The CoreLok is an extremely versatile system for measurement of bulk specific gravity and maximum specific gravity (Gmm) of asphalt. The Corelok also measures the apparent specific gravity, absorption and bulk specific gravity of fine and coarse aggregates. GravitySuite™ PC software can be used to calculate and manage the results. The Corelok does not require an empirical calibration and the results do not depend on material type or composition. Meets ASTM Standards D6752-02, AASHTO T-331 and D6857-03.

Bulk Specific Gravity of Compacted Samples
Specific gravity (density) is the single most specified parameter in the construction industry. For open graded and absorptive mixtures of asphalt, the Saturated Surface Dry (SSD) method is inaccurate. Water infiltration in and out of the sample produces a lower than actual measurement for sample volume, higher calculated density and a lower estimate of air voids. The CoreLok system automatically seals these samples in specially designed polymer bags and allows for measurement of accurate water displacement tests. The present sealing methods, wax and films, are labor intensive and the results are extremely operator dependent. ASTM D6752-02 and AASHTO T-331

Maximum Specific Gravity (Gmm)
This method may be used as an alternative to the conventional “Rice Test” for the determination of maximum specific gravity of loose asphalt mixtures. The CoreLok test can be completed in 7 minutes with minimal exposure to water, eliminating the need for a lengthy “Dry Back” method.

This procedure requires that a sample of dry asphalt mixture be placed inside the vacuum bag and sealed within the CoreLok vacuum chamber. The bag is then cut open under water and a submerged weight is determined. The weight in air and the submerged weight can be used to calculate the maximum specific gravity of the asphalt mixture. ASTM D6857-03

Apparent Specific Gravity, Absorption and Bulk Specific Gravity of Aggregates
Oven dry aggregates are used in this test to determine the specific gravity and absorption of fine or coarse aggregates in less than 20 minutes. This test is highly accurate and repeatable. In this test, a density measurement is obtained by vacuum sealing a sample using the CoreLok. Another density is measured under an unsaturated condition using a volumeter. These two densities can be used with already known standard equations to calculate apparent specific gravity, absorption and bulk specific gravity. The AggSpec™ PC software allows for simple entry and calculation of these parameters.