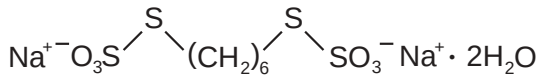
FLEXSYS

Specialties

## Product Data

# DURALINK HTS



**Hexamethylene-1,6-bis(thiosulfate), disodium salt, dihydrate**

**CAS Reg. No.: 5719-73-3**

**Molecular weight: 390**

## FUNCTION

Duralink HTS is used in sulfur based vulcanization systems to generate hybrid crosslinks which provide increased retention of physical and dynamic properties when exposed to anaerobic conditions at elevated temperatures such as those experienced during overcure, when using high curing temperatures or during product service life.

## MAJOR APPLICATIONS AND PROPERTIES

- Duralink HTS is used with conventional or semi-efficient sulfur based vulcanization systems to generate thermally stable hybrid crosslinks which provide excellent dynamic flexibility in NR, IR, SBR, BR and blends of these polymers.
- Duralink HTS is used in SBR based compounds to modify the viscoelastic dynamic properties.
- Duralink HTS is used as an adhesion promoter to enhance the adhesion between rubber compounds and brass plated steel reinforcing materials.
- A slight reduction in scorch safety and modulus and a slight increase in cure time may be observed when using Duralink HTS in various compounds.
- Duralink HTS is non-staining and non-discoloring in most compounds.
- Duralink HTS is regulated for use in articles in contact with food as specified under BgVV XXI, Category 4. Duralink HTS is not regulated for use in FDA food contact applications.

## COMPOUNDING INFORMATION

Duralink HTS can be used at 1.0 to 3.0 phr with conventional and semi-efficient sulfur based cure systems to provide improved thermal resistance and dynamic properties.
The benefits of a Duralink HTS based vulcanization system can be maximized by optimizing the whole cure system for specific properties. Suggested starting point formulations (in phr) include:

| Ingredient | Overcure | High Temperature Curing | Dynamic Heat Build-up | Overall Compromise |
|---|---|---|---|---|
| Duralink HTS | 1.8 | 1.6 | 3.0 | 2.8 |
| Sulfur | 2.2 | 1.0 | 1.3 | 1.1 |
| Accelerator | 1.6 | 2.3 | 1.1 | 1.0 |
| Stearic acid | 2.7 | 0.75 | 2.4 | 1.6 |

Duralink HTS can be used at 1.0 to 1.5 phr as a bonding promoter for rubber based compounds to brass plated steel reinforcing materials.
Duralink HTS is used at 1.0 to 2.0 phr to modify the dynamic properties of SBR based compounds such as treads where it is desirable to improve the compromise between wet grip, ice grip and rolling resistance.

## HANDLING PRECAUTIONS

For detailed information on toxicological properties and handling precautions please refer to the current 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

Store Duralink HTS in a cool, dry, well ventilated area, avoiding exposure of the packaged product to direct sunlight.

## PRODUCT INFORMATION

| **Duralink HTS**<br>Product form | | **pdr-d-s**<br>dust suppressed fine powder | |
|---|---|---|---|
| **PRODUCT SPECIFICATIONS** | | | Test method |
| Appearance | | white powder | FF97.5 |
| Assay (titration) | (%) min. | 95.0 | FAg97.2 |
| Chloride as NaCl | (%) max. | 1.0 | FAg97.1 |
| Moisture | (%) | 8.5-10.0 | FAmp90.1 |
| Additive | (%) | 1.0-2.0 | FGr83.6 |
| **TYPICAL PROPERTIES** | | | |
| Density at 25°C | ($kg/m^3$) | 1390 | |
| Residue on 150 µm sieve | (%) max. | < 0.05% | |

For further information please visit our website www.flexsys.com or contact your local Flexsys office or regional Flexsys headquarters:

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