

The repeat unit molecular weights of the polymers listed in Table 14.3 are as follows:

Polyethylene--28.05 g/mol
Poly(vinyl chloride)--62.49 g/mol
Polytetrafluoroethylene--100.02 g/mol
Polypropylene--42.08 g/mol
Polystyrene--104.14 g/mol
Poly(methyl methacrylate)--100.11 g/mol
Phenol-formaldehyde--133.16 g/mol
Nylon 6,6--226.32 g/mol
PET--192.16 g/mol
Polycarbonate--254.27 g/mol

Therefore, polytetrafluoroethylene is the material since its repeat unit molecular weight is closest to that calculated above.