



atlanta testing & engineering
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February 24, 1998

Industrial Polymers
8980 Scranton Street
Houston, Tx. 77075-1088

Attention: Carl Boddie

Re: Flammability and Flame
Propagation

Gentlemen:

Atlanta Testing & Engineering completed Flammability testing on the High Build Urethane Coating Speedliner 1000 submitted to our Duluth laboratory. The flammability tests were performed in accordance with Federal Motor Vehicle Safety Standards; FMVSS 302. Tests were duplicated for accuracy. The results of these tests indicate that the burn rate of the Speedliner 1000 sample **was** in accordance with the referenced Standard. For test procedure and data, see the following pages.

Please feel free to contact us if there are any questions.

Respectfully submitted,
Atlanta Testing & Engineering

Roger Baldwin
Engineering Technician

Barry Bennett E.I.T
Director Specialty Services





Procedure

- A. Prior to testing, the specimen was conditioned for 24 hours at a temperature of 70 degrees Fahrenheit and a relative humidity of 50%.
- B. The specimen was mounted on a U-shaped frame with one end even with the open end of the flame.
- C. The specimen was placed in a horizontal position in the center of the cabinet.
- D. The Bunsen burner was placed under the specimen so that the center of the burner tip was 3/4-inch below the center of the bottom edge of the specimen.
- E. The specimen was exposed to the flame for 15 seconds.
- F. Timing was began, without reference to the period of the initial exposure to the flame.
- G. The time it took the flame to progress 1 1/2-inches, or to the point where it stopped was measured.
- H. The burn rate was calculated from the formula: $B=60x(D/T)$

Where:

B= Burn rate in inches per minute

D= Length the flame travels in inches

T= Time in seconds for flame to travel the distance as listed in Procedure G above.

Note: As per FMVSS 302 Section S4.3, para.(b): If a material stops burning before it has burned 60 seconds from the start of timing, and has not burned more than 2 inches from the point where timing was started, it shall be considered to meet the burn-rate requirement.



Scope

This Test Evaluates the burn resistance for materials used in the occupant compartment of motor vehicles.

Requirements

- A. The components of the occupant compartment or any other material which is within 1/2-inch of the occupant compartments air space shall meet the requirements of FMVSS 302 Section 4.3 which states, when tested in accordance with FMVSS302 any such components or composite materials shall not burn nor transmit a flame front across its surface at a rate of more than 4 inches per minute.

- B. If a material stops burning before it has burned 60 seconds from the start of timing, and has not burned more than 2 inches from the point where timing was started, it shall be considered to meet the burn rate requirement of FMVSS 302.



Equipment

- A. Metal Cabinet for protecting the test surfaces from drafts.

- B. A Bunsen burner with a tube 3/8-inch in diameter was used. The adjusting valve was set to provide a flame, with the tube vertical, of 1-1/2 inches in height. The air inlet to the burner was closed.

- C. Natural Gas

- D. Stop Watch

Materials Flammability Test
Industrial Polymers

End Tested	Type Material Tested	Burn Rate per minute
1	High Build Urethane Coating Speedliner 1000	No burn rate
2	High Build Urethane Coating Speedliner 1000	No burn rate