Comparison Between ASPOM M20N & CELCOM M90

Parameter	ASPOM M20N	Celcon® M90
Density	1.4 g/cm³	1.41 g/cm³
Melt volume-flow rate, 190°C/2.16 kg	7.5 cm³/10 min	8.0 cm³/10 min
Melt mass-flow rate, 190°C/2.16 kg	9 g/10 min	Not listed
Molding shrinkage, parallel / flow	2.1% parallel	2.0% flow
Molding shrinkage, normal / across flow	2.1% normal	1.9% across flow
Water absorption	0.55% after 24 hr at 23°C	0.75% saturation; 0.20% equilibrium at 23°C and 50% RH
Flow temperature	174°C	174°C
Melt density	1.20 g/cm³	1.20 g/cm³
Melt specific heat	2210 J/kg/°C	2210 J/kg/°C
Melt thermal conductivity	0.16 W/m/K	0.16 W/m/K
Ejection temperature	140°C	140°C

Yield stress / tensile stress at yield	65 MPa	65.0 MPa
Yield strain / tensile strain at yield	9.4%	10%
Elongation at break	29%	Not listed
Tensile modulus	2700 MPa	2760 MPa
Flexural modulus	2500 MPa	2550 MPa
Flexural strength / stress	87 MPa	73 MPa at 3.5% strain
Tensile creep modulus, 1000 h	1400 MPa	1350 MPa

Contact - +91-8112 91 8112, Email - customerservice@mmpolymers.net , info@mmpolymers.net

Tensile creep modulus, 1 h	2450 MPa	2450 MPa
Compressive stress, 1% strain	26.0 MPa	26.0 MPa
Compressive stress, 6% strain	88.0 MPa	88.0 MPa

Charpy unnotched impact strength, 23°C	245 kJ/m²	190 kJ/m²
Charpy unnotched impact strength, -30°C	190 kJ/m²	180 kJ/m²
Charpy notched impact strength, 23°C	6.0 kJ/m²	6.0 kJ/m²
Charpy notched impact strength, -30°C	5.5 kJ/m²	6.0 kJ/m²
Notched Izod impact strength, 23°C	Not listed	5.7 kJ/m²
Notched Izod impact strength, -30°C	5.5 kJ/m²	5.5 kJ/m²

Summary –

- Both grades are very close in density, yield strength, tensile modulus, HDT at 1.8 MPa, and melting temperature, so both belong to a similar general performance class among unfilled POM materials.
- Celcon® M90 has the more detailed and production-friendly datasheet, with broader processing guidance and more secondary engineering data such as compressive stress, Izod impact, melt thermal properties, and expanded thermal characterization.
- ASPOM M20N shows stronger Charpy unnotched impact values and includes elongation at break, UV resistance, and UL94 HB in the extracted sheet, which may be useful depending on the end application.
- On shrinkage and stiffness, Celcon® M90 is slightly more favorable on the listed values, though the practical difference is small based on the reported numbers.