



SHERMAN & REILLY

400 West 33rd St. • Chattanooga, TN 37410-1267 USA

Toll Free 1.800.251.7780 • Phone 423.756.5300 • Fax 423.756.2948

Web Site - <http://www.sherman-reilly.com> • E-Mail - sales@sherman-reilly.com

Urethane Lined Sheaves

S & R Urethane Lined Sheaves

S & R Urethane is a polymer that has a special kind of thermo-setting characteristic. It combines in one material the resiliency of rubber and the hardness of structural plastics and possesses the additional important properties such as high load bearing capacities, resistance to impact, abrasion, compression set, ozone, oil, and many chemicals. Sherman & Reilly premium grade urethane elastomer should be very much distinguished from the weaker urethanes, which are better suited for filling voids, insulation and other uses not requiring great structural strength. In addition to its unique accommodation of properties, it also differs from conventional elastomers in several ways. It is a liquid polymer, which is compounded chemically (to initiate curing), and from which sheave linings are fabricated by casting.

This combination of so many outstanding properties within a single material makes the urethane distinctive from conventional rubbers and plastics. In fact, one might consider the urethane elastomer as a bridge between rubber and structural plastic.

As with conventional neoprene, Sherman & Reilly urethanes possess the important property of elasticity, which makes it ideal for use as a sheave lining. When the wire rope pulling line or conductor is in the sheave under load, the material will flow in accordance with the force exerted on it and within the limits provided by the mass of the material itself. This is called compression. This does not mean that the elastomer will undergo a change in volume under pressure; rather it means that the elastomer will deflect, or undergo a change in shape. This distinction is important because even though the elastomer will change shape under load, it is compelled by the characteristics of elasticity to return to its original shape once the load is removed.

