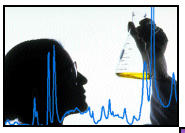
BIO-RAD Spectral Databases



Hummel Defined Polymers

By Chemical Concepts. A Wiley Division.

4655 Hummel Defined Polymers - 2,330 Spectra

Database by Chemical Concepts. A Wiley Division.

Professor Dieter O. Hummel's Atlas of Polymer and Plastics Analysis, Volume 1, Band 1: Defined Polymers is well known and used throughout the world. The database includes 2,330 spectra of polymers, copolymers, and polymer additives. This unique database enables polymer and plastics chemists to solve many analytical problems quickly and reliably in the various fields of polymer chemistry. Whether it's used for quality control, for characterizing, or for structure elucidation, this database is indispensable to every polymer expert!

The spectra of the most important defined polymers were recorded using FT-IR spectrometers, primarily with the Nicolet 7199 and 20 SX instruments. They were intensity normalized, background corrected, and foreign bands were eliminated when possible.

Liquids were recorded as capillary layers. Soluble noncrystallizable materials with low softening points were applied to the carrier crystal as films from solution or melted between two crystal plates. The solvent was removed at 50°C in the oil pump vacuum for several hours, usually overnight. Low molecular weight or inorganic materials that were crystalline at room temperature were dispersed in KBr and pressed. The KBr technique was also used for insoluble polymers and fibers. Low melting polymers were melted to uniform films between KBr discs. Higher melting polymers were pressed to films between Al, Ti, or fiber-reinforced PTFE foils using a heated press. Soluble polymers were prepared as films from solution. Thallium bromide iodide (KRS-5) was used for substances which would have dissolved the alkali halides.

Structures and physical properties are included when available.

Classifications

Polyethylenes
Polypropylenes
Petroleum hydrocarbon resins
Synthetic waxes
Polybutenes and butyl rubbers
Polybutadienes
Synthetic polyisoprenes and natural rubbers
Aliphatic hydrocarbon copolymers
Coumarone-indene resins
Polyterpene and naphthene resins
Other cyclic hydrocarbon resins
Polystyrenes
Styrene-butadiene copolymers
Other styrene copolymers (excluding nitriles)
Other aromatic vinyl hydrocarbons
Fluorocarbon resins
Chlorinated hydrocarbon resins
Silicone polymers
Acrylonitrile-butadiene-styrene resins
Polyurethane and urethane prepolymers
Butadiene-acrylonitrile copolymers
Styrene-acrylonitrile copolymers
Other nitrile polymers
Thioplasts/Polysulfides
Polyethers
Anhydride polymers
Unmodified epoxy resins
Modified epoxy resins
Ionomers
Vinyl chloride homopolymers
Plasticized polyvinyl chlorides
Vinyl chloride copolymers
Polyvinyl alcohols
Polyvinyl ethers
Polyvinyl acetals
Polyvinyl esters
Polyvinyl acetate copolymers
Polyvinylidene polymers (excluding nitriles)
Miscellaneous vinyl polymers
Nitrocelluloses
Hydroxyethyl celluloses
Cellulose ethers
Carboxymethyl cellulose and salts
Cellulose esters and mixed esters
Miscellaneous carbohydrate derivatives
Phenolic resins
Modified phenolic resins
Acrylic copolymers (see also styrene copolymers)
Polyacrylic and polymethacrylic esters
Polyacrylic and polymethacrylic acids and salts
Polyesters
Modified polyesters
Polycarbonates
Alkyds
Styrenated alkyds
Resin modified alkyds
Silicone modified alkyds
Rosin and rosin derivatives
Aminoplasts/polyamines
Polyamides
Polyimides
Polyvinylpyrrolidones
Polyvinylpyridines
Polysulfones
Sulfonated polymers
Ion exchange resins
Polymerized fats
UV light absorbers
Miscellaneous polymers

Bio-Rad Laboratories

Informatics Division
www.informatics.bio-rad.com

U.S. Sales	*Phone: +1 888 5 BIO-RAD • E-mail: informatics.usa@bio-rad.com*
Europe	*Phone: +44 20 8328 2555 • Free phone: 00800 78945000 • E-mail: informatics.europe@bio-rad.com*
Japan	*Phone: +81 03 (5811) 6287 • E-mail: informatics.nbr@jp.bio-rad.com*
Rest of World	*Phone: +1 215 382 7800 • E-mail: informatics.row@bio-rad.com*