

IR - Sadtler Lubricants 2 - Wiley

Product Code - This database is available only as part of the KnowItAll IR Spectral Library
Spectra - 280

Description

Lubricants are substances that reduce friction between objects in motion. Lubricant additives are materials added to lubricants to give the resulting product special properties such as resistance to extreme temperatures or pressure, improved viscosity, and detergent capability. This database contains 280 infrared spectra of commercially available compounds used in a variety of industrial and automotive applications that perform these functions.

The types of products represented are commercially available lubricants such as greases, hydraulic fluids, cutting oils, motor oils and metallic soaps. Also included are products of petroleum origin and synthetic lubricants such as dibasic carboxylic acid esters, lubricating polymers, phosphate esters, and silicones

Additional Information

Each compound is identified by its commercial or trade name. The following additional information will also be supplied when available: chemical composition, chemical and physical properties, source of sample, and technique.

Technique

Every effort is made to maintain the highest standard of accuracy for spectra placed in the Sadtler collections. Each compound was prepared under standard conditions at Bio-Rad Laboratories, Informatics Division using equipment manufactured by leading instrument makers. Samples were checked to ensure that non-linearity is avoided to maximize reproducibility and provide for the best subtraction of reference spectra. Any spectra with evidence of decomposition, impurities, or reaction with sampling apparatus were rejected.

All spectra were run using a DigiLab FTS-40 spectrometer. A number of different techniques were employed: Neat, Melt, Film, and KBr.

The Neat technique was used for liquids, pastes and oils.

The Melt technique was used for compounds with melting points <45C.

The Film technique was used for compounds with melting points <72C. It should only be used if the Melt technique and KBr were unsuccessful.

For solids, the KBr technique was used.