## 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. AQU™ Polymer Fiber is an aramid fiber pre-treated with a liquid emulsion binder. Our patented water binder ensures a 100% delivery of the fibers 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 only EPD Certification Aramid product  (Low carbon additive) 0.622 kg $CO_2$ / US Mix Ton
- The only Emerald Eco-Labeled  Aramid product
- No potentially harmful plastics or other fillers
- No risk of additional VOCs  impacting stack testing
- One dose is 5 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 2.1oz per US Ton (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 75% by weight) |
|---|---|
| Treatment: | Liquid Emulsion binder (25% by weight, max) |
| Standard Aramid Dose: | 2.1 oz/US ton  (65 grams/tonne)  of Aramid |

### Physical Properties:
### Physical Properties:

| Decomposition Temp: | >800° F / 425° C |
|---|---|
| Linear Density: ASTM D1907-12,0PT6 | >3200 dtex |
| Length: | ¾ in (19 mm) or 1.5" (38 mm), +/-10% |
| Color: | Yellow |

### Mechanical Properties:

| Tensile Strength: ASTM D2256, D7269: | >2700 MPa |
|---|---|

**AQU™**
**POLYMER**
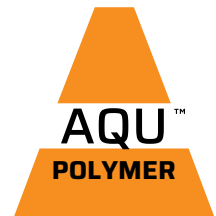
## AQU™ Dosing Plan

AQU™ Polymer Fibers are well suited for HMA, WMA, HMA, WMA, CCPR, Cold Patch and Micro-surfacing asphalt mixes. Precision dosing is recorded through a data capture every 10 seconds from the load cells on the certified DFNDR™ or SNTNL™ dosing machines that guarantees the correct amount of fiber being delivered into the asphalt. Use the dosage rate of 2.8 oz. coated weight per US Ton of asphalt mix (of which 2.1 oz. is pure aramid).  Metric dosage rate is 88 grams coated weight per Tonne of asphalt mix (of which 65g/t is pure aramid). **ASTM Standard D8395-2023 for Aramid Fibers in Asphalt Mixtures standardizes a dose as 2.1oz per US Ton (65g/t)**. Please note that AQU™ Polymer Fiber contains 75% actual aramid fiber and 25% liquid emulsion binder, by weight. With AQU™ Polymer Fiber, the aramid fiber remains in the form of a fiber strand with over 10,000 individual fibers per strand that are efficiently conveyed to the asphalt mixing drum. In the mixing drum, the liquid emulsion completely evaporates allowing the dry fibers to disperse into the mix.

## Batch Plant or Drum Plant:

Feed AQU™ Polymer Fibers with DFNDR™ or SNTNL™ precision dosing operated equipment or manually. 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 (tons/tonnes) and dosage rate (oz/ton)/(g/t). 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 fibers with the rate the plant is producing asphalt mix. If a fiber feeder is used, it must be properly calibrated for treated aramid fiber to deliver the fiber at the correct rate. Daily reporting and data is provided by the DFNDR™ and SNTNL™reporting system.

## Storage:

AQU™ is  supplied in a sealed bag / corrugated box containing a net weight of 50 pounds (23 kg). Close bags immediately after removing desired amount of fiber to prevent evaporation which could alter the addition tolerance in subsequent uses. Store fibers in a dry environment.

## Warranty:

Limited warranty available at www.surface-tech.com

**VERIFIED** by SCS GLOBAL SERVICES
ENVIRONMENTAL PRODUCT DECLARATION
BASED ON LCA

Compliant with **Build America, Buy America Act**
P.L.117-58

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D8395-23

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