

# Myrinol™ HP 310: High Performance Liquid Polyol

*For cast elastomers, TPUs, coatings, polyesters, and other chemistries*

**Myrinol™ HP 310** is made from Myriant's renewable **bio-succinic acid** and is a cost effective polyol for use in cast elastomers, thermoplastic urethanes, coatings, adhesives, and other systems. **Polymers produced with Myrinol™ HP 310 offers physical properties that rival polycarbonate and surpass traditional petroleum-based polyesters, with a balance of flexibility, resilience, abrasion resistance, and adhesion.**

## Applications

### 2K Urethane

Myrinol™ HP 310 is an excellent candidate for extremely tough polyurethanes when combined with aromatic or aliphatic isocyanates. The optimal systems can be either 100% solids, solventborne or waterborne.

### Moisture Cure Urethane

In addition, the urethane formulator can synthesize outstanding prepolymers using Myrinol™ HP 310 for adhesive or similar uses.

### Polyurethane Dispersions

Thermoplastic or self-crosslinking polyurethane dispersions made from Myrinol™ HP 310 reveal a tough, abrasion resistant coating without loss of adhesion.

### UV Cure

Myrinol™ HP 310 is an excellent choice for synthesis of 100% solids or waterborne UV curable systems.

### Thermoset

Myrinol™ HP 310 can be added to a curable thermoset system, specifically cationic cure, as it will cross-link into the matrix revealing tough, resilient coatings or composites.

Typical Properties	
Color	< 2 Gardner
Hydroxyl Number	295 – 325 mg KOH/g
Acid Number	2.0 mg KOH/g, max
Viscosity	30,000 cPs (25°C)
Specific Gravity	1.1
Water Content	500 ppm, max

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## Myrinol™ HP 310: 2K Urethane Application

While by no means exhaustive, the following formulation demonstrates efficacy in two component urethane systems.

### Formulation

Myrinol™ HP 310 was catalyzed with 50 ppm dibutyl tin dilaurate and mixed at an index of 1.05 with a commercially available HDI trimer (aliphatic isocyanate).

### Mechanical Properties

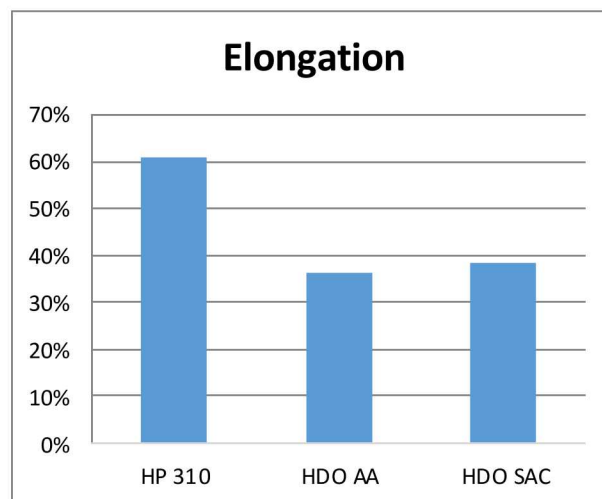
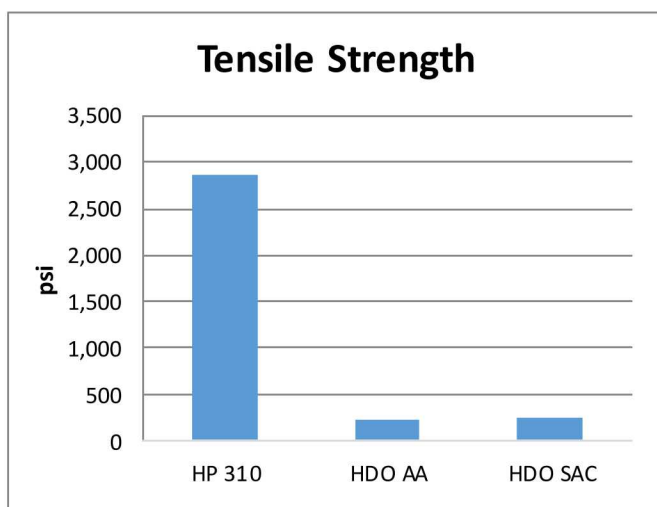


Figure 1: Tensile strength and elongation of Myrinol™ HP 310 compared to traditional hexanediol adipate (HDO AA) and hexanediol succinate (HDO SAC).

**Myrinol™ HP 310 reveals outstanding tensile strength without loss of elongation when compared with traditional petroleum-based polyester polyols at commensurate molecular weights.**



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