Dry or Wet?
What is the best polymer modifier for your mix?

With the advent of Superpave and PG grade binders, polymer modification has been proven to be critical to taking existing source raw materials to higher performance levels. In that time, however, a choice has developed – wet v dry. Wet polymers are typically SBS or SBR and are a bi-product derived from other chemical manufacturing and blended to PG standards by binder suppliers. Surface Tech has introduced an effective alternative in a dry polymer form; its proven technology is based on para-aramid fibers mixed in dry at the mix plant. With dry poly-fibers, the modifier is controlled by the production contractor and is an effective way to manage the process (including 365-availability and ease of plant dosing) that has many desirable differences from the traditional wet solutions; most importantly performance.

Polymer (WET)

Krayton SBS polymer

PG graded polymer modified binders have enhanced performance against cracking and rutting. Binder chemistry requires compatibility between neat stock, modifiers and aggregates.

- Dependent on liquid chemical compatibility
- Terminal blend only
- Expands PG, but at the trade off of higher mixing temperatures. (higher viscosity)
- Improves binder adhesion and mix cohesion
- Polymer mixes are usually more difficult to handwork
- Can slightly alter mix volumetrics
- Laydown usually requires warmer air temps (50 degrees and rising)
- Shorter thermal windows for compaction and hand work
- Supply subject to highly variable production and shortages

ACE XP (DRY)

ACE XP Polymer Fiber mitigates all cracking and rutting. Its higher performance depends on asphalt liquid to engage; not dependent on compatibility.

- Para-aramid - no compatibility issues
- Added at mix plant (drum or batch)
- Expands equivalent PG (of mixture)
  - About one bump high&low per 2.1 oz of Ace XP Polymer Fiber add
- Added Mixture Benefits
  - Acts similarly by overall rooting into the mixture creating a matrix
  - Improves mix cohesion as a 3D polymer network/matrix
- No change to mix design or volumetrics
- No change in mix temp. Temp tolerant and does not break down in HMA temps - has a melt point of 800 degress F
- Available 365 and can easily add to any plant, anytime
- Chemical (PPA) resistant