EMI Shielding Properties of Carbon Black filled Poly Vinyl Alcohol Coating Materials

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The electrical conductivity of polymers can be increased by the addition of carbon fillers, such as carbon blacks(CB), graphites and cokes. The resulting composites can be used in applications where metals have typically been the materials of choice. Electromagnetic interference (EMI) shielding efficiency (SE) of CB–PVA composites was measured. The SE increased with the increase in filler loading. We observed the increase of EMI SE of CB–PVA composites with increasing the content of CBs. When the thickness of carbon blacks filled PVA coating materials varied from 30 to 90 μm, the electrical conductivity of coating materials was varied from 0.06329 to 1.034 S/cm.