

## Resistivities of Various Materials

<b>Material</b>	<b>Resistivity (<math>\Omega \cdot m</math>)</b>	<b>Material</b>	<b>Resistivity (<math>\Omega \cdot m</math>)</b>
<b>conductors</b>		<b>semiconductors</b>	
silver	$1.59 \times 10^{-8}$	graphite	$(3-60) \times 10^{-5}$
copper	$1.68 \times 10^{-8}$	germanium	$(1-500) \times 10^{-3}$
gold	$2.44 \times 10^{-8}$	silicon	0.1-60
aluminum	$2.65 \times 10^{-8}$	<b>insulators</b>	
tungsten	$5.6 \times 10^{-8}$	glass	$10^9 - 10^{12}$
iron	$9.71 \times 10^{-8}$	hard rubber	$10^{13} - 10^{15}$
platinum	$10.6 \times 10^{-8}$		
mercury	$98 \times 10^{-8}$		
nichrome (Ni, Fe, Cr alloy)	$100 \times 10^{-8}$		

## Dielectrics of Various Materials

<b>Material</b>	<b>Dielectric constant (K)</b>	<b>Dielectric Strength (V/m)</b>
vacuum	1.0000	
air (1 atm)	1.0006	$3 \times 10^6$
paraffin	2.2	$10 \times 10^6$
polystyrene	2.6	$24 \times 10^6$
vinyl (plastic)	2-4	$50 \times 10^6$
paper	3.7	$15 \times 10^6$
quartz	4.3	$8 \times 10^6$
oil	4	$12 \times 10^6$
glass, pyrex	5	$14 \times 10^6$
rubber, neoprene	6.7	$12 \times 10^6$
porcelain	6-8	$5 \times 10^6$
mica	7	$150 \times 10^6$
water (liquid)	80	
strontium titanate	300	$8 \times 10^6$