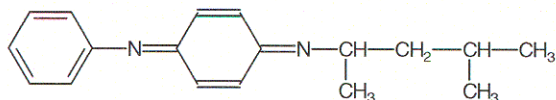


Product Data

Q-Flex QDI



Benzenamine, N-{4-[(1,3-dimethylbutyl)imino]-2,5-cyclohexadien-1-ylidene}-

CAS Reg. No.: 52870-46-9

Molecular Weight: 266

FUNCTION

Q-Flex QDI is a multi-functional chemical for the rubber industry. Q-Flex QDI functions primarily as long-lasting antidegradant suited for use in rubber intended for long service-life or rubber in aggressive environments. Q-Flex QDI provides both bound antioxidant and diffusible antiozonant protection. Q-Flex QDI functions as a peptizer for natural rubber compounds.

MAJOR APPLICATIONS AND PROPERTIES

- Q-Flex QDI 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-Flex QDI provides long-lasting antioxidant with antiozonant properties. Q-Flex QDI 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-Flex QDI becomes bound antioxidant during vulcanization, the remainder is converted to Santoflex 6PPD. Thus, the antiozonant protection is less than that expected from Santoflex 6PPD alone. Q-Flex QDI should be used in combination with Santoflex 6PPD for maximum ozone protection.
- Q-Flex QDI will discolor compounds and cause severe contact and migration staining.
- Q-Flex QDI can be used in place of common peptizers for mixing carbon black in natural rubber.
- Q-Flex QDI 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.
- When used as a peptizer, carbon black micro-dispersion is improved and the "Payne Effect" is reduced.
- Q-Flex QDI is not regulated for use in articles in contact with food as specified under FDA 21 CFR and under BgVV XXI.

COMPOUNDING INFORMATION

Use 2-6 phr of Q-Flex QDI in rubber compounds for resistance to ozone and flex fatigue. 1-3 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.

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Antidegradants

HANDLING PRECAUTIONS

For detailed information on toxicological properties and handling precautions please refer to the current Material Safety Data Sheet. This information sheet can be downloaded from our web site or requested from the nearest Flexsys office and should be consulted before handling this product.

STORAGE RECOMMENDATIONS

Q-Flex QDI is a liquid at room temperature and requires neither heated vessels nor heat traced plumbing for convenient handling in the liquid state. Q-Flex QDI should be stored in closed drums under cool conditions in a well ventilated area. Direct exposure of containers to sunlight should be avoided.

PRODUCT INFORMATION

Q-Flex QDI Product form	liq liquid	
<u>PRODUCT SPECIFICATIONS</u>		<u>Test method</u>
Appearance	dark viscous liquid	FF97.5
Purity (HPLC) (%) min.	95.0	FCL98.1
6PPD (HPLC) (%) max.	5.0	FCL98.1
Heat loss (%) max.	1.5	FGr97.7
Ash (%) max.	0.5	FGr90.9
<u>TYPICAL PROPERTIES</u>		
Viscosity at 60°C (cSt)	500	
Specific gravity at 25/25°C	0.998	

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