

## What is Neoprene Rubber Sheets?

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[Neoprene rubber](#) is also called polychloroprene or CR rubber, which is a family of synthetic rubbers produced by free-radical polymerization of chloroprene. In commercial production, this polymer is prepared by free radical emulsion polymerization. Polymerization is initiated using potassium persulfate. Use bifunctional nucleophiles, metal oxides (e.g. zinc oxide), and thioureas to crosslink individual polymer strands. Neoprene rubber sheets show very good chemical stability, and keeps flexibility over a wide temperature range. It has a wide range of applications, such as oil proof materials, electrical insulation, laptop sleeves, orthopedic braces, etc.

[Neoprene rubber sheets](#) was invented by DuPont scientists on April 17, 1930. At the earliest, Professor Fr Julius Arthur Nieuwland, of chemistry at the University of Notre Dame produced divinyl acetylene, a jelly that firms into an elastic compound similar to rubber when passed over sulfur dichloride. Then Dupont purchased the patent rights from the university, and took over commercial development of Nieuwland's discovery in collaboration with Nieuwland. They manufactured chloroprene. DuPont first marketed the compound in 1931 while its commercial possibilities were limited by the original manufacturing process, which left the product with a foul odor. Later they developed a new process, which eliminated the odor-causing byproducts and halved production costs, and the company began selling the material to manufacturers of finished end-products. In 1937 the material gets a generic name, "neoprene", which signifies this material is an ingredient, rather than a finished consumer product. DuPont then worked extensively to generate demand for its product, meanwhile publicized neoprene's uses as well as advertising other companies' neoprene-based products. By 1939, sales of neoprene rubber were generating profits over \$300,000 for the company.

Nowadays about 300 thousand tons of neoprene rubber sheets are produced per year outside of Russia and China.