



Standard Methods of COMPOUND AND SAMPLE PREPARATION FOR PHYSICAL TESTING OF RUBBER PRODUCTS¹

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These methods have been approved by the Department of Defense to replace methods 1011 and 1111 of Federal Test Method Standard No. 601 and for listing in the DoD Index Specifications and Standards. Future proposed revisions should be coordinated with the Federal Government through the Army Materials and Mechanics Research Center, Watertown, Mass. 02172.

1. Scope

1.1 These methods specify standard materials, describe equipment, and prescribe processing methods for evaluating compounding materials in various types of polymers, carbon blacks in natural rubber, and for evaluating butadiene (BR) and styrene - butadiene (SBR) polymers.

1.2 The methods are divided into three parts and appear in the following sequence:

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PART A—PREPARATION OF RUBBER COMPOUND

Standard Materials, Equipment, and Processing

2. Scope

2.1 These methods provide a listing of the reference compounding materials required to formulate the compositions given in subsequent parts of this method, give the procedures covering the weighing of the materials, describe a standard two-roll mill and certain of the operations concerned with mixing, and describe an internal mixer and methods of operation. These procedures may be used to evaluate nonstandard materials where applicable; the evaluation of nonstandard SBR polymers and carbon blacks are referred to in Parts B and C, respectively.

3. Standard Materials

3.1 The standard materials required for the

composition given in subsequent parts of the methods are as follows, and may be materials that are known to have properties identical with those of NBS standards, as supplied by the National Bureau of Standards. However, in case of dispute, actual standard material from the Bureau of Standards shall be used.

Material	NBS Standard Sample No.
Natural rubber	385
Styrene butadiene rubber, Type 1500	386
Butyl rubber	388
Styrene-butadiene rubber (Type 1503)	389
Nitrile-butadiene rubber	391
(33 percent acrylonitrile approx.)	
Zinc oxide	370

¹ These methods are under the jurisdiction of ASTM Committee D-11 on Rubber and Rubber-Like Materials. This standard is the direct responsibility of Subcommittee D-11.20 on Compounding Materials and Procedures.

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