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CARBONEXT™ 10

CarboNext 10 grade has been designed with engineered morphology, having very high level of purity for specific rubber applications. The grade is developed in line with our ongoing commitment of providing cutting edge solutions to our Partners.

CarboNext 10 provides high filler loading capability due to its engineered morphological characteristics and offers benefits such as greater dimensional stability, green strength, and extrudability in rubber compound. It provides higher electrical resistance in rubber compounds as compared with N500, N600 and N700 series carbon black of equivalent compound hardness. This property makes CarboNext 10 suitable for automotive coolant hose application and other rubber goods. The grade also provides better elasticity and low hysteresis properties in rubber applications due to its engineered morphology.

APPLICATIONS

- Automotive coolant, hydraulic and industrial rubber hoses
- Automotive weather stripping, door seals, and extruded profiles
- Engine suspension, automotive driving belts, and engine mounts

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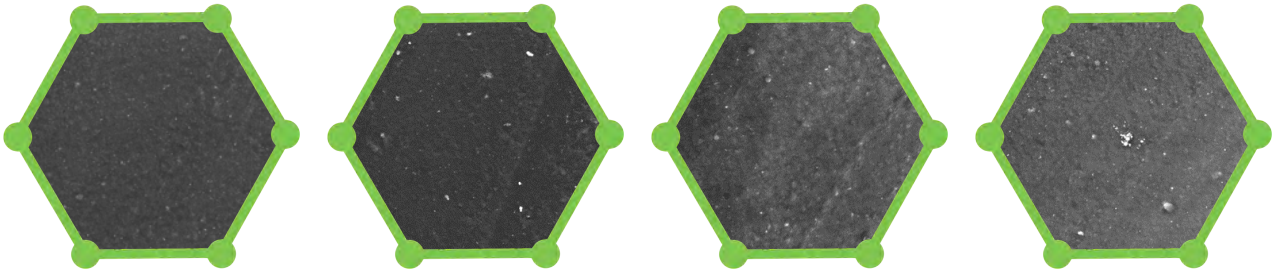
PERFORMANCE

CarboNext 10 grade is designed to incorporate higher loading of filler in rubber compound compared to commercial ASTM grade carbon black of N500 and N600 series carbon black. It provides similar level of compound viscosity and hardness which enables improved filler dispersion, superior extrusion performance of rubber compound.

EPDM Rubber Compound Property (Rubber 100 phr, Oil 75 phr)

	CarboNext 10	N550	N660	N774
Filler Loading (Phr)	**150**	120	130	150
Mooney Viscosity, ML (1+4) @ 100℃, (MU)	**13.2**	15.3	12.9	14.3
Hardness (Shore A)	**68**	68	70	70
Tensile Strength (MPa)	**8.8**	9.2	9.1	8.5
Elongation at Break (%)	**240**	274	284	230
200% Modulus (MPa)	**7.8**	7.2	6.8	7.4

Surface phenomena of rubber extrudate is characterised by Scanning Electron Microscopy study of extrudate profiles. The SEM images suggest that CarboNext 10 grade carbon black provides superior extrusion characteristics with improved surface smoothness behaviour.



CarboNext 10 | N550 | N660 | N774

CarboNext 10 grade provides reduced hysteresis loss (low loss tangent value) and high mechanical strength in NR based rubber system in comparison with a conventional carbon black system of N660/N990 blend having equivalent hardness property and viscosity. This phenomenon demonstrates suitable use of the grade for engine mount and vibration isolation application.

	CarboNext 10	N660/N990
Filler Loading (phr)	**40**	30/20
Mooney Viscosity ML (1+4) @ 100℃	**17.4**	18.9
Hardness (Shore A)	**55**	55
Tensile Strength	**23.2**	21.6
300% Modulus	**13.7**	13.0
Low Loss Tangent Value (20 Hz, 5% strain, 30℃)	**0.11**	0.13

PRODUCT SAFETY

Refer to SDS for handling purpose.

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