

### The CoreLok™ G<sub>mm</sub> - An 8-minute alternative test for measurements of maximum specific gravity of loose asphalt mixtures.

The CoreLok maximum specific gravity procedure (ASTM D6857-03) for loose asphalt mixtures involves placing a sample of dry mixture into a special channel bag. The channel bag is placed within another specially designed bag and vacuum is induced within the chamber by the CoreLok system. In approximately 5 minutes, the sample is evacuated to 29.95 in. Hg and can be removed from the vacuum chamber and placed in the water bath for weighing. While in the bath, the bag is cut open. Since the loose mixture is under vacuum, water will rush into the bag through designed channels and will fill all voids within the sample. The weight in air and the water submerged weight can be used to calculate the maximum specific gravity of the mixture.

In the existing G<sub>mm</sub> method (Rice Test), ASTM D2041 and AASHTO T209, the efficiency of the test depends on the vibration system, the vacuum pump condition, and the amount of water that is absorbed by the material during the test. In the Corelok method the sample is vacuumed while it is dry reducing the potential of water absorption into the mixture.

#### The advantages of the CoreLok G<sub>mm</sub> Test:

- ▶ The test procedure is extremely simple and intuitive and can be done in less than 8 minutes.
- ▶ Two hour material absorption correction (Dry Back) is no longer necessary, since exposure to water under vacuum is significantly reduced in the Corelok method.
- ▶ The CoreLok vacuum system is automatic with predetermined settings. The results do not depend on the vibration system and the varying equipment used, reducing variability between test sites.
- ▶ Vacuum is applied while the sample is dry, reducing the chance of water absorption by the aggregates and eliminating the damaging water vapor effect on the vacuum pump.
- ▶ Samples with high percent AC can “self compact” when piled in the container for the G<sub>mm</sub> test, prior to inducing vacuum. The sample “self compaction” is eliminated during this process.



Just place the sample in the bag and place it into the CoreLok. Close the door and the vacuum operation automatically begins.



Remove the sealed sample from the CoreLok.



Patent Pending

Submerge and cut the bag in water. Allow the scale to stabilize.

