Advanced Technologies for Rubberized Surfaces

The Dow Chemical Company (Dow) has a proven track record of offering an innovative portfolio and technologies for rubberized flooring surfaces. Offering a broad range of elastomers, manufacturers can create tailor-made surfaces that address specific requirements and processing needs.

Solutions for Elastomeric Granules

Elastomer products from Dow are an excellent choice for professional rubberized surfaces like athletics tracks, playgrounds, and tennis courts. Such surfaces need to strike a good balance between speed, anti-skid properties, shock-absorption, resilience, and permeability over a long span of time.

Elastomeric granules based on Dow technology can offer:

- Good energy absorption
- Excellent ultraviolet (UV) stability
- Enhanced wear resistance
- Good colorability
- Odorless and dust-free environment

ENGAGE™ Polyolefin Elastomers from Dow Elastomers are designed to bridge the performance gap between rubber and plastic, inspiring new design possibilities. These polymers offer an excellent combination of flexibility and toughness with low density, softness, and enhanced coloring options.

Moreover, product laboratory trials conducted by Dow indicate that it is possible to partially substitute ethylene propylene diene monomer (EPDM) with ENGAGE™ Polyolefin Elastomers in sulfur-cured systems and fully substitute EPDM in peroxide-cured systems. This opens a significant cost-saving opportunity for rubber granules producers and surface manufacturers.

Completing the range, Dow also offers NORDEL™ EPDM to meet customers' requirements in sulfur-cured systems.

Introducing New Opportunities

A typical rubberized surface consists of a wear layer composed of mixed-size, spike resistant EPDM granules embedded together with a liquid polyurethane binder, and an elastic layer consisting of bonded rubber granules.

Dow laboratory tests looking at partial or total EPDM replacement with ENGAGE™ Polyolefin Elastomers (POEs) in both sulfur- and peroxide-cured systems demonstrate good hardness at room and high temperatures as well as comparable tensile performance (see Figures 1 and 2, next page).

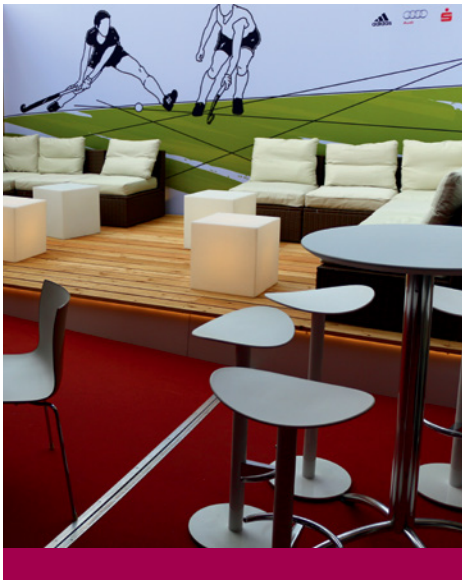
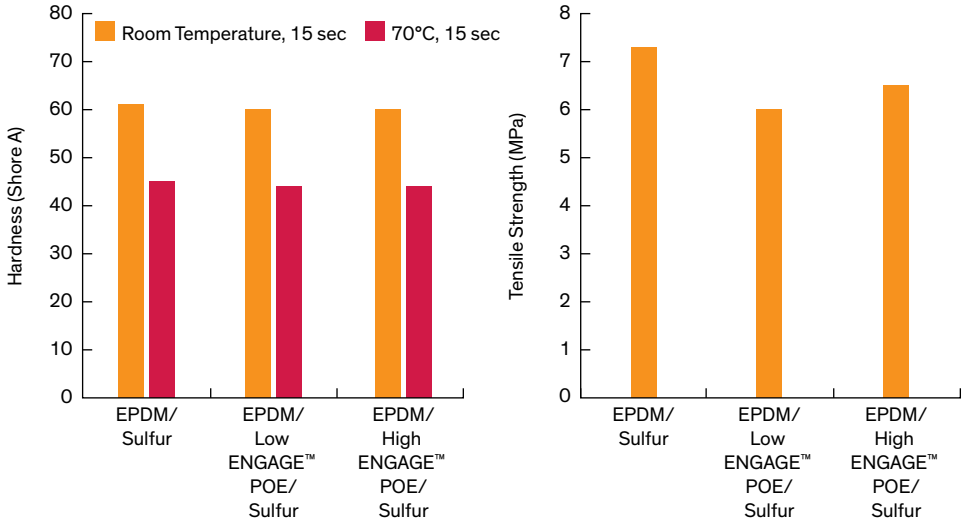


Figure 1: Sulfur-cured System (partial replacement of EPDM)[1]

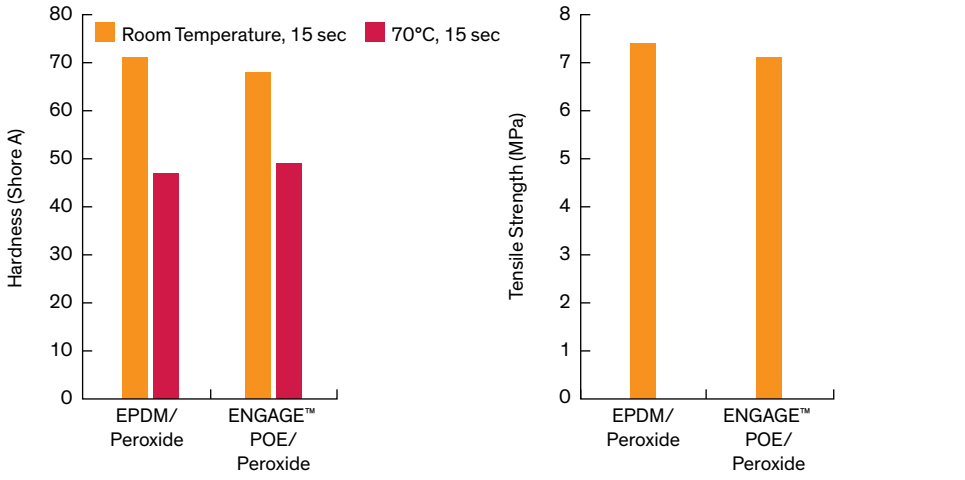


Dow's Solutions Welcomed London Olympic Visitors at the German House

Dow provided 220 square meters of rubberized surface at the German National Olympic Committee (NOC) house in London that was home to partners, NOC officials, government officials and press during the London 2012 Olympic Games. Visitors were able to experience first-hand how Dow's elastomers and polyurethane binders performed a very important function for the athletes and visitors to the house, providing a reliable and comfortable surface with bright colors.

The core of the sport surface was based on a customized system solution from Dow which combines an elastomeric granule made with specialty polyolefin elastomers bound with VORAMER™ solvent-free polyurethane (PU) binder, resulting in a flooring system that was easy to install, offered excellent colorability and durability and was well-suited to withstand the high traffic in the German House.

Figure 2: Peroxide-cured System (full replacement of EPDM)[1]



Dow can help tailor solutions based on your market application needs and curing system. Contact a Dow representative today to learn more. You can also visit www.dowelastomers.com or call the Dow Customer Information Group (CIG) at 1-800-441-4369 or 1-989-832-1426.

[1] Data per tests conducted by Dow. Test protocols and additional information available upon request. Properties shown are typical, not to be construed as specifications.

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