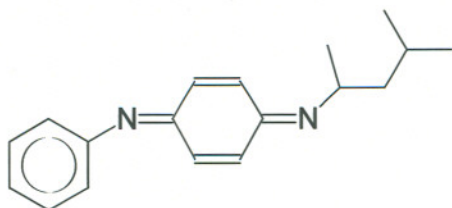


Product Data

Q-Black 50



50% by weight blend of Q-Flex QDI on Carbon Black.
 (50%w/w Benzenamine, N-{4-[(1,3-dimethylbutyl)imino]-2,5-cyclohexadien-1-ylidene} - CAS Reg. No.: 52870-46-9 and 50%w/w Carbon Black - CAS Reg. No.:1333-86-4)

FUNCTION

Q-Black 50 is a solid product form of the liquid antidegradant Q-Flex QDI (50% active Q-Flex QDI by weight.) Q-Black 50 is a multi-functional chemical for the rubber industry. Q-Black 50 functions primarily as long-lasting antidegradant suited for use in rubber intended for long service-life or rubber in aggressive environments. Q-Black 50 provides both bound antioxidant and diffusible antiozonant protection. Q-Black 50 also functions as an antioxidant-processing aide for carbon black filled natural rubber compounds. Difficult to mix natural rubber compounds can be mixed up to 25% faster using Q-Black 50.

MAJOR APPLICATIONS AND PROPERTIES

- Q-Black 50 applications include uses in pneumatic tire components, solid tires, belts, hoses, cables, automotive mounts, bushings and general mechanical products exposed to aggressive environmental conditions, continuous and intermittent dynamic operating conditions and applications requiring long-term protection from oxidative aging and protection from ozone.
- Q-Black 50 provides long-lasting antioxidant with antiozonant properties. Q-Black 50 provides excellent high temperature, fatigue, flex and aging resistance to rubber articles subject to loss of antidegradant through leaching or volatilization.
- Thirty to fifty percent of Q-Black 50 becomes bound antioxidant during vulcanization. The remainder is converted to Santoflex 6PPD. Thus, Q-Black 50 can partially replace Santoflex 6PPD. Used separately, the antiozonant protection is less than that expected from Santoflex 6PPD. Q-Black 50 should be used in combination with Santoflex 6PPD for maximum ozone protection. Q-Black 50 will discolor compounds and cause severe contact and migration staining.
- Q-Black 50 added with natural rubber and carbon black in an internal mixer will produce mixes having significantly lowered viscosity and thus improved processability. Viscosity reductions can also be observed in some NR Blend compounds. Improvements in mixing efficiency on the order of 25% may be realized.
- Q-Black 50 can be used in place of common peptizers or in place of premastication steps for mixing carbon black in natural rubber. Q-Black 50 provides antioxidant protection during the mix as opposed to the pro-oxidant behavior of common peptizers.
- Q-Black 50 is not regulated for use in articles in contact with food as specified under FDA 21 CFR and under BgVV XXI.

COMPOUNDING INFORMATION

Use 2-8 phr of Q-Black 50 in rubber compounds for resistance to ozone and flex fatigue. 1-4 phr is recommended when used in combination with Santoflex 6PPD. Maximum protection is achieved through combinations of antidegradants. Static protection against ozone is enhanced through the use of wax.

Important Note: In order to obtain comparable physical properties when using Q-Black 50, slight adjustment in filler loading (carbon black and/or silica) should be made. This is to compensate for the added filler contribution of Q-Black 50 which is 50% N-300 series carbon black.

HANDLING PRECAUTIONS

For detailed information on toxicological properties and handling precautions, please refer to the current Material Safety Data Sheet (MSDS). This information sheet can be downloaded from www.flexsys.com or requested from the nearest Flexsys office. The MSDS should be consulted before handling this product.

STORAGE RECOMMENDATIONS

Unopened bags of Q-Black 50 should be stored under cool conditions in a well ventilated area. Direct exposure of packages to sunlight or heat should be avoided. Do not double stack pallets to avoid compaction.

PRODUCT INFORMATION

Q-Black 50 Product form	pdr powder	
<u>PRODUCT SPECIFICATIONS</u>		<u>Test method</u>
Appearance	Black powder	FF97.5
Q-Flex QDI (%) min.	47.0	FGr03.1
Q-Flex QDI (%) max.	53.0	FGr03.1

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QBlack/0805

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