



A polish value is a measurement of readings on a test specimen of aggregate after nine hours of polishing in an accelerated polishing machine. It measures the ability of an aggregate to withstand the polishing effects of traffic wear.

ARCOSA LIGHTWEIGHT'S STREETMAN PRODUCT HAS HIGHEST POLISH VALUE IN TEXAS

The Texas Department of Transportation (TxDOT) understands the value of protecting their investment. Virtually half of their available funding is dedicated to pavement preservation and lightweight aggregate is a big part of their ongoing maintenance programs.

Texas uses an estimated 300,000 cubic yards of lightweight aggregate each year for seal coat and surface treatment applications. Arcosa Lightweight's Streetman product has the highest polish value of any material used in the state of Texas, based on TxDOT's Bituminous Rated Source Catalog (BRSQC).

Simply put, the material maintains its "roughness" and excellent wet weather skid characteristics even after years of traffic wear.

With the current fiscal condition of most public agencies, maintaining pavements that are in "acceptable or above acceptable" condition is paramount given the cost of

rehabilitation or reconstruction. It costs approximately \$.20 on the dollar to maintain "acceptable" or "above acceptable" conditions of pavements using conventional chip seals.

Oscar H. Rodriguez, P.E., an expert in the field of asphalt and concrete materials and paving, spent the first 10 years of his career working in TxDOT's Materials and Tests Division and the Austin District Laboratory. He has worked on Hot Mix Asphalt Concrete (HMAC) designs for the Texas Motor Speedway in Fort Worth, and test tracks around the state of Texas for Goodyear, Cooper Tire and General Tire. He explains the benefit of lightweight aggregate by comparing it to a sponge.

"If you cut a sponge in half, you expose its cells inside, each with tiny edges formed by air bubbles," said Rodriguez. "As you wear through the shell of lightweight aggregate, you expose one of its best characteristics – its abrasive texture formed by its cells makes it highly resistant to polishing and stripping."

Oscar H. Rodriguez, P.E.

DISTRICT WIDE USE

TxDOT Districts go to contract with district-wide chip seal contracts in the Fall/Winter timeframe to be constructed the following Summer. This allows aggregate suppliers time to produce and deliver the aggregate prior to when the contractor's working days commence. It also allows the

agency the time to do all necessary due diligence and preparation work on roadways slated for an upcoming chip seal.

In Texas, both lightweight aggregate (TxDOT Item 302-Type L or PL) and crushed stone (TxDOT Item 302-Type B or PB) are tested on an equal scale and therefore have to meet identical quality requirements. Taking it one step further, TxDOT has their own quality catalog, where all TxDOT-quality monitored bituminous aggregate sources used in Texas are rated on a surface aggregate classification system, commonly referred to as the SAC rating.

The SAC rating of lightweight expanded shale aggregate in all TxDOT types and grades is SAC A. The majority of the available crushed stone sources in Texas are SAC B. This means with regard to durability and wet weather accident prevention statistics, lightweight aggregate is superior.

Lightweight expanded shale aggregate remains a cost-effective, high-performance aggregate that is used extensively in Texas chip seal projects all over the central and eastern regions of the state.

