

STERLING® VH



STERLING® VH carbon black is a cost-effective replacement for N550, FEF carbon black. It is a semi-reinforcing grade that can be used in various tire carcass applications when high modulus, moderate reinforcement, and excellent processing characteristics are required. STERLING VH offers similar processing and physical properties to N550 with a very slight loss in reinforcement and better economics.

STERLING VH was introduced by Cabot Corporation in the early 1970's. One intriguing possibility this black offers is the substitution of N550 at a lower cost. In addition to the same good processing characteristics, the slightly lower surface area of STERLING VH offers less hysteresis and increased electrical resistance versus N550. STERLING VH conforms to ASTM grade N650.

STERLING VH is particularly suited for tire carcass applications that require excellent extrusion characteristics.

Performance Features

- Reinforcement about on a par with N550
- Ease of dispersion
- Excellent extrusion characteristics
- Economical

Typical Applications

- Passenger tire sidewalls
- Passenger tire ply skim compound
- Industrial product applications



STERLING VH Carbon Black from Cabot Corporation

STERLING VH carbon black represents an economical way to obtain moderate reinforcement of tire carcass compounds. Its excellent extrusion characteristics and ease of dispersion make it user friendly.

Recipe: ASTM NR, D 3192: 100 natural rubber, 50 black, 5 ZnO, 3 stearic acid, 0.6 MBTS, 2.5 S

Carbon Blacks		STERLING SO / N550	STERLING VH / N650	STERLING V / N660
Mooney Scorch ML @ 135C	T10	par	+2	+2
Tensile, 30' MPa Vs. IRB3#		-2.8	-3.4	-2.9
300% Modulus, MPa vs. IRB3#	15' 30'	1.1 0.70	1.4 0.70	-1.1 -1.9
Elongation, %		-40	-40	0
Resilience, ASTM D 1054,40' vs. IRB#3		+7.1	+7.1	+8.8

Recipe: ASTM SBR, D 3191: 100 S-1500, 50 black, 3 ZnO, 1.0 stearic acid, 1.0 TBBS, 1.75 S

Extrusion Shrinkage, ASTM D 2230, method B % relative to N550		100	99	112
ASTM D 1765 Cured 50' @ 145C				
Tensile Strength, MPa		-4.8	-7.3	-6.9
300% Modulus, MPa		-0.6	-2.1	-4.5
Elongation at break,%		-5	+50	+60

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NORTH AMERICA
Cabot Corporation
Rubber Blacks
1095 Windward Ridge Pkwy
Suite 200
Alpharetta, GA 30005
(800) 472-4889
www.cabot-corp.com

SOUTH AMERICA
Cabot Brasil Industria e Comércio
Ltda.
Av. João Castaldi, 88
04517-900 São Paulo, SP
Brazil
Tel: (55-11) 5536-0388
www.cabot-corp.com

EUROPE
Cabot Europe Ltd./Cabot
Europe/Cabot GIE
Le Nobel 4B
2 rue Marcel Monge
92158 Suresnes Cedex, France
Tel: (33-1) 46-97-58-00
www.cabot-corp.com

ASIA, PACIFIC
Asia Pacific Region
Level 14, MNI Tower 2,
11 Jalan Pinang
50450 Kuala Lumpur, Malaysia
Tel: (60-3) 2164 8352
www.cabot-corp.com