

## ENDURE™ E45 carbon black



### GENERAL DESCRIPTION

Many industrial rubber product applications operate under severe conditions that lead to significant wear and tear. Improved durability of the rubber components may provide a distinct total cost advantage. As part of Cabot's ongoing commitment to deliver solutions that meet our customers' needs, we have developed the ENDURE™ family of carbon blacks engineered for durability.

Improving wear, chunking and tear resistance or reducing heat buildup can result in longer part life, reducing costly equipment downtime, increasing throughput and enhancing end user profitability. Cabot products can enhance rubber part life and durability by optimizing the balance between heat buildup and reinforcement and are identified by the letter "D" in the ENDURE nomenclature system.



In certain applications such as conveyor belts, reduced hysteresis in the rubber compound may also be of interest as it can result in decreased power consumption, representing a significant energy and operating cost saving. In other applications such as rubber tracks and certain mill liners, a decrease in hysteresis can help with extending part life. Cabot products can help reduce energy costs and extend part life by optimizing the balance between hysteresis and reinforcement and are identified by the letter "E" in the ENDURE nomenclature system.

### PERFORMANCE FEATURES

ENDURE™ E45 carbon black exhibits good stiffness and very low heat build up in rubber and is the product of choice for rubber applications requiring less hysteresis than that offered by standard N500 ASTM semi reinforcing carbon blacks.

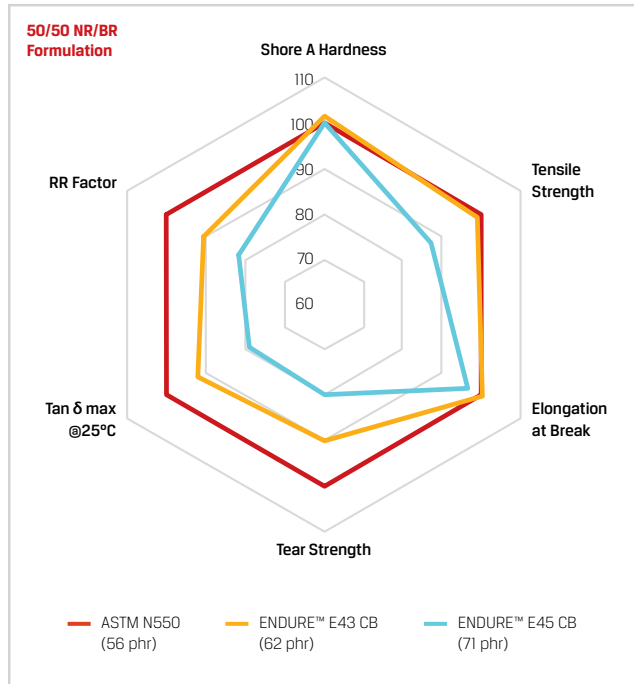
### TYPICAL APPLICATIONS

- ◆ Bottom cover of low rolling resistant conveyor belts

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## TECHNICAL DATA

ENDURE™ E45 carbon black can reduce the hysteresis of rubber compounds compared to compounds made with ASTM N700, N600 and N500 carbon black.



50/50 NR/BR Formulation	ASTM N550	ENDURE™ E43 CB	ENDURE™ E45 CB
Loading, (phr)	56	62	71
Hardness, (Shore A)	67	68	67
Tensile Strength, (MPa)	19.8	19.6	17.3
100% Mod, (MPa)	4.1	4.9	4.3
300% Mod, (MPa)	16.7	17.2	16
Elongation at Break, (%)	340	341	329
Tear Strength, (N/mm)	40	36	32
DIN Abrader (mm <sup>3</sup> )*	88	107	128
Tan δ max @25°C	0.113	0.104	0.089
RR factor	0.0693	0.0627	0.0567

\* higher DIN Abrader means worse

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