HANNA RUBBER COMPANY

Types of Rubber

Natural Rubber and Synthetic Natural Rubber (ASTM Designation AA)

Natural Rubber Sheet

Natural rubber, also known as caoutchouc or India rubber, is derived from the latex of the rubber tree, Hevea brasiliensis. It is a highly elastic and durable material that has been used for centuries for various applications, including the production of rubber sheets.

Physical properties of natural rubber sheet:

Elasticity: Natural rubber sheets have excellent elasticity, allowing them to stretch and return to their original shape without deformation.

Tensile Strength: Natural rubber sheets have high tensile strength, which makes them resistant to tearing and breaking under tension.

Abrasion Resistance: Natural rubber sheets have good abrasion resistance, making them suitable for applications where they will experience friction or wear.

Impact Resistance: Natural rubber sheets can absorb and dissipate energy from impacts, providing protection and cushioning for various applications.

Temperature Range: Natural rubber sheets can perform well in temperatures ranging from -40°C to 100°C, although their properties may degrade at higher temperatures.

Weather Resistance: Natural rubber sheets can withstand exposure to various weather conditions, although they are susceptible to UV degradation and ozone, which can lead to cracking over time.

Chemical Resistance: Natural rubber sheets have moderate chemical resistance, making them suitable for use in some environments, but they may degrade when exposed to certain chemicals like oils, solvents, and strong acids or bases.

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Types of Rubber

Synthetic Natural Rubber Sheet

Synthetic natural rubber, also known as isoprene rubber or polyisoprene, is a man-made material that is designed to mimic the properties of natural rubber. It is made from isoprene monomers that are polymerized to create a synthetic rubber material.

Physical properties of synthetic natural rubber sheet:

Elasticity: Synthetic natural rubber sheets have elasticity similar to that of natural rubber sheets, allowing them to stretch and return to their original shape without deformation.

Tensile Strength: Synthetic natural rubber sheets have high tensile strength and are resistant to tearing and breaking under tension.

Abrasion Resistance: Synthetic natural rubber sheets offer good abrasion resistance, making them suitable for applications where they will experience friction or wear.

Impact Resistance: Like natural rubber sheets, synthetic natural rubber sheets can absorb and dissipate energy from impacts, providing protection and cushioning.

Temperature Range: Synthetic natural rubber sheets have a similar temperature range as natural rubber sheets, typically -40°C to 100°C, but they may have slightly improved resistance to heat aging.

Weather Resistance: Synthetic natural rubber sheets generally have better resistance to UV degradation and ozone compared to natural rubber sheets, which can extend their service life in outdoor applications.

Chemical Resistance: Synthetic natural rubber sheets may have improved chemical resistance compared to natural rubber sheets, but their specific resistance will depend on the formulation used during production.

Both natural and synthetic natural rubber sheets are widely used in various industries for their excellent physical properties, such as in automotive, construction, and consumer goods applications.

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