

# National Bureau of Standards

## Certificate

### Standard Reference Material 388L

#### Isobutylene-Isoprene (Butyl) Rubber

This Standard Reference Material is an isoprene-isobutylene copolymer rubber, IIR Type 218. It is intended for use in checking the performance of Mooney Viscometers when applied to rubber and rubber-like materials.

Bales of a single lot of the dried rubber weighing approximately 34 kg were wrapped in polyethylene film and packaged in cardboard cartons. One-kilogram samples were taken at the start and during the baling of each fifth bale of rubber. Two measurements of the Mooney Viscosity Number were made on each sample at both 100° and 125° C according to the procedures described in ASTM Method D1646-74. Both ML 1+4 and ML 1+8 values of the Mooney Viscosity Number were recorded at each temperature.

<u>Temperature</u>	<u>Mooney Viscosity (ML 1+4)*</u>	<u>Mooney Viscosity (ML 1+8)**</u>
100 °C	73.5 ± 0.3	
100		71.5 ± 0.2
125	54.3 ± 0.3	
125		50.4 ± 0.3

\*ML 1+4 indicates that a large rotor was used; the sample was warmed in the viscometer for one minute before starting the motor; and the readings were taken 4 minutes after starting the motor.

\*\*ML 1+8 indicates that a large rotor was used; the sample was warmed in the viscometer for one minute before starting the motor; and the readings were taken 8 minutes after starting the motor.

NOTE: The values reported represent the mean plus or minus one standard deviation of 90 measurements performed in the laboratories of the National Bureau of Standards. User values may be slightly outside of the reported range. Any value obtained that is more than 1.5 Mooney points different from those reported above should be considered significant.

CAUTION: This material should be stored in the dark and away from heat, since exposure to light and heat may affect the certified properties.

This lot of rubber was tested and certified in the Center for Materials Science, Polymer Science and Standards Division, by G.W. Bullman and G.B. McKenna.

The technical and support aspects involved in the certification and issuance of this Standard Reference Material were coordinated through the Office of Standard Reference Materials by W.P. Reed.