

**49 CFR Part 571**

[Docket No. 68-22; Notice 02]

**Federal Motor Vehicle Safety Standards; Flammability of Interior Materials; Termination of Rulemaking Proceeding****AGENCY:** National Highway Traffic Safety Administration (NHTSA), DOT.**ACTION:** Termination of rulemaking proceeding.

**SUMMARY:** The purpose of this notice is to announce the termination of a rulemaking proceeding to amend Standard No. 302, *Flammability of Interior Materials*, to: (1) Modify the types of flammability tests used and consider using portions of the FAA regulations on flammability; (2) extend coverage to other vehicle classifications; and, (3) expand coverage to include the engine compartment and other areas of the vehicle. The agency sent a letter to the petitioner, Horkey & Associates Inc., notifying them that the petition was granted on May 4, 1990. Subsequently, the agency reviewed data on fire related crashes, estimated cost increases due to possible amendments to Standard No. 302, and estimated potential benefits due to increased flammability resistance. Because the agency has determined that the proposed amendments would significantly increase costs and that those costs would be greatly disproportionate to the potential safety benefits, this rulemaking action is terminated.

**FOR FURTHER INFORMATION CONTACT:** Dr. William J. Liu, NRM-12, Office of Vehicle Safety Standards, National Highway Traffic Safety Administration, 400 Seventh St., SW., Washington, DC 20590. Telephone: (202) 366-4923.

**SUPPLEMENTARY INFORMATION:** Federal Motor Vehicle Safety Standard No. 302, *Flammability of Interior Materials*, specifies flammability requirements for materials used in the occupant compartment of motor vehicles. The standard is intended "to reduce the deaths and injuries to motor vehicle occupants caused by vehicle fires, especially those originating in the interior of the vehicle from sources such as matches or cigarettes." 49 CFR 571.302, paragraph S2. The standard seeks to allow the driver time to stop the vehicle, and if necessary for occupants

to leave it, before injury occurs. The standard applies to passenger cars, multipurpose passenger vehicles, trucks, and buses.

Standard No. 302 has not been revised since it first went into effect on September 1, 1972. The standard's current test procedure is a horizontal burn test for testing flame spread properties. The standard limits the burn rate to 4 inches per minute for materials used in the occupant compartment and all interior materials that are designed to absorb impact energy in the event of a crash.

Different burn tests and limit of burn rates were considered during the development of the standard. For example, a vertical burn test with a zero burn rate (self-extinguishable) and horizontal burn tests with different burn rates were considered. The burn rate limit selected by the agency was based in part on compromises between the goals of flame resistance and energy absorption and between the cost of meeting Standard No. 302 and of meeting the crashworthiness standards that had been issued for those motor vehicles but which were not yet in effect at the time Standard No. 302 was issued. (See, 36 FR 289, January 8, 1971.)

On March 13, 1990, Edward J. Horkey, on behalf of Horkey & Associates Inc., petitioned NHTSA to revise Standard No. 302, since the standard "is now approximately eighteen years old and much more information is available today to cause an update." The petition requested amendment of Standard No. 302 to: (1) Modify the types of flammability tests used and consider using portions of the FAA regulation on flammability; (2) extend coverage to other vehicle classifications; and, (3) expand coverage to include the engine compartment and other areas of the vehicle.

After a preliminary review, on May 4, 1990, the agency notified Mr. Horkey that the petition was granted. The agency believed that granting the petition would give NHTSA the opportunity to re-examine Standard No. 302, based on the elapsed time since the standard first went into effect and the increased knowledge on materials as well as advancement in flame retarding technologies.

**Modify Flammability Tests**

The petition requested that the agency consider modifying the types of flammability tests used and consider using portions of the FAA regulations on flammability. As stated previously, the agency considered different burn rate tests when developing the standard. The

currently required burn rate test was based on economic and technical considerations. Despite improvements in technology since the standard was developed, agency analysis of crash data and the increases in vehicle costs due to material changes indicated minimal potential safety benefits compared to high expected costs.

The Fatal Accident Reporting System (FARS) shows that, in 1989, 1,613 motor vehicle occupants suffered fatal injuries in vehicles in fire related accidents. Of these, 969 (60.1%) were passenger car occupants. When fire is considered "the most harmful event" in vehicles in fire related accidents, 529 occupants suffered fatal injuries, and 300 (56.7%) were in passenger cars. (It should be noted that "the most harmful event" is coded in FARS for each vehicle, rather than for each occupant. Thus, for example, if there were two fatally injured occupants in one vehicle, there is a possibility that one of the occupants received their fatal injuries from other than the listed "most harmful event." Considering this possibility it was estimated that the range of passenger car occupants that received fatal injuries from fire was 222 to 450.) The FARS data do not indicate the source of the fire, therefore it cannot be determined how many occupants were injured in fire related accidents of the type Standard No. 302 was designed to prevent.

The increased costs due to a possible amendment to Standard No. 302 for the interior of passenger cars would be dependent upon the selected performance test. However, responses received from the Advance Notice of Proposed Rulemaking (ANPRM) for school bus flammability improvements, indicated that increases in seat assembly costs for flame retardant materials range from \$15 to \$35 per seat. (53 FR 44627, November 4, 1988; docket #88-22.) Using the cost of two complete seats and considering costs for flammability improvements for other interior components in a passenger car,

the agency estimates that the costs for amending Standard No. 302 to improve flammability performance in passenger cars would be in the range of \$60 to \$140 per vehicle.

The agency has no information on which to base an estimate of the effectiveness of flammability improvements on fire fatalities. However, based on effectiveness values used for other comparable safety measures, flammability improvements would likely save no more than 5% to 15% of fire fatalities. Based on a production of 10 million passenger cars each year, and on the estimated values of \$60 to \$140 per vehicle, the estimated annual fleet costs per year would be \$600 million to \$1.4 billion.

Based upon the above cost estimates, coupled with the minimal potential safety benefits, the agency does not believe rulemaking should proceed.

#### Extend Coverage to Other Vehicle Classifications

The petitioner also requested extending Standard No. 302 to other vehicle classes, specifically motor homes and recreational vehicles. Unless the motor home or recreational vehicle is drawn by another vehicle, it is classified as a multipurpose passenger vehicle and hence is already covered by Standard No. 302. Motor homes or recreational vehicles drawn by other vehicles are classified as trailers. While trailers are not covered by Standard No. 302, many States prohibit passengers from occupying them on the highway. Therefore, these vehicles do not appear to have a high potential for fire related injuries of the type Standard No. 302 is designed to prevent. The agency concludes that there is no evidence of a significant safety hazard that would justify extending Standard No. 302 as the petition requests.

#### Expand Coverage to the Engine Compartment

The petitioner's final request is to expand the standard's coverage to

include the engine compartment and other areas of the vehicle. Specifically, the petition states that "(t)he average car today has at least thirteen holes in the so-called firewall. Some are closed with rubber gaskets or plastics, such as heater frames. All of these materials burn vigorously and do not provide any fire barrier." While it is possible that a large fuel-fed fire could generate enough heat to burn through the heater frame or the air conditioner frame from the engine compartment to the occupant compartment, NHTSA's Office of Defects Investigation does not have any complaints relating to this matter.

Again, the current standard is designed for fires originating in the interior of the vehicle from sources such as matches or cigarettes. If the standard were expanded to include other areas of the vehicle, it would be necessary to include fuel-fed fires and to develop new test methods. This would likely result in a substantial cost increase for the vehicle. These costs would not be justified if the agency cannot show a safety need to extend Standard No. 302 to other areas of the vehicle.

#### Conclusions

Agency analysis indicates minimal potential safety benefits from amending Standard No. 302 as this petitioner requests, compared to high expected costs. Because of the substantial costs these amendments would impose, the agency concludes that there is no reasonable possibility that a rule amending Standard No. 302 would be issued at the conclusion of this rulemaking proceeding. Therefore, this proceeding is terminated.

Issued on January 22, 1991.

Barry Felrice,

Associate Administrator for Rulemaking.

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