

Valutek Titanium Dioxide Free Nitrile Cleanroom 12" Glove

Part Number: VTGNCRBTIO2F12



Description: Valutek's 12" ambidextrous nitrile powder-free cleanroom glove is constructed from 100% clean, synthetic nitrile polymer containing no rubber latex with a unique Titanium Dioxide (TiO₂) free formulation.

In order to develop the most chemically pure nitrile material, Valutek has removed all color pigment—the source of a known contaminant, Titanium Dioxide—from this specific formulation. The result is a cleaner, translucent glove with enhanced performance and operator comfort.

Features Include:

- "Accelerator Free" which eliminates known allergens
- "Filler Free" which enhances ESD properties tensile strength
- "Pigment Free" with no TiO₂ hard particles

Application: In addition to the standard textured fingertip and beaded long cuff design, the "zero additive" formulation offers the ultimate in user comfort; it is a softer, more flexible, tackier glove that is suitable for both wet and dry applications. Unlike most traditional clean nitrile gloves that are stiff with a slick finish, this next generation glove is both ultra clean and operator friendly by reducing hand fatigue.

Now that Titanium Dioxide is identified as a source for defects and reduced yield in semiconductor/advanced microelectronics production, this glove is engineered specifically to meet these needs without jeopardizing operator dexterity and comfort. As part of the Valutek Nanotek product family, this cleanroom packaged glove is recommended for use in a cleanroom Class 1-10 (ISO 3-4) critical environment.

All Valutek gloves are tested and manufactured in ISO-compliant facilities under Valutek inspection and strict process control to ensure Valutek quality standards and product specifications.

VTGNCRBTIO2F12 Packaging



- Outer bag contains inner bag with 2 stacks of 50 gloves. Gloves packaged cuffs on bottom, vacuum sealed, flat packed and with a carton liner. 100 ea/bag, 10 bags/case, 1000 ea/case.
- Critical environment compatible. All gloves are lot traceable with retention samples held in Quality Control for 36 months from date of manufacturing.



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VTGNCRBTIO2F12 Physical Properties

Part Number	Size	Palm Width (mm)	Weight (gm)	Length (inch/mm)	Test Method
VTGNCRBTIO2F12-XS	XS	75 ± 5	5.5 ± 0.2	12"/290	IEST-RP-CC005.4 ASTM D3767
VTGNCRBTIO2F12-SM	SM	85 ± 5	6.0 ± 0.2		
VTGNCRBTIO2F12-MD	MD	95 ± 5	6.5 ± 0.2		
VTGNCRBTIO2F12-LG	LG	105 ± 5	7.0 ± 0.2		
VTGNCRBTIO2F12-XL	XL	115 ± 5	7.5 ± 0.2		
VTGNCRBTIO2F12-2X	2X	125 ± 5	8.0 ± 0.2		

Tensile Properties	Tensile Strength	Ultimate Elongation	Test Method	Measured Points	Thickness	Test Method	Surface Texture	Friction	Test Method
Before Aging	18 MPa, min	500%, min	ASTM D412	Fingertip	4.72 mil	0.12 mm, min	Tackiness	< 200 gmf	ASTM D1894
				Palm	3.94 mil	0.10 mm, min			
After Aging	16 MPa, min	450%, min		Cuff	3.15 mil	0.08 mm, min			

*Barrier Integrity: AQL 1.5

VTGNCRBTIO2F12 Technical Performance

Attribute	Value	Units	Test Method
Particle Counts			
LPC: ≥0.5 µm	<600	particles/cm ²	IEST-RP-CC005.4, Sec 16.4
SEM-EDX			
Titanium Dioxide (TiO ₂)	Absent		SEM-EDX - Stamping method
Non Volatile Residue (NVR)			
DI Water	<2.0	µg/cm ²	IEST-RP-CC005.4, Sec 17.2
IPA	<5.0	µg/cm ²	IEST-RP-CC005.4, Sec 17.2
FTIR			
Silicone Oil, Amide, DOP	Not Detectable		IEST-RP-CC005.4, Sec 17.4

Extractable Counts (Ions)					
Sodium(Na)	<0.02	µg/cm ²	Fluoride(F ⁻)	<0.001	µg/cm ²
Potassium(K)	<0.02	µg/cm ²	Bromide(Br ⁻)	<0.001	µg/cm ²
Calcium(Ca)	<0.30	µg/cm ²	Phosphate(PO ₄ ³⁻)	<0.002	µg/cm ²
Magnesium(Mg)	<0.005	µg/cm ²	Chloride(Cl ⁻)	<0.20	µg/cm ²
Ammonium(NH ₄ ⁺)	<0.005	µg/cm ²	Sulfate(SO ₄ ²⁻)	<0.06	µg/cm ²
Nitrate(NO ₃ ⁻)	<0.12	µg/cm ²	Nitrite(NO ₂ ⁻)	<0.001	µg/cm ²
Lithium(Li)	<0.005	µg/cm ²	Aluminium(Al)	<0.01	µg/cm ²
Zinc(Zn)	<0.07	µg/cm ²	Iron(Fe)	<0.005	µg/cm ²
Copper(Cu)	<0.0004	µg/cm ²			

ESD Properties				
Electrostatic Decay	<5 seconds	Tribo Charge	<50 V	ANSI/ESD SP15.1
Surface resistivity	< 1 X 10E11 Ω ⁻²			



Gloves



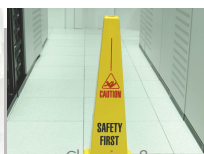
Wipers



Apparel



Adhesive Mats



Cleaning & Maintenance



Documentation



Glove Liners



ESD