ElasTek™ Goodyear® “U” Adhesion Fixture: Description

ELASTEK ElasTek Products by CCSi

CCSi features the “Goodyear® U Adhesion Fixture” for evaluating the measurement of adhesion of reinforcing cords that are bonded to rubber compounds.

The test is applicable to cord structures from both natural and manmade fibers, including steel, textiles, glass filaments and other reinforcing materials.

The test is primarily used to evaluate tire cords, the suitability of tire cord adhesives and the suitability of rubber compounds. The test may also be used to evaluate cords in industrial hose and belting products and other cord reinforced rubber products.

The “Goodyear® U Adhesion Fixture” was designed by the Goodyear® Tire & Rubber Company as a research and development tool over 40 years ago. The test procedure proved to be very successful and was seen as a viable alternative to the limitations of ASTM D4776 and other ASTM test methods related to the adhesion of various cord reinforcing materials in rubber compounds.

As a result of this success, the once proprietary design was later shared with their customers and suppliers in efforts to improve product quality. The “Goodyear® U Adhesion Fixture” is now employed worldwide within their QA/QC and Production Control networks.

ElasTek™ Goodyear® “U” Adhesion Fixture: Recent Developments

Developments in technology led Goodyear® to seek out the assistance of CCSi in improving the original design, as well as the manufacture of the instrument and the specimen mold.

The new version of the “Goodyear® U Adhesion Fixture” now features a PID temperature controller, state—of—the—art “quick response” electric heating elements, improved structural materials and safety features.

The unique mold, designed to be used in preparing the test specimens for the “Goodyear® U Adhesion Fixture”, is very flexible in its application. It allows multiple rubber compounds to be tested with a single reinforcing cord, or alternatively, multiple reinforcing cords to be tested with a single rubber compound.

This is a tremendous advantage in quickly ascertaining the suitability of rubber compounds and reinforcing cords for a particular application, as well as monitoring quality in a production control environment.

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