

Materials:

Aramid Reinforced Composite Asphalt (ARCA) solutions reinforce and control the liquid bitumen and aggregates that traditionally comprise asphalt mixes, preventing cracking and rutting while improving fatigue resiliency and toughness. ACE XP™ Polymer Fibre is an aramid fiber pre-treated with wax. Our patented wax binder ensures a 100% delivery of the fibres into the HMA/ WMA creating a confident dosing solution for all QC-conscious project stakeholders, with no change to the mix design's volumetric properties. No change to JMF.

- The first EPD Certification Aramid product (Low carbon additive) 0.736 kg CO₂ / Tonne
- The only Emerald Eco-Labeled Aramid product
- No potentially harmful plastics or other fillers
- No risk of additional VOCs impact stack testing
- One dose is 6 times less volume than the competitor dramatically reducing shipping and storage costs
- **ASTM Standard D8395-2023 for Aramid Fibers in Asphalt Mixtures standardizes a dose as 65 grams/tonne**
- Patented binding method disperses into mix. No Aramid clinging to inside of drum and hoses nor loss into the bag house
- Form factor ensures precision dosing

Material Properties:

| | |
|----------------|---------------------------------|
| Material: | Para-Aramid (min 63% by weight) |
| Treatment: | Wax (37% by weight, max) |
| Standard Dose: | 65 g/tonne of Aramid |

Physical Properties:

| | |
|-------------------------------------|-------------------------|
| Decomposition Temp: | >425° deg. C |
| Linear Density: ASTM D1907/1907M-12 | >3200 dtex |
| Length: | 19 mm) or 38 mm, +/-10% |
| Color: | Yellow |

Mechanical Properties:

| | |
|--------------------------------------|------------|
| Tensile Strength: ASTM D2256, D7269: | >2700 MPa. |
| Young's Modulus: ASTM D2256, D7269: | >80 GPa |



ACE XP™ Dosing Plan

ACE XP™ Polymer Fibres are well suited for HMA/WMA. Precision dosing is recorded through a data capture every 10 seconds from the load cells on the certified dosing machines that guarantees the correct amount of fiber being delivered into the asphalt. Use the dosage rate of 106g coated weight per Tonne of asphalt mix (of which 65g is pure aramid). Daily production reports are provided by the dosing system.

ASTM Standard D8395-2023 for Aramid Fibers in Asphalt Mixtures standardizes a dose as 65g/tonne). Please note that ACE XP™ Polymer Fibre contains 63% actual aramid fiber and 37% wax binder, by weight. With ACE XP™ Polymer Fiber, the aramid fiber remains in the form of a fibre strand with over 10,000 individual fibre per strand that are efficiently conveyed to the asphalt mixing drum. In the mixing drum, the wax completely dissipates allowing the dry fibers to disperse into the mix.

Batch Plant or Drum Plant:

Feed ACE XP™ Polymer Fibres with Surface Tech precision dosing operated equipment. For batch plants, feed directly into the pug mill or weigh hopper. For drum plants, feed directly into the mixing drum through the RAP Collar. Standard project HMA/ WMA batch mixing times apply. Metering shall be based on batch size (tonnes) and dosage rate (g/tonne). Feeding shall occur in a constant stream-like manner during the heated aggregate mixing batch time. If necessary, increase the mixing time with heated aggregates to ensure the aramid fibers are uniformly distributed. Match the feeding of fibres with the rate the plant is producing asphalt mix. If a fibre feeder is used, it must be properly calibrated for treated aramid fibre to deliver at the correct rate.

Storage:

ACE XP™ is supplied in a sealed bag / corrugated box containing a net weight of 20 kgs. Close bags immediately after removing desired amount of fiber to prevent contamination which could alter the addition tolerance in subsequent uses. Store fibres in a dry environment.

Warranty:

Limited warranty available at www.surface-tech.ca

Contact:

Surface Tech Construction Materials Corp
 2080 Appleby Line PO Box 75041 Burlington ON L7L 6M0 Canada
 647.613.6988
info@surface-tech.ca
www.surface-tech.ca

