Description

This database contains high-quality reference spectra of commercially available synthetic fibers measured by FT-IR microscope.

Additional Information

The database includes chemical classification, trade name, and manufacturer identification. The spectra were measured using a FT-IR microscope for the Reference Collection of Synthetic Fibers assembled by Collaborative Testing Services Inc., Herndon, Virginia, U.S.A. by Dr. Eileen J. Carnahan, Micro-Scan Services Inc., Schenectady, New York, U.S.A.

Classifications

- **Acetates** (27 spectra) - A manufactured fiber in which the fiber-forming substance is produced from partially hydrolyzed cellulose acetate.
- **Acrylics** (25 spectra) - A manufactured fiber made by polymerization of acrylonitrile.
- **Aramid** (4 spectra) - A synthetic fiber in which the fiber-forming substance is made from a nitrile binder.
- **Fluorocarbons** (7 spectra) - A manufactured fiber made from a fluorocarbon resin.
- **Modacrylics** (4 spectra) - A synthetic fiber composed of less than 85% and more than 35% by weight of acrylonitrile units.
- **Nylons** (114 spectra) - A manufactured fiber in which the fiber-forming substance is any long-chain synthetic polyamide having recurring amide groups as an integral part of the polymer chain.
- **Olefins** (86 spectra) - Long-chain polymeric material produced by the chain reaction of olefinic monomers.
- **Polycarbonates** (1 spectrum) - A thermoplastic synthetic resin made from bisphenol and phosgene.
- **Polyesters** (139 spectra) - A manufactured fiber in which the fiber-forming substance is any long chain synthetic polymer composed of at least 85% by weight of an ester of dihydric alcohol and terephthalic acid.
- **Rayons** (35 spectra) - A manufactured fiber composed of regenerated cellulose, as well as manufactured fibers composed of regenerated cellulose in which substituents have replaced not more than 15% of the hydrogens of the hydroxyl groups.
- **Rubber** (7 spectra) - A fiber composed of natural or synthetic rubber.
- **Sarans** (2 spectra) - A manufactured fiber in which the fiber forming substance is any long-chain synthetic polymer composed of at least 80% by weight of vinylidene chloride units.
- **Spandex** (3 spectra) - A manufactured fiber in which the fiber-forming substance is a long chain synthetic polymer comprised of at least 85% of a segmented polyurethane.
- **Sulfars** (1 spectrum) - A manufactured fiber in which the fiber forming substance is a long synthetic polysulfide in which at least 85% of the sulfide linkages are attached directly to two aromatic rings.
- **Triacetates** (2 spectra) - A fiber manufactured from cellulose acetate in which 92% or more of the hydroxyl groups are acetylated.
- **Vinyons** (1 spectrum) - Any manufactured fiber made of a long chain synthetic polymer composed of at least 85% by weight of vinyl chloride units.

Technique

The spectra were measured on 450 fiber and yarn samples, and multiple spectra are provided for two or more components in a yarn.

This collection has been subject to the Sadtler Data Review Protocol™ to provide you with the highest standard in spectral data today. These rigorous qualifying procedures start at data acquisition and continue throughout the database development process.

For more information about this product: [www.knowitall.com](http://www.knowitall.com)
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