



ASTM B-294

Test Method for Hardness Testing of Cemented Carbides

This test method covers the hardness testing of cemented carbides by use of the Rockwell hardness tester with the Rockwell A scale (diamond indenter and 588.4 N load) in range of Rockwell A80 and above. Also covered are the procedures for the testing and selection of diamond indenters, the management and traceability of the four levels of standard test blocks, the acquisition of secondary standard test blocks, and the making and calibration of working standard test blocks.

The Rockwell hardness tester is a convenient and reliable means of measuring the hardness of cemented carbides. A hardness value is obtained easily, but it is subject to considerable error unless certain precautions are observed. Test methods E-18 can be followed except where otherwise indicated in the method.

Rockwell hardness is one of the more important properties used to evaluate cemented carbides. For compositional groups of cemented carbides, hardness is an indication of wear resistance and toughness. Lower hardness grades usually indicate less wear resistance but greater toughness. For a specific grade of cemented carbide, hardness is an indication of the metallurgical quality of the material. In no case is hardness the only property to be considered in evaluating cemented carbides. If you have any questions concerning this particular ASTM method, please feel free to give our office a call at (800) 334-5432 or email us your inquiry at info@nhml.com.

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