Result
	G1	1.5	Pass
2. Visual Inspection	Sampling	AQL	Result
Critical Defects	G1	1.5	Pass
Major Defects	G1	2.5	Pass
Minor Defects	G1	4.0	Pass
3. Dimension Test	Sampling	AQL	Result
Length	S2	4.0	Pass
Thickness	S2	4.0	Pass

Physical Properties

Physical Test	Method	Criteria	Actual	Result
4. Tensile Strength	ASTM D412	Min. 14 Mpa	23.60	Pass
5. Elongation	ASTM D412	min. 500%	666	Pass

Cleanliness

Liquid Particle Count Test

LPC	Method	Specification	Actual	Result
Counts / cm ² (≥ 0.5 micron)	IEST-RP-CC005.4	<600	361.51	Pass

Contamination Detection

Fourier Transform Infra-Red Test

FTIR	Method	Specification	Actual	Result
Silicone, Amide, DOP	IEST-RP-CC005.4	Absent	Absent	Pass

Total Non Volatile Residue Test

TNVR	Method	Specification	Actual	Result
Isopropyl Alcohol (mg/cm ²)	IEST-RP-CC005.4	< 5.0	3.90	Pass
DI H ₂ O (mg/cm ²)	IEST-RP-CC005.4	< 2.0	0.70	Pass

Extractable Ions Test (µg/cm²):

Ionic(Anions)	Method	F ⁻	Br ⁻	Cl ⁻	NO ₂ ⁻	NO ₃ ⁻	SO ₄ ²⁻	PO ₄ ³⁻	Result
Specification	IEST-RP-CC005.4	< 0.001	< 0.001	< 0.20	< 0.001	< 0.12	< 0.06	< 0.002	
Result	Actual	ND	ND	0.129	ND	0.070	0.031	ND	Pass

Ionic(Cations)	Method	Na ⁺	K ⁺	Ca ²⁺	Mg ²⁺	Li ⁺	NH ₄ ⁺	Result
Specification	IEST-RP-CC005.4	< 0.02	< 0.02	< 0.30	< 0.005	< 0.005	< 0.005	
Result	Actual	0.011	0.011	0.168	ND	ND	ND	Pass

Ionic (Heavy metal)	Method	Al ³⁺	Fe ³⁺	Cu ²⁺	Zn ²⁺	Result
Specification	IEST-RP-CC005.4	< 0.01	< 0.005	< 0.0004	< 0.07	
Result	Actual	0.004	0.002	ND	0.033	Pass

Electrical Properties

Electrostatic Decay

ESD	Method	Specification	Actual	Result
Surface Resistance (ohms)	ESD/EOS S11.11	< 1 x 10 ¹¹	8.7 x 10 ¹⁰	Pass
Static Decay Time (seconds)		< 5.0	0.7	Pass
Tribo Electric Charge (volts)		< 50	40	Pass

Notes:



Tested by:
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Laboratory Coordinator



Approved by:
Vijendra Venkitasalam
Quality Manager