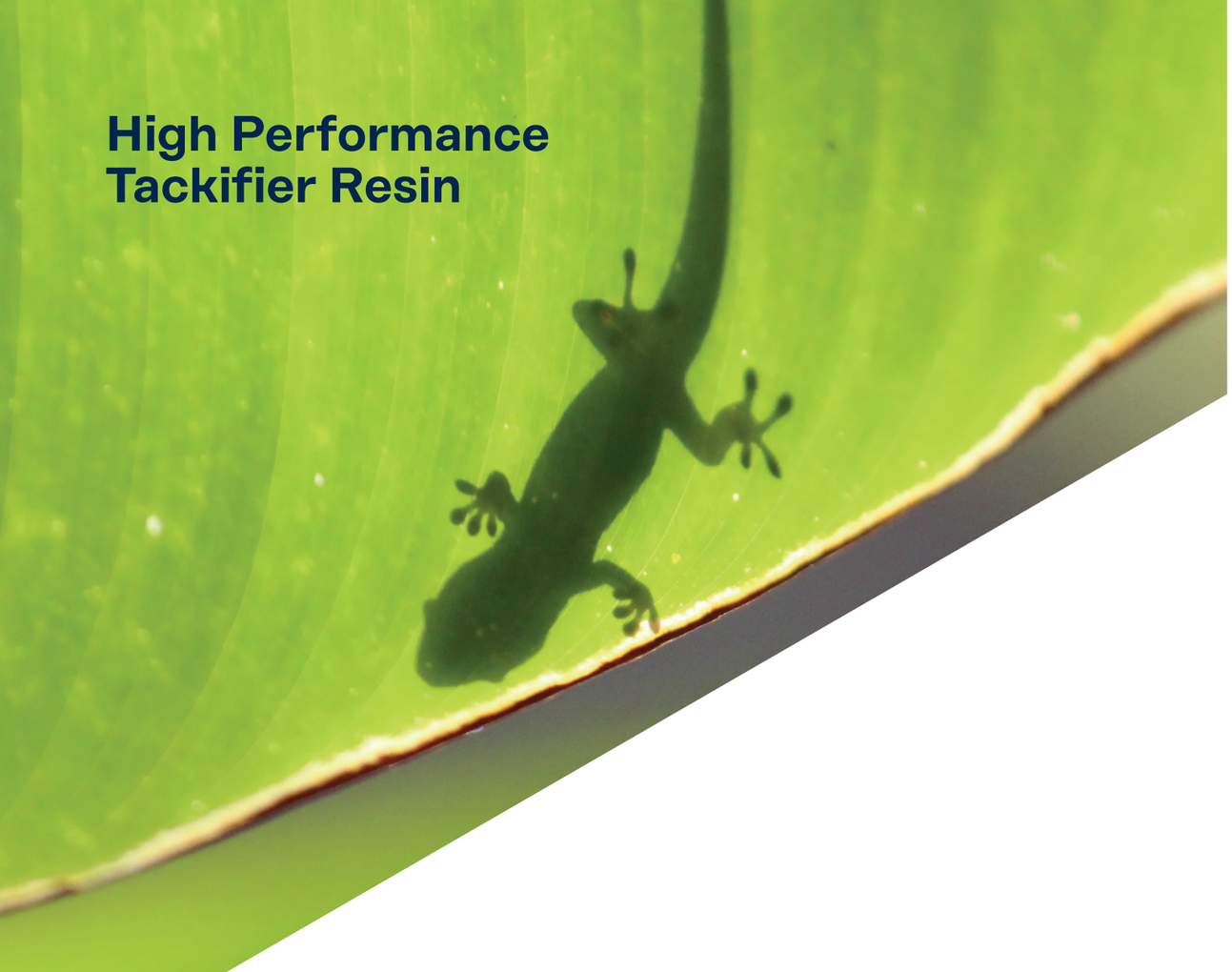
BAKELITE
SYNTHETICS

Won‘t expect that tack

Infinite performance. Infinite potential.
With High Performance Tackifier Resin

INFINITE
ADHESION
TECHNOLOGY



High Performance Tackifier Resin

Rubber articles such as automotive, truck, and motorcycle tires, conveyer belts and the like consist of multiple layers of materials with identical or different compositions. During manufacture of such articles, the unvulcanized rubber mixtures must adhere to one another for a lengthy period prior to compression moulding and vulcanization. The property called contact or assembly tack is required. Mixtures of synthetic rubber do not generally exhibit adequate assembly tack. Addition of tackifying resins, generally at a level of 2-6 phr, significantly improves the tack of unvulcanized mixtures of styrene-butadiene copolymers, polybutadiene-, polychloroprene-, nitril- and APT rubber.

The resins

must exhibit good compatibility with the elastomers and other components of the mix. The melting range of the resins must match to the processing temperature of the rubber mix. The resin must flawlessly distributed throughout the mix both when it is incorporated on a roller and when this operation is carried out in an internal mixer.

The resin is also suitable for use as an additive in spreading solutions to increase their adhesive strength.

Bakelite® PF 6204 K Tackifiers

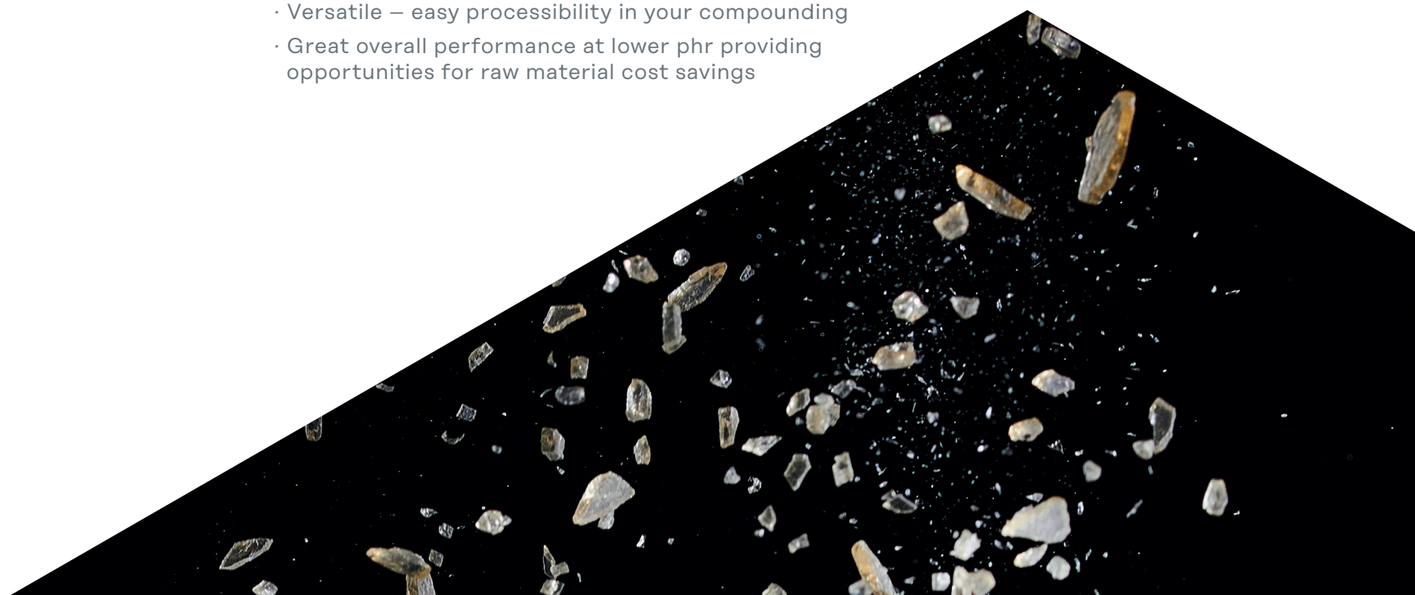
Phenolic tackifier resins are based on alkylphenol novolaks as they have a good compatibility to rubber due to the long alkyl chain. Bakelite Synthetics has developed the high performance phenolic tackifier resin Bakelite® PF 6204 K that leads to a high initial rubber tack but also to a high long term tack. No loss of adhesive strength occurs when the mix is stored over a lengthy period. There are no side effects on vulcanization. The resin acts as a mild plasticizer, thus promoting distribution of the filler.

Appearance	Yellow to amber flakes
Melting point (R&B)	ca. 140 °C
Color Gardner	max. 10
Acid value	max. 0,5 mg KOH/g
pH-value	ca. 5,8
Specific gravity 20 °C	ca. 1,05 g/cm^3

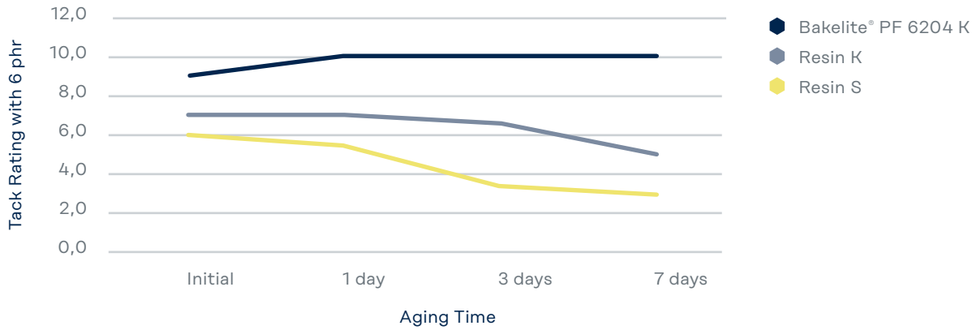
Tested and verified by an independent, ISO 17025 certified institute

Bakelite® PF 6204 K

- Verified and tested vs. currently used tackifiers in industry
- Excellent initial and long-term tack to meet your demanding needs
- Versatile – easy processibility in your compounding
- Great overall performance at lower phr providing opportunities for raw material cost savings

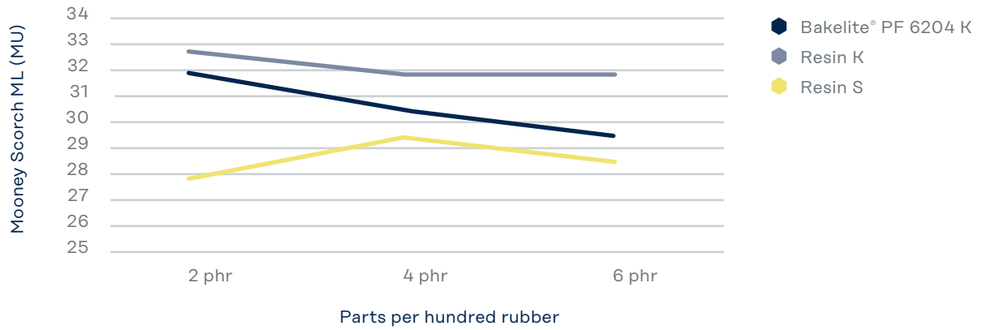


Tack Test ASTM D429



- Over time, Bakelite® PF 6204 K maintains higher aging tack levels than industry used phenolic resins
- Suitable replacement which provides more flexibility and confidence to compounding needs

Mooney Scorch ML (MU) ASTM D1646



While driving excellent adhesion and tack, Bakelite® PF 6204 K gives compounding flexibility and has only little impact on vulcanization behavior (scorch time).

Strebler Adhesion (N/mm) ASTM D2624

- Bakelite® PF 6204 K drives higher peel adhesion than industry used phenolic tackifiers
- Excellent adhesion to both natural and synthetic rubbers

Tested and verified by an independent, ISO 17025 certified institute

Mooney Viscosity (MU) ASTM D1646

Again, Bakelite® PF 6204 K can easily be added to your rubber compounds, enhancing processing and performance vs. industry used tackifiers.

BAKELITE® PF 6204 K

Applications

Rubber Goods

- Conveyor belts
- Hoses
- Seals
- Rubber rolls
- Shoes
- Industrial rubber goods

Tire Construction

- Side wall
- Bladder
- Re-treading
- Wire bead

Adhesives

- Automotive
- Industrial
- Construction
- Composites

Properties

		Bakelite® PF 6204 K	Phenolic Resin K	Phenolic Resin S
Chemistry		Alkylphenol Novolac	Alkylphenol Novolac	Alkylphenol Novolac
Physical Form		Flakes	Flakes	Flakes
Softening Point (Ring & Ball)	°C	140	140	90
Specific Gravity at 20°C	g/cm³	1.05	1.03	1.01
Odor		almost odorless	almost odorless	almost odorless
Storage Stability	Years	2	2	2

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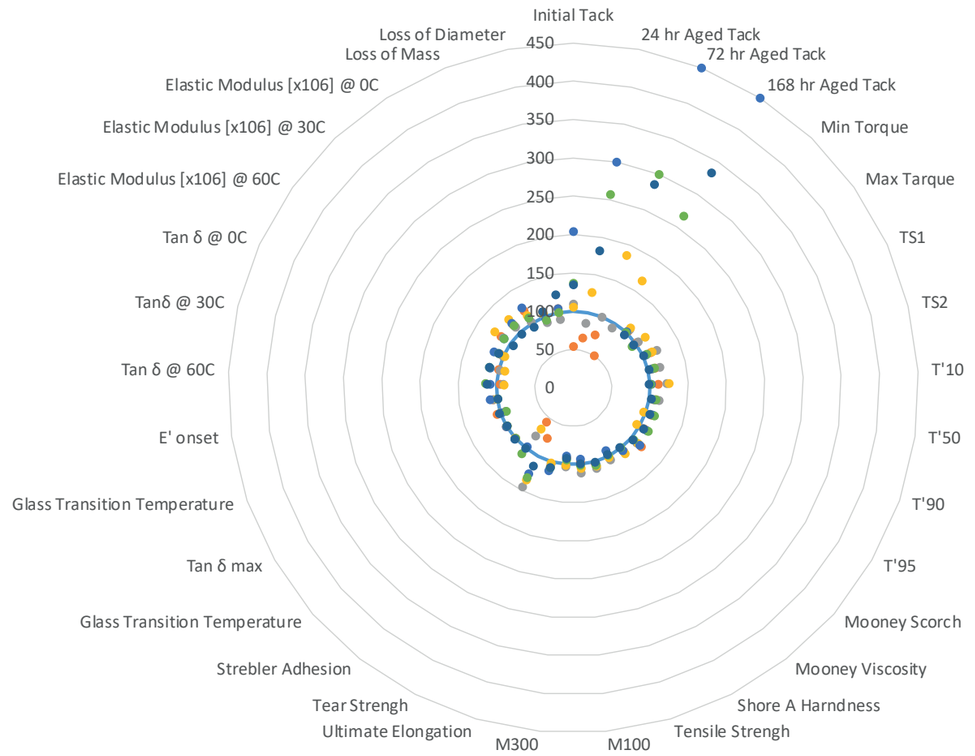
Performance Testing Summary – Tire Sidewall BR-NR-Mixture



- Extensive testing completed vs. industry leading phenolic tackifiers
- Tested and verified by an independent, ISO 17025 certified third party
- Confidence in our Bakelite® PF 6204 K tackifier to meet all your performance and processing needs

Next Generation Synthetics

Infinite potential.
Infinite curiosity.
Infinite solutions.

Learn more about the vision, products and history of bakelite on our website

bakelite.com