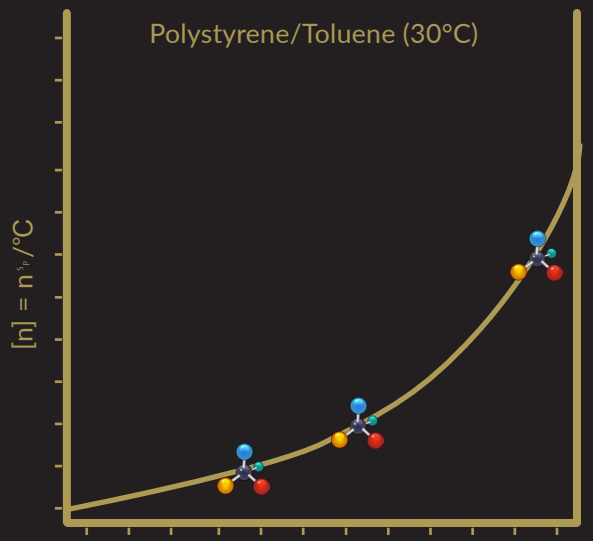
CONVERSION TECHNOLOGY - MELT FLOW MATTERS

MOLECULAR WEIGHT

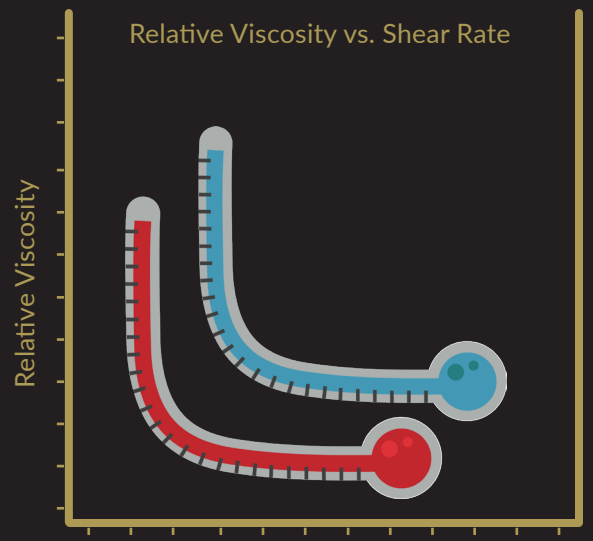
Products developed from polymers with elevated molecular weight have:

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



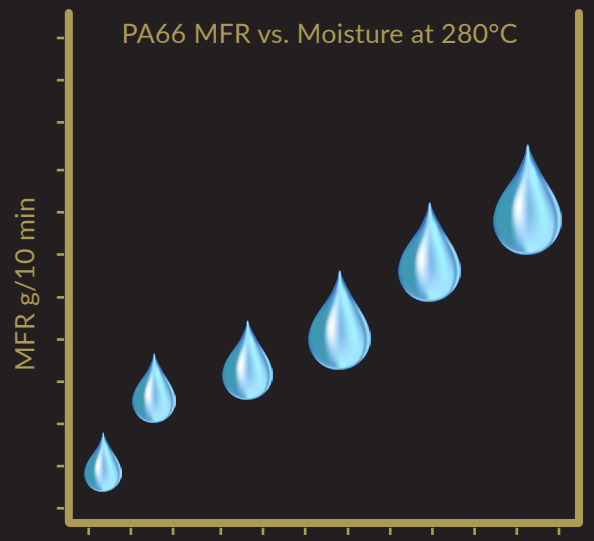
TEMPERATURE

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.



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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_2SO_4	MV	HV	2.4 - 3.3	3.5 - 4.2	2.73 - 3.8
PA6*	Rel. Visc. 96% H_2SO_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