



K21 Novel Broad-Spectrum Microbicide/Antimicrobial Technical Data Sheet

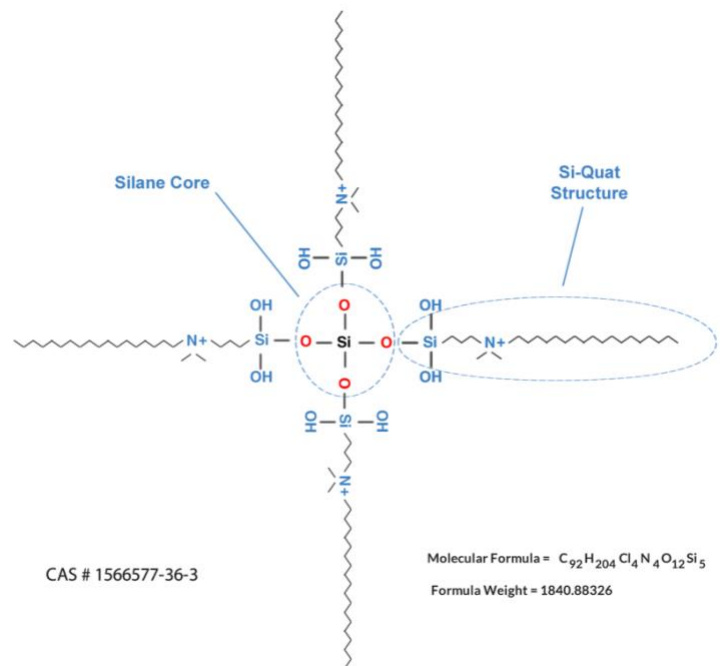
FiteBac K21 is a next-generation, broad-spectrum antimicrobial. It is a multifunctional inorganic/organic additive that enhances physical properties and provides exceptional broad-spectrum antimicrobial traits. Originally developed for dental applications, K21 is currently present in FDA-cleared dental devices and it can also provide its unique benefits to medical and non-medical materials.

FiteBac K21:

K21 is a multi-arm quaternary ammonium compound. To the right, this representative structure shows the active moieties on the silane core.

K21 can be incorporated into polymers through the OH groups. Additionally, K21 can be bound to silica or blended with a variety of polymers to provide zero VOC options.

The multiple QUAT groups on K21 are the key to providing exceptional antimicrobial activity in addition to improved polymer performance.



Forms of Supply:

- FiteBac K21 50% Ethanol: Low-viscosity, low-color liquid
- FiteBac K21 ~5% on Various Silicas: Free-flowing, white powder
- Other monomers also available

Typical Properties, K21 50% Ethanol:

- | | |
|-----------------------|------------------------------|
| ○ Percent Solids | 47% to 53% |
| ○ FTIR | 98% match to standard |
| ○ Solvent | Ethanol, 200 Proof |
| ○ Viscosity | ~1cP |
| ○ Color | water white to slight yellow |
| ○ Disassociation Temp | ~165°C |

Potential Applications / Registrations:

- FIFRA approval for K21 is pending and samples are available for R&D applications.
- FiteBac K21 is present in FDA-cleared dental devices.
- FiteBac K21 is not currently TSCA registered.
- Modification of polymer systems to impart exceptional, long-lasting microbicidal efficacy for coatings, composites, elastomers, and rubber products.
- Enhances flexural strength of polymer systems

Storage Conditions:

When stored between 10°C - 30°C in an unopened container in a dark location, K21 50% Ethanol has a shelf life of one year from the date of manufacture.

Patents:

K21 is patented. Patent information can be found on our website: FiteBac.com.

Legal Disclaimer:

FiteBac Technology believes this technical data sheet contains an accurate description of the typical uses of the product and disclaims any liability for incidental or consequential damages which may result from the use of the product that are beyond its control. It is the user's responsibility to thoroughly test the product in their application to determine its performance, efficacy, and safety. Nothing contained herein is to be considered as permission or a recommendation to infringe upon any patent or any other intellectual property right.

Contact Us:

For more information on FiteBac products, please visit our website at: FiteBac.com.

Mailing Address: FiteBac Technology, 3698 Largent Way, Suite 101, Marietta, GA 30064

Phone: (770) 218-6211

Email: info@fitebac.com