

Glove Selection Guidelines

The use of hand protection is one of the most effective methods of reducing chemical exposure during the handling of chemicals and other hazardous materials. Choosing the right glove for your application is critical for ensuring proper protection. The chemical breakthrough time and degradation rating, process, and temperature are among criteria used to determine the best type of glove to use. Thin wall examination gloves are rated for splash protection only and are not intended for industrial application of chemical handling. Splash protection is defined as an incidental exposure for a limited time. The glove should be disposed of after exposure to reduce the potential for breakthrough.

Permeation Breakthrough: is defined as the amount of time a glove can be expected to provide effective permeation resistance when totally immersed in the test chemical.

Permeation Rate: refers to a 6-hour test generally expressed in terms of mg/cm²/min, or mg/m²/sec and is identified by the manufacturer. This is the measurement of the flow of chemical through the glove material.

Degradation rating: refers to the potential effect to the integrity of the glove as an effective barrier against the test chemical. Usually expressed in qualitative terms of: Excellent, Good, Fair, Poor and Not Recommended.

The gloves evaluated below are recommended for use with the chemicals identified. Other choices may also be available however these are being considered to be the best value selection.

Please note: it is the workers responsibility to inspect their gloves before handling hazardous materials. Signs of wear may include holes, cracks, tears and discoloration of the glove material. Some gloves have an indicator underlayer of a different color to show when the outer layer has been breached. Gloves should be replaced at the first sign of wear to reduce exposure. Gloves containing latex may cause skin irritation for those workers with a latex allergy.

Gloves should be fitted properly to ensure the safe handling of laboratory or process equipment. Maximum life can be obtained by removing the chemical from the surface of the glove by washing or other appropriate methods after each use. Gloves should be stored away from the contaminating atmosphere.

Thin Walled Exam Glove selection

Splash Protection ONLY

Chemical	Natural Rubber Latex	Nitrile	Neoprene
Acetone	Not recommended	Not recommended	Not recommended
Ethyl Ether	Not recommended	Not recommended	Not recommended
Hydrochloric Acid	Acceptable >8 hrs	Acceptable >8 hrs	Acceptable >8 hrs
Isopropyl Alcohol	Not recommended	Acceptable >4 hrs	Acceptable >4hrs
Methanol	Not recommended	Not recommended	Not recommended
Methylene Chloride	Not recommended	Not recommended	Not recommended
Nitric Acid <30%	Acceptable >8 hrs	Acceptable >8 hrs	Acceptable >8 hrs
Nitric Acid 30-70%	Not recommended	Not recommended	Acceptable >4 hrs
Petroleum Ether	Not recommended	Acceptable >8 hrs	Not recommended
Sodium Hydroxide 30-70%	Acceptable >8 hrs	Acceptable >8 hrs	Acceptable >8 hrs
Sulfuric Acid 30-70%	Acceptable >8 hrs	Not recommended	Acceptable >8 hrs

				9	32890-006	
	Ansell, Poly Vinyl Alcohol (PVA), 14"	>6hrs	Good	9	32890-010	
Nitric Acid (10%)	Ansell Neoprene	>8hrs	Excellent	7	32890-052	
				8	32890-054	
				9	32890-056	
				10	32890-058	
	Ansell Nitrile	>8hrs	Excellent	7	32890-088	
				8	32890-090	
				9	32890-092	
				10	32890-094	
				11	32890-096	
	Best, Butyl	>8hrs	Excellent	8	47727-168	
				9	32892-050	
				10	32892-051	
				11	32892-052	
Nitric Acid (Conc.)	MAPA Neoprene, Stanzoil	<4hrs	Excellent	9	32929-136	
				10	32929-140	
	Ansell, Neox Neoprene	>6 hrs	Excellent	10	32889-994	
	MAPA Natural Rubber	235 mins		7	32930-552	
				8	32930-554	
				9	32930-556	
				10	32930-558	
Petroleum Ether	MAPA Nitrile	>8hrs	Excellent	6	32917-855	
				7	32917-856	
				8	32917-857	
				9	32897-858	
				10	32917-859	
				11	32897-860	
	Ansell Nitrile	>8hrs	Excellent	7	32890-088	
				8	32890-090	
				9	32890-092	
				10	32890-094	
				11	32890-096	
Sodium Hydroxide	Ansell Neoprene	>8hrs	Excellent	7	32890-052	
				8	32890-054	
				9	32890-056	
				10	32890-058	
	Ansell, Poly Vinyl Alcohol (PVA), 12"	>6hrs	Good	8	32890-011	
				9	32890-006	
	Ansell, Poly Vinyl Alcohol (PVA), 14"	>6hrs	Good	9	32890-010	
	MAPA Nitrile	>8hrs	Excellent	6	32917-855	
				7	32917-856	
				8	32917-857	
				9	32897-858	
				10	32917-859	
				11	32897-860	
	MAPA Natural Rubber	>8 hrs		7	32930-552	
				8	32930-554	
				9	32930-556	
				10	32930-558	
Sulfuric Acid	Ansell Nitrile	>8hrs	Excellent	7	32890-088	
				8	32890-090	
				9	32890-092	
				10	32890-094	
				11	32890-096	
	MAPA Nitrile	>8hrs	Excellent	6	32917-855	
				7	32917-856	
				8	32917-857	
				9	32897-858	
				10	32917-859	
				11	32897-860	
	Ansell Neoprene	>8hrs	Excellent	7	32890-052	
				8	32890-054	
				9	32890-056	
				10	32890-058	

Please contact your VWR Safety Specialist or call our Safety Technical Hotline to discuss your applications or process and specific product recommendations.

VWR Technical Resource Center: 888-VWR-LINE

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