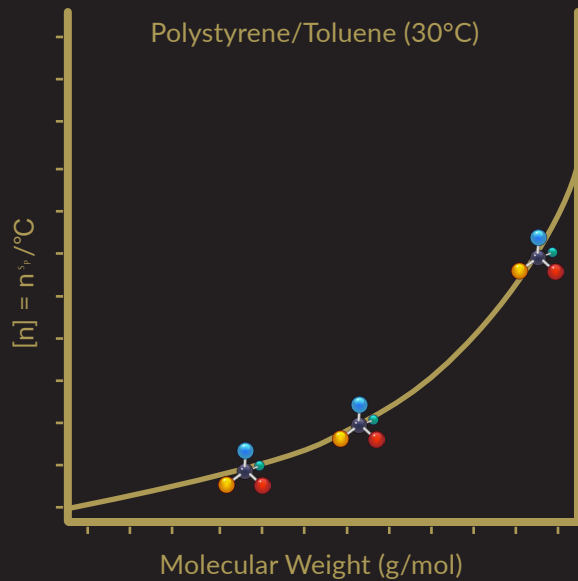


MOLECULAR WEIGHT

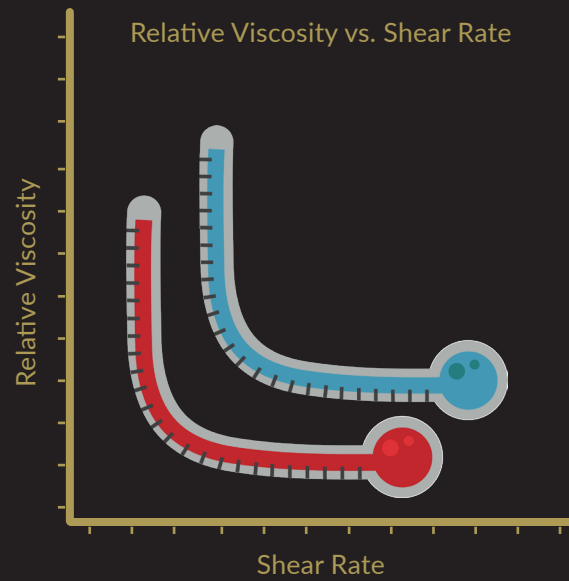
Products developed from polymers with elevated molecular weight have:

- ✓ Increased Relative Viscosity
- ✓ Increased Mechanical Strength
- ✓ Increased Moduli
- ✓ Increased Softening Temperatures



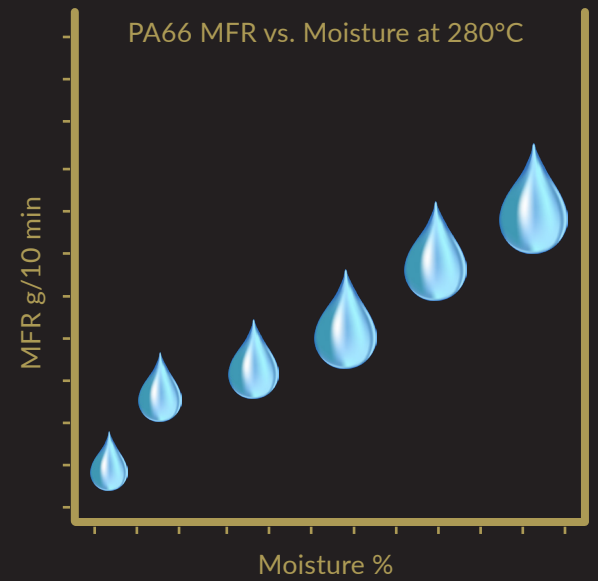
TEMPERATURE

Viscoelastic properties of plastics cause both mechanical and processing parameters to vary. Adjusting temperature within the processing range of the polymer will help to increase/decrease relative viscosity.



PLASTICIZER CONTENT

Internal lubricants are utilized to enhance melt flow and reduce relative viscosity during processing. Internal lubricants reduce the frictional/steric interactions between polymer molecules.



MATERIAL CATEGORY	ASTM D1238/ISO 1133 CONDITIONS	INJECTION MOLDING	BLOW MOLDING	FIBER/ MONOFILAMENT	PROFILE/TUBE/ SHEET EXTRUSION	CAST/ BLOWN FILM
ABS	200°C / 5 kg	2.0 - 80.0	0.2 - 0.8	6.0 - 20.0 (160°C, 2.16 kg)	0.8 - 2.0	N/A
PMMA	230°C / 3.8 kg	1.5 - 26.0	1.0 - 2.2	N/A	1.0 - 2.0	1.0 - 2.0
PC	300°C / 1.2 kg	5.0 - 60.0	Branched 2.0 - 7.0	N/A	3.0 - 8.0	4.0 - 10.0
POM	190°C / 2.16 kg	1.5 - 40.0	0.5 - 1.1	N/A	1.5 - 6.0	1.5 - 8.0
HDPE	190°C / 2.16 kg	2.0 - 60	0.25 - 0.8	2.0 - 20	0.08 - 2.0	0.8 - 4
LDPE	190°C / 2.16 kg	4.0 - 35.0	0.25 - 1.0	2.0 - 20	0.08 - 2.0	0.8 - 4
PP	230°C / 2.16 kg	2.0 - 100	0.5 - 1.0	10.0 - 20.0	0.4 - 3.0	0.5 - 10.0
PA66*	Rel. Visc. 96% H ₂ SO ₄	MV	HV	2.4 - 3.3	3.5 - 4.2	2.73 - 3.8
PA6*	Rel. Visc. 96% H ₂ SO ₄	MV	HV	2.4 - 3.3	3.0 - 3.7	2.73 - 3.8
PBT	250°C / 2.16 kg	5.0 - 65.0	2.0 - 6.0	30 - 65	5.0 - 20	10.0 - 25
PEEK	380°C / 5 kg	4.5 - 40	3.0 - 10.0	6.0 - 40.0	5.0 - 10.0	3.0 - 15.0
PPS	316°C / 5 kg	15 - 100	5.0 - 20.0	120 - 200	N/A	1500 - 5000 Coatings

4/18/2019 The information presented in this document was assembled from literature of the resin product producers. The information is believed to be accurate; however, Entec Polymers (EP) makes no representation as to its accuracy and assumes no obligation or liability for the information, including without limitation to confirm, any advice given, or the results obtained. ENTEC DISCLAIMS ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING FITNESS FOR A PARTICULAR PURPOSE. The customer shall use its own independent skill and expertise in the evaluation of the resin product to determine suitability for a particular application and accept the results at its sole risk.