

CHEMICAL-PHYSICAL ANALYSIS OF VULCANISED RUBBER COMPOUNDS**Application**

This test method is applicable for the testing of vulcanized compounds for all rubber parts (test slabs and finished parts), and is used for the determination of:

- A. Acetone extract-quantitatively (gravimetric).
- B. Infrared spectrogram of the acetone extract for reference and comparison with subsequent deliveries.
- C. Ash content-quantitatively (gravimetric).
- D. Elastomer content quantitatively.
- E. Infrared spectrogram of the elastomer compound pyrolysate.

Apparatus and Chemicals Required**Infrared Spectrophotometer**

Double beam type - capable of recording over a wavelength range of approx 2 - 15 microns and accessories.

Sodium Chloride Plates or equivalent

Suitable for the infrared spectrophotometer.

Laboratory Distillation (simple type)**Electric Heating Mangle**

For 250 mL flasks - 3 stage adjustable.

Soxhlet Extraction Apparatus

With 70 mL extractor and 250 mL narrow neck flask.

Evaporation Dish

100 mL

Analytical Balance

Accuracy +/- 1 mg

Date	Action	Revisions
2001 01 31	Revised	Editorial – no technical change A. Cockman
2000 04 19		Editorial – no technical change A. Cockman
1993 10 19		

Printed copies are uncontrolled

Page 1 of 4

Copyright © 2001, Ford Global Technologies, Inc.

Muffle Furnace

Capable of maintaining a temperature of 800 +/- 25 °C.

Retort Stand

With 2 round clamps, 3 flask clamps together with a mounting ring to support the soxhlet apparatus and the heating mantle.

Acetone (A.R.)

Porcelain Crucible with Cover

Desiccator with Silica Gel

Combustion Apparatus

Grote-Krekeler type with electrical heating. Adjustable resistance, temperature recorder and porcelain boat.

Inert Gas

e.g., nitrogen, helium or argon, pure and free from oxygen and moisture.

Test Tubes

130 x 14 mm Fiolax No. 28 or equivalent.

Bunsen Burner

Cotton Wool

Test Tube Clamps

n-Propylalcohol (A.R.)

Laboratory Convection Oven

Capable of maintaining a temperature of 80 +/- 2 °C.

Glass Beaker

50 mL

Conditioning and Test Conditions

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 °C and 50 +/- 5 % relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.