

Valutek Titanium Dioxide Free Nitrile 12" Glove



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

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

Part Number: VTGNCRBTIO2F12

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 a member 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.

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 trace-able** with retention samples held in **Quality Control for 36 months** from the date of manufacturing.



Gloves



Wipers



Apparel



Adhesive Mats



Cleaning & Maintenance



Documentation



Glove Liners



ESD

Valutek Titanium Dioxide Free Nitrile Clenroom 12" Glove

Part Number: VTGNCRBTIO2F12

VTGNCRBTIOF12 Physical Properties

Part Number	Size	Palm Width (mm)	Weight (gm)	Length (inch/mm)	Test Method
VTGNCRBTIO2F12-XS	XS	75 ± 5	5.5 ± 0.2		
VTGNCRBTIO2F12-SM	SM	85 ± 5	6.0 ± 0.2		IEST-RP-CC005.4
VTGNCRBTIO2F12-MD	MD	95 ± 5	6.5 ± 0.2	12"/290	ASTM D3767
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	ASTM D3767	Tackiness	< 200 gmf	ASTM D1894
After Aging	16 MPa, min	450%, min		Palm	3.94 mil 0.10 mm, min				
				Cuff	3.15 mil 0.08 mm, min				

*Barrier Integrity: AQL 1.5

VTGNCRBTIOF12 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
Surface Resistivity	<1 X 10E11	Ω ⁻²			ANSI/ESD SPI5.1

*Note: Technical data listed reflects upper/lower limits. Certificates of Analysis available upon request for actual lot-to-lot test data. 36 month lot trend analysis available upon request



Valutek WEST
Phoenix, AZ - USA

Valutek EAST
Albany, NY - USA

Valutek ASIA
Penang - Malaysia

1.800.763.1250

orderdesk@valutek.com

valutek.com

INNOVATIVE SOLUTIONS FOR CRITICAL ENVIRONMENTS