

The best materials make the best products and road/surface construction is no exception. For testing aggregate (composite) materials (fine or coarse), the micro-deval test and the Los Angeles (L.A.) abrasion test are currently the two most popular tests.

Developed in France during the 1960s, the micro-deval test addresses abrasion and durability where testers use the mill-like apparatus to contain and combine aggregate materials with steel balls (a.k.a. abrasive charge) and water (wet materials more exposed to wear than dry) in special jar containers (a.k.a. drums). An electronic controller records the time, speed and revolutions then the materials wash over a sieve (filter) then testers finally measure the material's degradation.



Gilson offers the ideal equipment for micro-deval testing of aggregate materials. Their MD-2000 micro-deval apparatus (<https://www.globalgilson.com/micro-deval-apparatus>) showcases simple, practical feature with several unique considerations.

Gilson's main micro-deval apparatus features a durable steel frame where the set-up allows testers to run two samples at once. In addition, the two optical encoder sensors (top and bottom) record data while also incorporating important safety features that will not allow operation until components are properly placed and/or installed. Each stainless steel jar (5L each) features a locking lid for extra security. Two sets of magnetic, stainless steel abrasive charge (5,500g each) and an abrasive charge magnet for easy pick-up after test completion are also included.

Gilson's MD-2000 micro-deval apparatus offers three models. Their MD-2000 model requires a 115V/60Hz grounded power supply for proper operation while the MD-2000F requires a 230V/50Hz grounded power supply for proper operation.

The MD-2000C model has thermal protection that prevents overheating and overall failure thanks to special heat-sensing features. Restarting motors with these features require testers to manually press the reset button located on the motor...a minor inconvenience when compared to total motor replacement. This thermal protection feature prevent early "burn-out" of the 115V/60Hz motor.

Safety comes first with no exposed moving parts plus highly break-resistant Lexan™ doors have special safety interlocks to secure the abrasive charge and any other materials. Gilson also demonstrates their expertise by meeting several high quality standards including the following:

- "Standard Test Method for Resistance of Coarse Aggregates to Degradation in the Micro-Deval Apparatus" AASHTO Designation T 327, ASTM D 6928, TxDot 845-49-40, and Ontario (Canadian) LS-618.
- "Standard Test Method for Resistance of Fine Aggregates to Degradation in the Micro-Deval Apparatus, ASTM Designation D 7428 and Ontario LS-619.

Gilson's micro-deval apparatus equipment can also be configured to meet European Standard EN 1097-1. When you need that quality control for aggregate materials, Gilson has you covered with their MD-2000 micro-deval apparatus.