Material Properties

This appendix of material properties should be useful for initial comparison studies. For precise values several resources are recommend in a later section.

A good resource has been provided by the IAEA[1].

Bibliography

[1] IAEA, "Thermophysical properties of materials for nuclear engineering: a tutorial and collection of data." Available online, 2008.

Table 1: Basic Thermal Properties[1]

Material	Conductivity W/mK	Density g/cm^3	Melting Point °C	Thermal Expansion 1E6/°C
UO_2	2.79	10.963	2800	9.8
UN	20.9	14.42	2850	7.5
UC	23	13.63	2365	10.5
U metal	31.2	19.1	1130	13.9
U-20Pu-10Zr	16	15.67	1155	17
U_3Si_2	22	12.2	1700	16.1

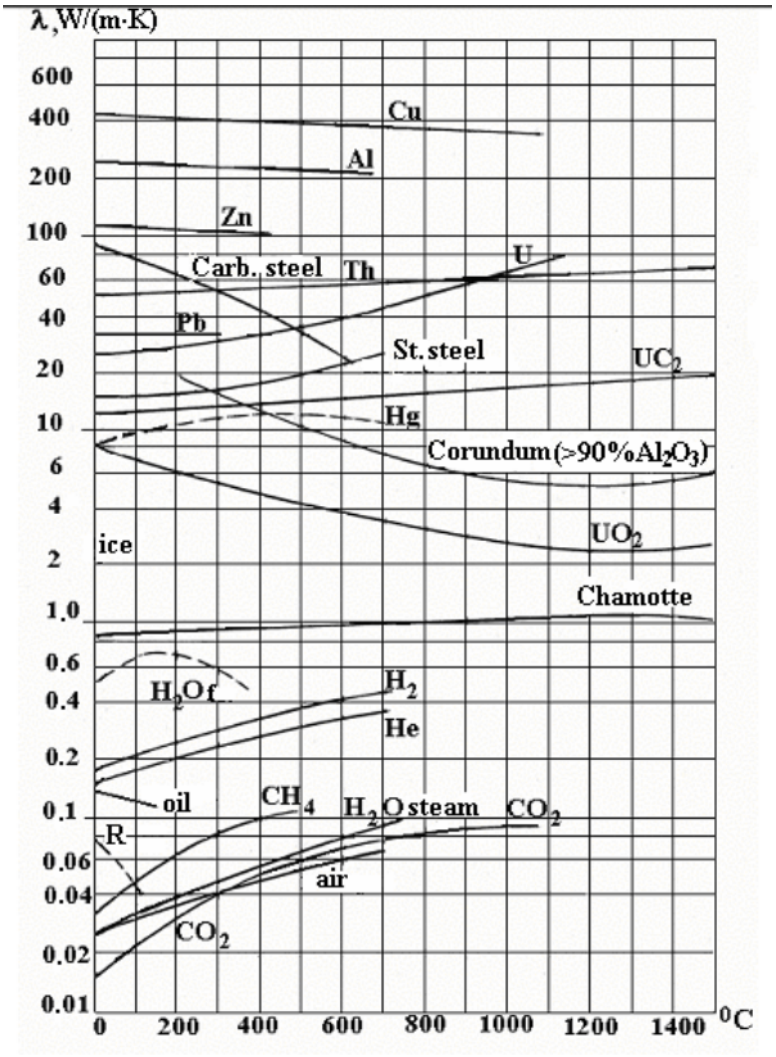

FIG. 1.2. Thermal conductivity of various materials at 0.1 Mpa.