Supported & Unsupported Glove Terminology

Supported gloves are made with fabric lining that provide "support" to the protective compounds (Nitrile, Latex, Neoprene, PVC, etc.) that form the outer surface of the glove. Supported gloved are made by either "Dipping" or "Cutting and Sewing". Dipping involves placing a knitted or woven fabric liner on a hand former and dipping the former into a protective polymer. Cut and Sewn supported gloves are manufactured by cutting laminated, impregnated or coated fabrics into components, and then stitching them together.

Unsupported gloves are made without supporting fabrics or liners, Ceramic formers with embossed grip patterns are dipped directly into protective polymers. Generally, unsupported gloves are available in palm thickness that range from 11-30 mils. A mil is 1/1000th of an inch. Unsupported gloves are sometimes lined with cotton flocking to absorb perspiration and provide comfort. Unsupported gloves provide excellent dexterity and chemical protection.

Disposable gloves offer the most tactile sensitivity of any glove type. Most disposable gloves are designed for single use, light duty applications. Available in both Medical and Food Service grades, most disposable gloves have palm thickness that range from 4-15 mils. Disposable gloves are normally powdered, chlorinated or polymer coated to allow for easy donning. Latex, Nitrile and Vinyl are the most prevalent compounds use to produce disposable gloves.

Butyl gloves are made in the USA by Guardian Manufacturing and offer unmatched protection against hazardous chemical encountered in agriculture, chemical manufacturing, Hazmat operations, first response, ship building, and aircraft manufacturing. The dense molecular structure of butyl rubber is the key to its superior chemical impermeability. We offer butyl rubber gloves in 5, 7, 14 and 25 mil thickness to allow for dexterity in a variety of applications.

Natural Rubber Latex is the milky sap of the Hevea Rubber Tree. Once extracted, the sap is centrifuged and processed to achieve optimal physical properties. Natural latex transforms from a liquid state to a solid state when exposed to heat (vulcanization) during the curing process. Natural rubber generally withstands all liquids that mix with water, such as alcohols and acetones. Some individuals may experience allergic reactions to proteins found in Natural Rubber.

Nitrile, or Acrylonitrile Butadiene Rubber, is a synthetic rubber developed as a substitute for Natural Rubber. It offers good protection against organic solvents, oils, bases and animal fats It also provides excellent resistance to abrasion, snag, punctures, and cuts. Nitrile is an extremely versatile synthetic rubber, and it is used to produce a wide range of Disposable, Unsupported, Supported and Coated gloves.

Neoprene, or Chloroprene was developed in the 1930's by DuPont®. Neoprene was the first man-made rubber. It provides excellent chemical protection, and it is impermeable to gases, vapors, and moisture. Neoprene does not provide quite the same abrasion resistance as Nitrile; however, it does offer good cut protection and resembles Natural Rubber in feel and flexibility. Neoprene resists degradation from sun, ozone and weather, and is used to make a variety of products including conveyor belts, hoses, wet suits and gaskets.

Polyvinyl Chloride, or PVC Vinyl Plastic is the thermoplastic polymer of Vinyl and Chloride. It is produced by combing resins and plasticizers, then fusing them through a heat process. The wear, flexibility and chemical resistance of PVC can be controlled by carefully regulating the compounding of these two ingredients. Polyvinyl Chloride provides protection against caustics, acids, bases, detergents, and solvents.

Polyurethane, or PU, is a petroleum based thermoplastic elastomer with a cross-linked molecular structure. Polyurethane's molecular structure makes it incredibly tough and yet, surprisingly soft, flexible and comfortable. PU contains no Latex proteins of chemical accelerators, both of which can cause allergic reactions. PU is odorless and it resists degradation by ozone, fuels, oils, acids and may solvents.

PROPERTIES	LATEX	NITRILE	NEOPRENE	PVC	POLYURETHANE
Strength	Excellent	Excellent	Very Good	Fair	Excellent
Barrier Protection	Excellent	Excellent	Very Good	Good	Excellent
Puncture Resistance	Very Good	Excellent	Good	Poor	Excellent
Chemical Resistance	Good	Excellent	Very Good	Poor	Very Good
Thermal Resistance	0-300°F	25-300°F	25-300°F	25-150°F	25-300°F
Elasticity	Excellent	Very Good	Excellent	Poor	Excellent
Allergen	Latex Proteins are present. Varies By Product	Very Good. No Proteins, but some residual chemicals.	Very Good. No Proteins, but some residual chemicals.	Good. No proteins, but some chemicals and curing agents	Very Good. No proteins, but some chemicals and curing agents
Comfort	Excellent	Very Good	Excellent	Fair	Very Good
Cost	Low	Medium	Medium	Low	High

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