

COMPARISON OF COATINGS - NINJA GLOVES

Coating Types		Nitrile					
		Nitrile Flat (added Crumbs for Nitrachem)	Sponge/Flex	Micro Foam (DS)	2NFT	12NFT	Nitrile Latex Waves Pattern
Coating Description/Features		High resistance to abrasion (similar to PU), tacky finish, excellent dry grip. FDA approved.	Sponge coating (chemically foamed) offers slightly better wet and oil grip than flat Nitrile. It is softer and more flexible, however less soft and breathable than Air Foam Nitrile.	Can be formulated thinner than Nitrile foam coating. Microfoam coatings have a slightly tacky finish.	Unique porous structure with suede finish on Nitrile coating. Offers good wet and oil grip. More elastic and form fitting compared to other Nitrile coatings.	Unique porous structure with suede finish over smooth finish (double layered) Nitrile coating. Oil/ glue does not permeate.	Solvent free, "Waves" pattern structure. Nitrile Latex coating provides flexibility, and highest resistance to abrasion. Excellent dry and wet grip with good oil grip.
Characteristics	Finish	Smooth	Smooth	Textured	Textured	Textured	Crinkle
	Weight	Medium weight	Medium weight	Light weight	Medium weight	Medium weight	Heavy weight
	Breathability	N/A	Fair Breathability	Very Good Breathability	Very Good Breathability	Good Breathability	Poor Breathability
	Flexibility	Good Flexibility	Good Flexibility	Very Good Flexibility	Very Good Flexibility	Good Flexibility	Fairly Flexible
General Temperature Ranges (Celcius)		-4 to 150°C	-4 to 150°C	less than 101°C preferred	Not available	Not available	-4 to 150°C
Grip	Dry	Excellent	Good	Good	Good	Good	Excellent
	Oil	Poor	Good	Good	Excellent	Good	Good
	Wet	Poor	Fair	Fair	Very good	Good	Good
Limitations		Poor breathability, less soft so faster hand fatigue, inherently soapy in wet environment.	Inherently soapy in wet environment and permeable.	Inherently soapy in wet environment and less permeable than Sponge Nitrile.	Due to porous structure, moisture penetration is high. Lower abrasion resistance and durability compared to flat.	Less flexible compared to 2NFT due to double coating.	Less flexible. Reduced tactility.
EN 388 (Coating + 15 GG Polyamide Liner)	Abrasion Level	4	3	4	4	4	4
	Cycles	8000	2000	8000	8000	8000+	8000+
	Cut Level	1	1	1	1	1	1
	Index Value	1.6	1.7	1.38	1.7	1.7	1.8 - 2.1
	Tear Level	2	3	2	4	3	3
	Newton	42	60	45.5	110	59	60 - 62
	Puncture Level	1	2	2	1	1	1
	Newton	48	61	60.1	35	40	56.7
Applications		Automotive, assembly, food packing, furniture manufacturing, pesticides, oil refining. Component materials are safe for food contact. Good for chemical applications.	Automotive, construction, material handling, engineering, assembly, inspection/examination. Component materials are safe for food contact, but porous properties will allow bacteria to develop.	Automotive, construction, material handling, engineering, assembly, inspection/examination. Moderate cool temperatures, where protection is still needed.	Agriculture, material handling, packing, construction, furniture manufacturing, glass handling, bottling operations. Component materials are safe for food contact.	Agriculture, material handling, packing, construction, furniture manufacturing, glass handling, bottling operations. Component materials are safe for food contact.	"Waves" structure ideal for maximum dexterity, comfort. Automotive/transport, aerospace, utilities, oil and gas. Flexible coating provides a firm wet and dry grip.
Coating Wearer Trial Results	Manual Operation of Solvent Dipping - Hrs				18 hours		
	Manual Operation of Compound Dipping - Hrs	20 hours	17 hours		26+ hours	26+ hours	
	Lift Loading Operation - Hrs				26+ hours		
	Tyre Changing Workshop - Days	20+ days			8 days		60 days
	Engineering Workshop - Days				12 days		
Ninja Styles		MULTI-TECH NitraChem65 MULTI-TECH NitraChem Classic Total Cut 5	Classic Multi Foam Classic Multi Foam HV	MULTI-TECH DryGuard	Maxim Cool Maxim Cool HV Maxim Cool HV DOTS Maxim Tactus Maxim Tactus HV Maxim Cut 3 Maxim Cut 4 Maxim Cut 5 Maxim Glacier Classic Max Cut 4	Maxim Cut 3 Oil Maxim Dry Maxim Dry +	Rufftec Endure Rufftec Endure HV

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Coating Types		PVC		Natural Rubber Latex	Bi-Polymer	Polyurethane (PU)
		Hydrellent Technology (HPT)	PVC Multi Dip	Natural Rubber Latex	Bi-Polymer (Nitrile/PU blend)	Polyurethane (PU)
Coating Description/Features		Light weight Flexible Durable Clean Non-tacky	Extremely durable, flexible, sponge touch, anti-vibe finish. Excellent wet grip, minimal tackiness. REACH/Prop 65 Compliant	Liquid proof coating with good wet, dry and oil Grip. Coating is tacky and rough for extra gripping power. Chemical Resistance and REACH/Prop 65 Compliant.	Flexible, moderate tenacity coating, less resistant to abrasion compared to PU and Nitrile. Latex coatings have minimal tackiness. Excellent dry grip and good wet grip. FDA approved.	Light weight with excellent flexibility. Coating is slightly tacky for extra gripping power.
Characteristics	Finish	Textured	Textured	Particle/Rough	Crinkle	Smooth
	Weight	Light weight	Heavy weight	Heavy weight	Heavy weight	Light weight
	Breathability	Excellent Breathability	Very Good Breathability	N/A	Poor Breathability	Good Breathability
	Flexibility	Excellent Flexibility	Good Flexibility	Fair Flexibility	Excellent Flexibility	Excellent Flexibility
General Temperature Ranges (Celcius)		-4 to 150°C	-4 to 66°C	-4 to 66°C	-18 to 150°C	-4 to 150°C
Grip	Dry	Good	Very good	Excellent	Excellent	Very good
	Oil	Good	Good	Good	Not Recommended	Good
	Wet	Good	Excellent	Excellent	Good	Not recommended
Limitations		Porous. High permeability. DMF levels.	Suspect oil grip, marring/smudging due to plasticizers on coating. Low resistance to heat.	Marring/smudging due to plasticizers on coating. Reduced tactility.	Sensitive to heat. Poor oil/grease resistance. Can cause allergic reactions due to presence of latex proteins.	Water can easily pass through. High permeability. Lower resistance to abrasion.
EN 388 (Coating + 15 GG Polyamide Liner)	Abrasion Level	4	4	4	3	2
	Cycles	8000	8000	8000+	2500	500
	Cut Level	1	1	1	1	1
	Index Value	1.7	1.3 - 1.5	1.5 - 1.7	1.6	1.7
	Tear Level	3	3	2	3	3
	Newton	65	55 - 80	25-49	57.5	54.4
	Puncture Level	1	1	1	1	1
	Newton	35	46 - 54	46 - 54	41.5	35.8
Applications		Detailed assembly, inspection, light fabrication and small parts handling, general purpose.	Petrochemical industry, shipping and receiving, plumbing, general construction.	Long lasting, well suited to a variety of applications such as high dexterity, good oil grip, best wet and dry grip. Good for chemical applications.	Agriculture, material handling, packing, construction, furniture manufacturing, glass handling, bottling operations. Component materials are safe for food contact.	Automotive, engineering, electronics, maintenance, inspection, packaging. Component materials are safe for food contact, but porous properties will allow bacteria to develop.
Coating Wearer Trial Results	Manual Operation of Solvent Dipping - Hrs	16 hours				
	Manual Operation of Compound Dipping - Hrs	18 hours			17 hours	20 hours
	Lift Loading Operation - Hrs	20+ hours				
	Tyre Changing Workshop - Days	15 days	30 days		20 days	
	Engineering Workshop - Days	26 days	2 days (stopped/sweaty)		2 days (stopped/sweaty)	
Ninja Styles		RAZR Diamond 3 RAZR Diamond 5 RAZR Silver 3 RAZR Silver 5 Classic Multi Lite Classic Multi Lite HV Classic Force Cut 5	HPT GripX HPT GripX HV HPT Ice HPT Ice HV MULTI-TECH Therm365	MULTI-TECH PVCChem	Classic Multi Flex Classic Multi Flex V Classic ACE Cut 3	Classic X Cut 4 Classic 5 Star Cut