

VULCAN® 7H



VULCAN® 7H carbon black is the most cost-effective carbon black to use when greater treadwear than a standard N220 is needed. Currently carrying a very small list price premium over N220, VULCAN 7H offers approximately 7-11% better treadwear. With less than two pounds of carbon black used in the tread of most passenger tires, better UTQGL ratings are very affordable.

VULCAN 7H was introduced by Cabot Corporation in the early 1970's as part of a family of blacks that incorporated a breakthrough reactor technology. It imparts excellent wear resistance to all tire tread rubbers. It gives better wear than even the more costly N110. VULCAN 7H is also a high structure carbon black; thus it disperses well and gives moderately high modulus, while imparting excellent extrusion characteristics to rubber compounds. VULCAN 7H conforms to ASTM grade N234.

VULCAN 7H is particularly suited for tire treads that require excellent wear resistance, including those made from emulsion SBR, solution SBR, BR, natural rubber, or blends of any of these polymers. In the industrial rubber goods area, VULCAN 7H is also recommended for conveyor belts, solid tires, and other products requiring excellent abrasion resistance.

Performance Features

- Excellent abrasion resistance
- Ease of dispersion
- Excellent extrusion characteristics
- Economical

Typical Applications

- Premium passenger tire treads
- Retread truck tires
- Industrial product applications



VULCAN 7H Carbon Black from Cabot Corporation

VULCAN 7H carbon black represents an economical way to obtain excellent treadwear and abrasion resistance. Its excellent extrusion characteristics and ease of dispersion make it user friendly.

Recipe: 65 S-1712 / 35 BR , 75 black, 50 total oil, 3 ZnO, 2 stearic acid, 2 AO, 2.5 wax, 1.4 CBS, 1.75 S

Carbon Blacks	VULCAN 6 / N220	VULCAN 7H / N234	VULCAN 9 / N110
Treadwear rating	100*	111*	103**

*average ten tests **average 2 tests

Processing Properties

Carbon Blacks	VULCAN 6 / N220	VULCAN 7H / N234	VULCAN 9 / N110
Mooney Viscosity ML 1+4 @ 100C	45	52	48
Mooney Scorch ML @ 135C	T5 21.3 T10 22.8	17.4 18.9	18.2 20.0
Extrusion Shrinkage ASTM D 2230, method B % relative to N220	100	96.1	106.9
Visual Dispersion ASTM D2663	4.4	4.4	4.3

Physical Properties

Carbon Blacks	VULCAN 6 / N220	VULCAN 7H / N234	VULCAN 9 / N110
ASTM D 1765 Cured 60' @ 145C			
Tensile Strength, MPa	19.5	21.0	20.3
300% Modulus, MPa	7.1	7.5	6.4
Elongation at break,%	590	585	600
Hardness, Shore A2	56	58	56
Resilience, ASTM D1054 Cured 70' % relative to N220	100	93.8	95.6

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