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(57) Abstract: Novel copolymers are described comprising ethylene and alpha-olefins having (a) a density (D) in the range 930 - 960 kg/m³ (b) a melt index (MI₂) in the range 0.1 - 3.5 g/10 min (c) a melt elastic modulus G' (G''= 500 Pa) in the range 40 to 150 Pa, and (d) a ratio of complex dynamic shear viscosities $\eta^*(0.1)/\eta^*(100)$ in the range 1.5 to 5.5. The novel copolymers are particularly suitable for use as Polyethylenes of Raised Temperature Resistance (PE-RT) for use in hot water piping systems. The novel copolymers may be prepared by use of metallocene catalyst systems. Pipes having a time to failure of ≥ 500 hrs measured according to ISO 1167 at 110°C and 2.6 MPa prepared in a single reactor are also disclosed.



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