

24.2: Introduction

The thermal conductivity of a material is a measure of the Joules per second which can be transferred through the material. The ability to conduct heat depends on the mobility of the electrons, how free the electrons are to meander and have collisions. The more free electrons are to move within a material, independent of the nucleus, the faster the material will conduct (move) heat energy. A substance in which electrons are not able to move freely will slow or impede the flow of heat energy. Substances which slow the transfer of heat energy are called insulators.

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