

## STERLING® 1120



STERLING® 1120 is the new choice for molded rubber product applications that require excellent flex resistance, resilience, durability, and low heat build-up with ease of processing.

STERLING 1120 carbon black is one of a unique family of products developed to deliver improved processing in high-durometer compounds. Customers using N700-type carbon blacks and blends of N700-type and N990 will find special value using STERLING 1120 carbon black, particularly in dynamic applications.

STERLING 1120 carbon black's custom features are designed for applications in which excellent flexing fatigue properties are required. Its contribution to low heat build-up makes it a good choice for use in engine mounts and other dynamic applications. Compounds containing STERLING 1120 carbon black exhibit very low tan delta compared to N700-type at equal loadings. This low damping, along with better tensile strength, and elastic modulus than N990 at high loadings, makes STERLING 1120 carbon black the preferred choice for resilient dynamic applications in natural rubber.

High damping polymers such as butyl also can benefit from these properties by using STERLING 1120 carbon black to balance the inherent dynamic characteristics of these polymers. This ability allows the compounder to optimize the spring-rate-constant ratio and damping in both types of applications.

STERLING 1120 carbon black has very low electrical conductivity, making it an excellent choice for insulation applications.

Compounding costs can be reduced when using expensive polymers through higher loadings at equal durometer. STERLING 1120 carbon black improves processing by enabling the engineer to compound for high hardness levels at relatively low viscosities when using high carbon black loadings.

### Performance Features

- Excellent flexing fatigue properties compared to N990 and N700-type
- Excellent tear-resistance compared to N990 and N700-type
- Higher carbon black loadings at equal durometer for lower compounding costs compared to N700-type
- Low electrical conductivity
- Lower viscosity at equal hardness compared to N700-type
- Good tensile strength at high loadings compared to N700-type and N990
- More resilient than N700-type at constant loadings

### Typical Applications for STERLING 1120 Carbon Black

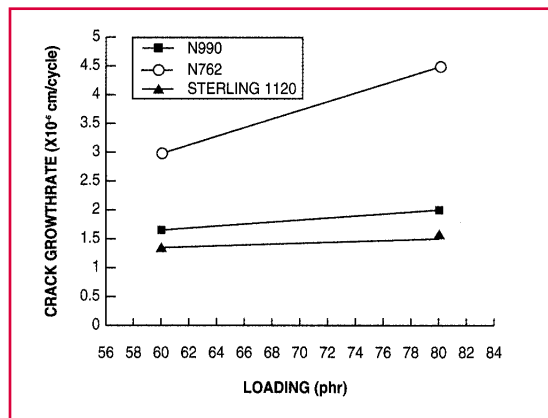
- Engine mount components
- Body mounts
- High-durometer molded goods
- Dynamic parts requiring good flex life

STERLING 1120 and other custom carbon black products have been specially developed by Cabot Corporation's Industrial Products Business as part of the company's ongoing commitment to meet existing market needs and provide solutions for future product design and processing challenges.



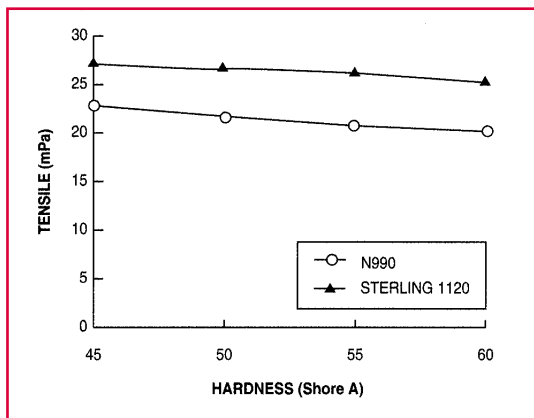
### Flex Fatigue Properties in Natural Rubber

Compounds containing STERLING 1120 carbon black show a substantially lower crack growth rate than those containing N990 or N762 at all carbon black loading levels.



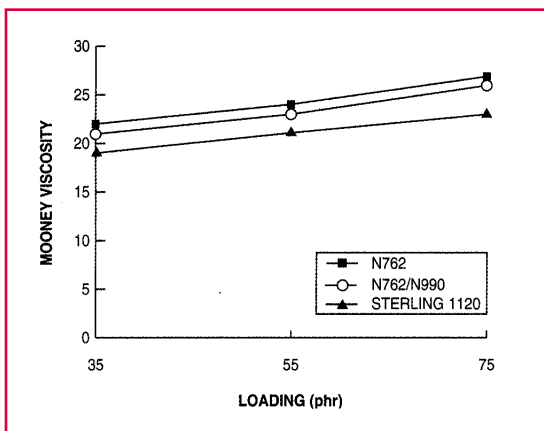
### Tensile Strength vs Hardness in Natural Rubber

STERLING 1120 carbon black shows higher tensile strength at equal hardness compared to N990 in natural rubber compounds.



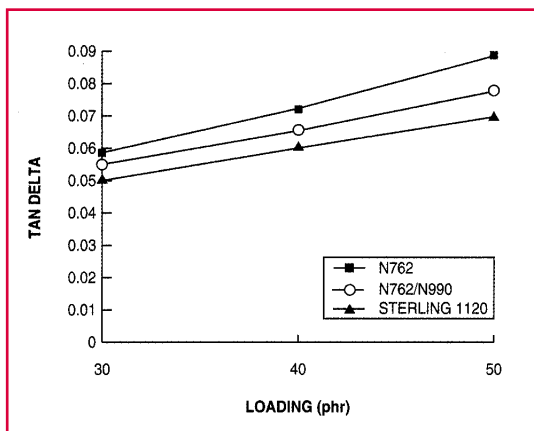
### Mooney Viscosity vs Loading in Butyl

STERLING 1120 carbon black exhibits lower Mooney viscosity at equal carbon black loading compared to N762 and N762/N990 in butyl compounds.



### Tan Delta vs Loading in Natural Rubber

STERLING 1120 carbon black shows lower tan delta at equal carbon black loading compared to N762 and N762/N990 in natural rubber compounds.



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