Section IV, Column 9. Cancelled Tests ~ This column requires a count of the number of tests in each testing category that the BAT or STT reported as cancelled. Do not count any cancelled tests in Column 1 or in any other column other than Column 9. For instance, you must not count a 0.04 screening result or confirmation result in any column, other than Column 9, if the test was ultimately cancelled for some reason (e.g., a required air blank was not performed).

[Example: If a pre-employment test was reported cancelled, “1” would be entered in Column 9 on the Pre-Employment row. If three of the company’s random test results were reported cancelled, “3” would be entered in Column 13 on the Random row.]

TOTAL Line. Columns 1 through 9 ~ This line requires you to add the numbers in each column and provide the totals.

[FR Doc. 03–18378 Filed 7–24–03; 8:45 am]


The requirements in ANSI Z26.1 are specified in terms of performance tests that the various types or “items” of glazing must pass. There are 21 “items” of glazing for which requirements are currently specified in FMVSS No. 205.

The Society of Automotive Engineers (SAE) Glazing Materials Standards Committee, acting under the sponsorship of ANSI, has revised the ANSI standard periodically. However, since the FMVSS cannot be changed except through rulemaking, revisions to the ANSI standard do not become part of FMVSS No. 205 unless we expressly identify and incorporate them through a rulemaking. SAE previously petitioned us to upgrade ANSI Z26.1 with 1983 and 1990 revisions. However, we denied those petitions.

In addition to incorporating some of the revisions of the ANSI standard, we have occasionally updated FMVSS No. 205 directly by adding provisions similar or identical to those in various revisions of the ANSI standard.

II. Summary of the Notice of Proposed Rulemaking (NPRM)


NHTSA tentatively concluded that incorporating ANSI/SAE Z26.1–1996 would be beneficial for (1) improved safety, (2) harmonization with foreign glazing standards, and (3) streamlining and clarification.

1. Improved Safety

ANSI Z26.1 requires a fracture test (Test No. 7) of a 305 mm (12 in.) square, flat sample of glazing. In contrast, ANSI/SAE Z26.1–1996 requires the use of a full-size production piece of vehicle window glass. Paragraph 5.7.2 of ANSI/SAE Z26.1–1996 states that the specimens of glazing selected for testing “shall be of the most difficult part or pattern designation within the model number.” NHTSA stated that it interpreted this to mean the portion of glazing which we consider most likely to fail the test.

ANSI/SAE Z26.1–1996 also improves safety by eliminating wire glass as an approved glazing material. Wire glass is flat-rolled glass reinforced with wire mesh. Wire glass is known to shatter more readily at lower impact speeds and is more lacerative than laminated glass. Wire glass was used in past automotive applications. However, this practice has been discontinued and, to our knowledge, no company currently produces wire glass for vehicle use.

2. Harmonization with Foreign Glazing Standards

Incorporating ANSI/SAE Z26.1–1996 will improve harmonization between US, Canadian, and European glazing standards in the following ways:

• The test fixture for the impact, fracture and penetration resistance tests (Tests 6, 7, 8, 9, 10, 11, 12, 13, 14 and 26) is identical to the support frame required in Economic Commission for Europe (ECE) Regulation R43.
• The equipment used for the abrasion test (Tests 17 and 18) is similar to that used under ECE R43.
• The Weathering Test (Test 16) is similar to International Organization for Standardization (“ISO”) Standard 3917, which requires a xenon light source, instead of the carbon arc light source currently specified in FMVSS No. 205.
• The solvents specified in the chemical resistance test (Test 20) have been revised to conform to the requirements of the American Society for Testing and Materials (ASTM) and Occupant Safety and Health Administration (OSHA). These are the same solvents specified in ECE R43.
• The requirement for specimens to be tested for the fracture test in section 5.7.2 of ANSI/SAE Z26.1–1996 states that the specimens of glazing selected for testing “shall be of the most difficult part or pattern designation within the model number.” NHTSA stated that it interpreted this to mean the portion of glazing which we consider most likely to fail the test.

3. Streamlining and Clarification

The proposed incorporation by reference of ANSI/SAE Z26.1–1996 would permit the deletion of most of the existing text of FMVSS No. 205. The amendments of the last 20 years have resulted in a patchwork of requirements that must be read in conjunction with the ANSI Z26.1 in order to gain a comprehensive understanding of the overall requirements of FMVSS No. 205. Adoption of the proposal would simplify FMVSS No. 205, consistent with our regulatory reform efforts.

B. Proposed Revisions to FMVSS No. 205

NHTSA discussed some proposed revisions to FMVSS No. 205, as described below.

First, NHTSA discussed the general nature of the textual changes to ANSI Z26.1. We stated that our substitution of the 1996 version for the 1980 version of the ANSI standard would not make many substantive changes to our standard since our current standard already contains many provisions of the 1996 version. They were directly added to our standard in various rulemaking proceedings between 1977 and 1996 to supplement the 1977 version of the ANSI standard. Therefore, the practical effect of our incorporation by reference of the 1996 ANSI standard is that it would enable us to eliminate the provisions added to our standard between 1977 and 1996.

Second, NHTSA proposed to modify the application section of FMVSS No. 205 so that the standard explicitly applies to vehicles.

Third, NHTSA proposed that “the most difficult part or pattern” for the Fracture Test means that all portions of the glazing surface must be able to pass the test requirements. We explained...
that we believe “the most difficult part or pattern” was intended to mean the part of the glazing that provides for “worst case” testing, not the type of difficulty contemplated or how we select the most difficult part or pattern in our compliance testing. Therefore, all portions of the glazing surface must be able to pass the test requirements.

NHTSA proposed that this interpretation would be made explicit in the regulatory text of FMVSS No. 205.

Fourth, NHTSA tentatively concluded that a xenon arc light source produces a spectral power distribution closer to that of sunlight than the carbon arc lamp currently utilized in the weathering test procedures of ANSI Z26.1 and requested comment on this issue. We said that carbon arc technology, which was developed in 1919 for textile and printing industries, is no longer the best light source for simulating sunlight because the spectral power distribution of carbon arc is unlike that of natural sunlight. Further, we noted that most of the testing industry is currently using xenon-arc lamp test devices to simulate weathering.

Fifth, NHTSA proposed to modify FMVSS No. 205 to incorporate the June 1995 version of the Society of Automotive Engineers, Inc. (SAE), Recommended Practice J100, “Class A Vehicle Glazing Shade Bands” (SAE J100) and requested comments on the appropriateness of that shade band standard or any alternative shade band standard that should be considered.

NHTSA said that a visibility requirement needs to be set to establish boundaries for shade bands on glazed surfaces since we need to be able, for the purposes of compliance testing, to differentiate between those areas of a window that are intended to meet the 70 percent transmittance requirements and those areas that are not so intended.

Z26.1–1996 states, “[t]he number of specimens selected from each model number of glazing shall be six (6) and shall all be of the most difficult part or pattern designation within the model number.”

Laboratory-accelerated weathering tests are used to test the durability of materials by simulating the damaging effects of sunlight over an extended period of time. The weathering tests are used to identify materials that are more susceptible to sun damage, such as rigid plastics, flexible plastics and glass-plastics (annealed and tempered). Currently, the weathering test procedures of ANSI Z26.1 simulate sunlight using a carbon arc lamp.

Nanometers in the ultraviolet range of the electromagnetic spectrum (wavelengths of 400 nm and below) can affect how some materials will degrade.

ANSI Z26.1 requires most passenger car windows to pass a light transmittance test that assures that they transmit 70 percent of the incident light. While all windows in passenger cars are considered requisite for driving visibility, certain areas of the glazing that are not at levels requisite for driving visibility may be tinted. The most familiar location for the tinted areas is the upper corner of the windshield. As defined in SAE's Recommended Practices, an eyepoint is a statistical representation of driver eye locations in road vehicles. It is an eye movement/position survey designed to identify vision and field of view contours. The 95th percentile male eyepoint is specified in SAE J100 because it is the highest eyepoint, and therefore is the eyepoint most likely to be blocked by the shade band. On June 17, 1998, we published 63 FR 33194 a new standard for “low-speed vehicles” (49 CFR 571.500). The rule defines low-speed vehicles as a statistical representation of driver eye locations in road vehicles. It is an eye movement/position survey designed to identify vision and field of view contours. The 95th percentile male eyepoint is specified in SAE J100 because it is the highest eyepoint, and therefore is the eyepoint most likely to be blocked by the shade band. On June 17, 1998, we published 63 FR 33194 a new standard for “low-speed vehicles” (49 CFR 571.500). The rule defines low-speed vehicles as a statistical representation of driver eye locations in road vehicles. It is an eye movement/position survey designed to identify vision and field of view contours. The 95th percentile male eyepoint is specified in SAE J100 because it is the highest eyepoint, and therefore is the eyepoint most likely to be blocked by the shade band.

Currently, neither FMVSS No. 205 nor the updated ANSI/SAE Z26.1–1996 set boundaries for the area of glazing that does not have to meet the 70 percent light transmittance requirement. SAE J100 sets limits for the shade band on the windshield, rear window and fixed side windows based upon the eyepoint of the 95th percentile male driver’s eye positions in a vehicle.

Sixth, NHTSA proposed modifying S5(b)(6) of FMVSS No. 500, “Low-speed vehicles” (49 CFR 571.500), to eliminate the incorporation by reference of ANSI Z26.1 and any reference to the permitted types of glazing.

fifth, NHTSA proposed adding a paragraph to the requirements specifying the use of AS–1 or AS–4 glazing in the windshields of low speed vehicles. This section is necessary because the descriptions of the locations of glazing specified by the ANSI standard would not otherwise allow AS–5 glazing.

Also, NHTSA proposed to correct a technical error in FMVSS No. 500. We replaced AS–5 glazing with AS–4 glazing as a permitted glazing type in low speed vehicles. AS–4 is equivalent glazing to AS–5 but contains a light transmittance requirement so that it can be used in windshields, since the windshield is a location considered requisite for driving visibility.

Finally, NHTSA requested comments on the need to verify DOT numbers based on the concern of SAE’s Glazing Materials Standards Committee regarding the accuracy of our Glazing Manufacturer list. SAE has contended that only 25 percent of the manufacturers listed with DOT numbers are currently active; some of the manufacturers have gone out of business without notifying us, and many other manufacturers have moved or merged.

III. Summary of Public Comments to the NPRM

NHTSA received eight comments on the August 1999 NPRM. Three glazing manufacturers, three vehicle manufacturers, one glazing manufacturers association, and one automotive standards organization submitted the eight comments. The comments are summarized below.

A. Meaning of the “Most Difficult Part or Pattern” for the Fracture Test

Several manufacturers stated that NHTSA had misinterpreted the meaning of “most difficult part or pattern” and that the fracture test could be interpreted to have many fracture points, instead of a single point 25 mm (1 in.) in-bound along the center of the longest edge.

Sekurit Saint-Gobain (Sekurit), a glazing manufacturer, suggested that NHTSA adopt ISO 3537. ISO 3537 has several fracture points [(point 1, 30 mm (1.2 in.) from the edge in one corner; point 2, 30 mm (1.2 in.) from the nearest edge; point 3 at the geometric center, and for curved materials, point 4 on the longest median at a point of maximum curvature] and allows for fracture of the windshield.

SAE encouraged NHTSA to revise S5.1.2 to read as follows: “NHTSA may conduct the Fracture Test as specified in ANSI/SAE Z26.1–1996 Section 5.7 on any piece of glazing material that is required to comply with Section 5.7.”

B. Xenon Light Source for Weathering Test

Ford Motor Company (Ford) and SAE both commented that a xenon arc light source more closely simulates sunlight than does a carbon arc and that the xenon arc is a much-improved light source for the weathering tests. Ford also said that a xenon arc lamp would meet the requirement of ECE R43 stating that any source of radiation which produces the same effect as a mercury
vapor lamp may be used for the test procedure.

C. Limiting the Width of the Shade Band

DaimlerChrysler (DC) and SAE supported the adoption of SAE J100 to identify areas of glazing not requisite for driving visibility. DC also urged the agency to clarify the definition of shade band to mean any obscuration band on a glazing because of the variations in band application to laminated safety glass (dye or pigment added to interlayer material prior to application) and tempered safety glass (pattern of lines and dots printed onto the glass surface).

Toyota Motor Corporation (Toyota) and the Flat Glass Manufacturers Association of Japan (FGMAJ), however, suggested incorporating “area B,” specified in ECE R43 92/22EC to establish boundaries for the shade band instead of incorporating SAE J100 because it would harmonize FMVSS No. 205 with requirements adopted in Europe and Japan and because application of the “area B” requirement of ECE R43 is current practice for Toyota. More specifically, Toyota stated that FMVSS No. 205 should “prescribe that the area of the windshield other than the ‘area B’ may be tinted” and FGMAJ stated that the “[d]etermination of the top boundary of windshield for driving visibility should be the upper edge of Zone B, which is drawn in accordance with V1 prescribed in ECE R43.”

Additionally, on the issue of whether shade band requirements should be applied to side and rear windows, FGMAJ stated, “[t]his non-requirement provision for driving visibility should be limited to the windshield, which would harmonize with the international standard.”

D. Certification and Verification of DOT Numbers

Pilkington Libbey Owens Ford (LOF), and Glassig Inc. (Glassig), both glazing manufacturers, commented that DOT numbers should be kept current and suggested notification to the agency or re-certification every five years so that separate active and non-active manufacturer lists can be prepared. SAE suggested that NHTSA avoid reassigning DOT numbers and also supported the use of separate active and non-active manufacturer lists. Sekurit said that the confusion that results from the reassigning of DOT numbers could be avoided if glass manufacturers were required to apply their trade names to their products. FGMAJ suggested that a manufacturer who simply cuts sections of glazing for use in a motor vehicle application obtain a separate DOT code number from that of the prime glazing manufacturer who produces the glazing. Additionally, FGMAJ suggested that the definition of “prime glazing manufacturer” should specify the inclusion of aftermarket manufacturers.

E. Other Issues

1. Applicability of Proposal to MPVs

DC and SAE encouraged NHTSA not to delete paragraph S5.1.1.6 of FMVSS No. 205, which states that glazing intended for use in multipurpose passenger vehicles (MPVs) is treated identically to glazing used in trucks. ANSI/SAE Z26.1–1996 expressly prohibits the use of deep tinted windows adjacent to the driver in trucks but is silent with regard to tinting in MPVs.

2. Edge Treatment for Automotive Safety Glass

The SAE recommended that NHTSA eliminate paragraph S5.2 of FMVSS No. 205 because it incorporates by reference the edge treatment requirements (SAE Recommended Practice J673, “Automotive Safety Glasses”) that are already incorporated by reference in ANSI/SAE Z26.1–1996.10

3. Labeling

Toyota suggested that FMVSS No. 205 specify that the cleaning instruction label currently required for Items 12, 13, 16A and 16B not be required for these items of glazing because these items of glazing are not required to meet the 70% light transmittance requirement (Test 2 of the ANSI standard). The NPRM proposed deleting S5.1.2.2 and S5.1.2.10, which contains cleaning instruction label requirements from FMVSS No. 205. Since ANSI/SAE Z26.1–1996 contains the cleaning instruction label requirements for the aforementioned Items, FMVSS No. 205 would incorporate them by reference.

4. Additional Tests

Sekurit expressed the view that additional tests, not included in ANSI/SAE Z26.1–1996, could have been added to FMVSS No. 205. These tests include a head-impact test for windshields (ISO 3537), a requirement for testing of optical properties of a windshield according to ISO 3538, and a mechanical strength test using a 227 g (0.5 lb.) ball at high and low temperatures. According to Sekurit, ISO 3538 takes windscreen design, rake angle, and field of vision into account while ANSI/SAE Z26.1–1996 tests optical properties by an obsolete method that does not take into account the current design of windshields. Additionally, Sekurit argued that a mechanical strength test using a 227 g (0.5 lb.) ball would more closely approximate real-life conditions than the strength test in ANSI.

IV. Agency Discussion of Issues and Response to Comments

A. Summary of Changes from the NPRM

In response to the comments, the agency is modifying the approach it proposed in the NPRM. The major deviations from the proposal are summarized below.

• The fracture test of ANSI/SAE Z26.1–1996 is clarified to indicate that any piece of glazing subject to the fracture test may be tested, and that the test procedure is a single fracture origin or break point 25 mm (1 in.) inboard at the edge of the midpoint of the longest edge of the specimen as specified in ANSI/SAE Z26.1–1996.

• Shade band areas are required to conform with the SAE J100 recommended practice. However, a substitution of the ECE R43 procedure “up angle” of 7 degrees, instead of the SAE procedure “up angle” of 5 degrees, will be used to determine the upper limit of the area for driving visibility.

B. Meaning of the “Most Difficult Part or Pattern” for the Fracture Test

Currently, Fracture Test No. 7 specifies dropping a 227 g (0.5 lb.) ball onto 305 mm × 305 mm (12 in. × 12 in.) laboratory samples of glazing. The drop height starts at ten feet and increases until the samples break. To pass the test, the largest fractured particle must weigh 4.3 g (0.15 oz.) or less.

The proposed fracture test in S5.7.2 specified six production parts representing each construction type model number. Fracture Test No. 7 stated, “[T]he number of specimens selected from each model number of glazing shall be six (6) and shall all be of the most difficult part or pattern (emphasis added) designation within the model number.” The fracture origin or break point is 25 mm (1 in.) inboard of the edge at the midpoint of the longest edge of the specimen. If the specimen has two long edges of equal length, the edge nearer the manufacturer’s trademark is chosen. To obtain fracture, a spring loaded center punch or a hammer of about 75 g (2.65 oz.), each with a point having a radius

10 SAE Recommended Practice J673 provides several mechanical treatments that shape the edge of the finished glazing for either laminated glazing or tempered glass glazing. The intent of these treatments is to reduce the risk of a lacerative injury due to an exposed sharp edge or corner in the finished glazing product.
of curvature of 0.2 mm ± 0.05 mm (0.0008 in. ± 0.002 in.), is used. To pass the test, the largest fractured particle must weigh 4.3 g (0.15 oz.) or less.

In the NPRM, NHTSA stated “we believe that the phrase ‘most difficult part or pattern’ was intended to mean the part of the glazing that provides for ‘worst-case’ testing.” After consideration of the comments, NHTSA now agrees that this interpretation of the phrase was not the intent of the authors of ANSI/SAE Z26.1–1996. In the context of ANSI/SAE Z26.1–1996, as clarified by SAE in its comment to the NPRM, the “most difficult part or pattern” refers to the most difficult application or component with respect to the fracture performance for a given glazing model number. In other words, ANSI/SAE Z26.1 calls for fracture testing on the “worst-case” use, rather than on the worst case target area. It does not refer to the fracture location on a given piece of glazing, nor does it refer to the part of the glazing that provides for “worst-case” testing.

For the purposes of FMVSS No. 205, the phrase “the most difficult part or pattern” means the worst-case component with respect to fracture performance, not the worst-case test location on that component. The worst-case component could be picked from the grouping of such articles that are described by a common manufacturer’s model number. For instance, using the example cited by SAE in its comments to the NPRM, if a manufacturer produces side and rear windows with the same model number and the rear window performs worse in the fracture performance test, then the rear window must pass the fracture performance test. The difficulty referred to is in regard to meeting the particle weight requirement of the fracture test.

Sekurit suggested requiring multiple fracture points and other manufacturers have objected to conducting fracture testing on production parts with a single fracture origin or breakpoint 25 mm (1 in.) inboard at the edge of the midpoint of the longest edge of the specimen. They stated that the fracture test could be interpreted to have many fracture points. These manufacturers, however, have not demonstrated a safety need to deviate from the testing specified in ANSI/SAE Z26.1–1996. For this reason, NHTSA believes that the test procedures need not be revised at this time. However, as suggested by Sekurit, NHTSA will continue to explore the desirability of extending the test procedures to multiple break points in the future, through participation in the UN/ECE Working Party 29’s Working Party on General Safety Provisions (GRSG).

In retaining the “most difficult part or pattern” requirement, NHTSA agrees with the SAE and has decided to clarify that any piece of glazing subject to the fracture test may be tested, and that the test procedure will be a single fracture origin or break point 25 mm (1 in.) inboard at the edge of the midpoint of the longest edge of the specimen as specified in ANSI/SAE Z26.1–1996.

C. Xenon Light Source for the Weathering Test

As noted above, Ford and SAE concurred with the agency’s tentative conclusion that a xenon arc produces a spectral power distribution closer to that of sunlight than carbon arc lamps and that it is an improved light source for the weathering tests. As in the NPRM, we also note that most of the testing industry is currently using xenon arc lamp test devices to simulate weathering. For these reasons, the agency has decided to adopt the use of the xenon arc lamp test device for the weathering tests as specified in ANSI/SAE Z26.1–1996.

D. Limiting the Width of the Shade Band

In response to comments by DaimlerChrysler, Toyota, and FGMAJ, NHTSA commissioned a study at General Test Laboratories (GTL) of current industry practices (SAE J100 and ECE R43) concerning shade band areas.

As a preliminary matter, NHTSA collected data for a series of five windshields from current production vehicles to evaluate the lower boundary of actual windshield shade bands in comparison to the SAE J100 recommendations. The vehicle manufacturers supplied full size templates for each windshield. On these templates, NHTSA engineers measured the difference between the AS–1 line and the boundary of the shade band zone defined in Section 4.1 of SAE J100 for forward glazing (J100 line). The boundary value for the upper limit of level of visibility in SAE J100 is defined as the intersection of the windshield’s centerline with an inclined plane tangent to the upper edge of the 95th eyellipse. The AS–1 line marked on the upper edge of the windshield equipped with a shade band shows the current shade band practice by the manufacturer. NHTSA’s limited survey of vehicles found that the manufacturer-provided shade bands did not extend as far downward as permitted by SAE J100, and the distance between the lower boundary of the shade bands and the boundary limit recommended in SAE J100 ranged from 45 mm (1.8 in.) for the Chevrolet Camaro to about 191 mm (7.5 in.) for the Pontiac Grand Am (Table 1). Based on these measurements, all vehicles tested exceeded the recommendations set forth in SAE J100.

Next, NHTSA determined the extent to which the ECE R43 requirement (ECE R43 line) was exceeded. It then compared the extent to which the ECE R43 line was exceeded with the extent to which the J100 line was exceeded. These comparisons are shown in Table 1.

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>(a) AS–1 line, SAE exceedance*, inches</th>
<th>Pass SAE J100?</th>
<th>(b) AS–1 line, ECE–R43 exceedance*, inches</th>
<th>Pass ECE 43?</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Motors</td>
<td>Chevrolet Camaro</td>
<td>1.8</td>
<td>Yes</td>
<td>–0.8</td>
<td>No</td>
</tr>
<tr>
<td>General Motors</td>
<td>Saturn LS2</td>
<td>4</td>
<td>Yes</td>
<td>2.4</td>
<td>Yes</td>
</tr>
<tr>
<td>General Motors</td>
<td>Pontiac Grand Am</td>
<td>7.5</td>
<td>Yes</td>
<td>5</td>
<td>Yes</td>
</tr>
<tr>
<td>Mitsubishi</td>
<td>Galant</td>
<td>N/A**</td>
<td>No</td>
<td>N/A**</td>
<td>N/A**</td>
</tr>
</tbody>
</table>

12 GTL is a test facility used by NHTSA to evaluate vehicle equipment for compliance with the FMVSSs.
13 FMVSS No. 205 requires that manufacturers mark the windshields to show the limits of the area having a luminous transmittance of less than 70%. For example, if a manufacturer chooses to install a shade band at the upper edge of the windshield, the windshield must be permanently marked with a line indicating the line of demarcation. An arrow and “AS–1” must also be marked on the glazing which points to the area compliant with the visibility requirements [minimum level of light transmittance required for a windshield in the area indicated by the direction of the arrow] of FMVSS No. 205.

Table 1.—Comparison of Estimated Shade Band Compliance with SAE J100 and ECE–R43
As demonstrated in Table 1, not all tested vehicles comply with ECE R43, and differing results occur for the SAE J100 procedure and the ECE R43 procedure. The SAE procedure uses an “up angle” of 5 degrees to determine the lower limit of the shade band area and the ECE R43 procedure uses an “up angle” of 7 degrees to determine the upper limit of the area for driving visibility. Other minor factors distinguish the SAE method from the ECE method, but these differences are due only to the method by which the point of origin for the 5 degree and 7 degree lines is established.14

As stated in the NPRM, NHTSA believes that establishing a lower boundary for windshield shade bands is a necessary component of the amended glazing standard. Further, no negative comments were received on the proposal to institute a requirement for the lower boundary for a shade band on a windshield.

The net safety benefit from the slight differences in allowable shade band design between SAE J100 and ECE R43 is negligible. While the SAE procedure offers slightly greater glare protection, the ECE R43 procedure allows a greater daylight opening for visibility at luminous transmittance values of 70% or greater. NHTSA believes that the approaches set forth in both ECE R43 and SAE J100 represent reasonable approaches to determining the limits of a windshield shade band.

However, each procedure is dependent upon the location of a seating design point defined by the vehicle manufacturer. The ECE method relies upon the location of the European “R-point” whereas the SAE method relies upon the SAE seating reference point (SgRP). Due to the existence of only slight technical differences between the two methods and the use of SgRP in other FMVSS, NHTSA has decided to adopt the SAE J100 recommended practice. This adoption includes, however, a substitution of the ECE R43 procedure “up angle” of 7 degrees, instead of the SAE procedure “up angle” of 5 degrees, to determine the upper limit of the area for driving visibility.

Using the 7 degree “up angle” method for determining the location of the AS–1 line increases the total windshield visibility. Additionally, manufacturers that presently manufacture their shade bands in accordance with SAE J100 can continue using the same testing conditions and procedures defined in SAE J100, except for the “up angle.” However, due to the substantial similarity between the provisions of SAE J100 and ECE R43, except for the degree of the “up angle,” the agency anticipates the shade band boundary line under the new rule would more closely approximate the ECE R43 line due to the 7 degree “up angle” for most vehicles. Therefore, we believe manufacturers would be able to market vehicles with the same AS–1 line in both Europe and the United States.

Agency testing indicates that most manufacturers do not use all of the potential available windshield shade band area available under ECE R43 for shade band coverage. However, as demonstrated above in Table 1, not all tested vehicles complied with ECE R43 (one out of four did not comply). Therefore, a small percentage of current production vehicles may not comply with the new shade band requirement. However, as with the 2000 Chevrolet Camaro, the anticipated extent of failure for this small percentage of vehicles is slight. The agency believes that modifying the shade band location by 25 mm (1 inch) or less on most vehicles represents a reasonable undertaking that should not be costly for manufacturers and that can be accomplished within a short lead time. Based on the results of the agency’s testing, manufacturers should have no difficulty adjusting shade bands to meet the new requirement.

With regard to shade band requirements for glazing areas other than the upper edge of the windshield, SAE J100 does not address driver visibility for the bottom edge of the windshield or for the side of the windshield. SAE J100 does include shade band requirements for fixed side and rear windows. While SAE J100 includes this requirement for side and rear windows, the majority of side and rear windows are tempered glass. Shade bands can only be applied to laminated glazing (by tinting the inner layer). Laminated glazing is required only for windshield applications. Therefore, shade bands rarely exist on fixed side and rear windows. Further, ECE R43 does not contain shade band requirements for side or rear windows. Because of the limited number of fixed side and rear windows containing shade bands and because of harmonization concerns, as commented by FGMAJ, the agency has decided to apply the provisions of SAE J100 exclusively to windshield applications. However, the light transmittance requirements for side and rear windows contained in FMVSS No. 205 and ANSI/SAE Z26.1–1996 will continue to apply to side and rear windows.

E. Certification and Verification of DOT Numbers

Comments concerning the certification and verification of DOT numbers suggest that NHTSA’s DOT registry process should require additional certification and verification activities such as the re-certification of numbers every 5 years and the maintenance of active and non-active manufacturer lists. Commenters did not, however, provide evidence that the additional certification and verification activities would yield safety benefits. Further, the agency believes that additional certification and verification activities would require additional resources and manpower which would, in turn, adversely impact the agency’s use of its resources to upgrade its safety.

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14 The test zones used by each standard are generated using different methods. The European test zone uses the ISO “V” points (coordinates related to seat back angle) while the U.S. zones are based on the SAE J941 ellipse. However, the ISO “V” points are a derivative of the SAE ellipse, and generate substantially similar zones. While the zones are not identical, the differences in practice account for only slight variations in calculated outcomes.
standards. Due to the absence of apparent safety benefits and because additional registry and certification activities would detract resources from its safety mission, the agency is not amending the current DOT registry process at this time.

As stated above, FGMAJ suggested that a manufacturer who cuts glazing should be required to obtain a separate DOT code number from the one used by the prime glazing manufacturer who produces the glazing. NHTSA is unaware of any safety benefits associated with this suggestion. Additionally, this suggested action would create an additional resource burden for the agency.15 Therefore, NHTSA is not adopting the suggested requirement. NHTSA, however, is aware of the need for clarification regarding certification responsibilities and is adopting the language proposed in the NPRM for S6 of FMVSS No. 205. This revised section provides a more straightforward and clearer statement of the certification and marking responsibilities of a manufacturer who fabricates, laminates, or tempers glazing material and distinguishes those responsibilities from those of a manufacturer who cuts a section of glazing material for subsequent use in a motor vehicle application. This text also makes clear that the requirement to affix a manufacturer’s code mark to the glazing applies only to the prime glazing manufacturer16 and not to a manufacturer or distributor who simply cuts a piece of glazing.

The proposed regulatory text in the NPRM included a definition of “prime glazing manufacturer” as “a manufacturer that fabricates, laminates, or tempers glazing materials.” FGMAJ commented that this definition should also include a reference to aftermarket manufacturers. The agency considers it unnecessary to add a reference to aftermarket manufacturers in the definition of “prime glazing manufacturer.” FMVSS No. 205 applies to all glazing for use in motor vehicles, whether it is supplied as original equipment in a vehicle or as an aftermarket product. Besides this suggestion by FGMAJ, the agency received no other comments concerning the definition of “prime glazing manufacturer.” Therefore, the agency has decided to adopt the definition of “prime glazing manufacturer” as proposed in the NPRM.

D. Other Issues

1. Applicability of Standard to MPVs

Today’s rule retains S5.1.1.6 in the regulatory text of FMVSS 205. Paragraph S5.1.1.6 ensures that MPVs must meet the same glazing requirements as those required for trucks. NHTSA agrees with DC and SAE that the requirements for glazing to be used in trucks should be applied to glazing for use in MPVs. This approach of applying identical requirements to both trucks and MPVs is consistent with the treatment of trucks and MPVs in past interpretations (57 FR 2496; 63 FR 37820).

2. Edge Treatment for Automotive Safety Glass

NHTSA agrees with SAE that the requirements of S5.2 of FMVSS No. 205 are redundant with the edge treatment provisions of Section 6 of ANSI/SAE Z26.1–1996, which requires that exposed edges in vehicles other than school buses shall be treated in accordance with SAE J673 (April 1993 version) and that exposed edges in school buses shall be banded. Section 6 of ANSI/SAE Z26.1–1996 is identical to the current requirements for edge treatment in FMVSS No. 205, except that FMVSS No. 205 incorporates by reference an outdated (1967) version of SAE J673. Due to the redundancy between FMVSS No. 205 and ANSI/SAE Z26.1–1996 concerning the requirements for edge treatment and because ANSI/SAE Z26.1–1996 contains a more recent version of SAE J673, the agency will delete S5.2 from FMVSS No. 205 and revise the regulatory text accordingly.

3. Labeling

Toyota has requested that FMVSS No. 205 state that the cleaning instruction label requirement in ANSI/SAE Z26.1–1996 is not applicable to Items 12, 13, 16A and 16B. With the deletion of S5.1.2.2 and S5.1.2.10, the cleaning instruction requirements for these items would be found in ANSI/SAE Z26.1–1996.

Toyota is correct that Items 12, 13, 16A and 16B are not required to meet the light transmittance test in ANSI/SAE Z26.1–1996. However, ANSI/SAE Z26.1–1996 does include tests, e.g., the weathering test, which ensure that they maintain a luminous transmittance that closely approximates the transmittance found in their original manufactured state. This indicates to NHTSA that, while Items 12, 13, 16A and 16B need not meet the 70% light transmittance test, it is important for these items of glazing to maintain a luminous transmittance which is achieved, in part, by proper maintenance and cleaning indicated on the cleaning instruction label on the glazing.

Additionally, ANSI/SAE Z26.1–1996 provides manufacturers with the option of placing cleaning instructions in the vehicle’s owner’s manual rather than on a label affixed to the glazing for Items 16A and 16B. The agency believes that the option of placing the cleaning instructions in the owner’s manual rather than on a cleaning instruction label on the glazing partially alleviates Toyota’s concern.

4. Additional Tests

As discussed above, Sekurit suggested that the agency incorporate additional tests for head impact into windscreens, optical properties, and mechanical strength into FMVSS No. 205. Currently, the agency, through participation in GRSG meetings on the proposed Global Glazing Regulation, is evaluating the tests recommended by Sekurit. If NHTSA tentatively concludes that these tests would have a safety benefit, the agency may propose adoption of one or more of these tests in a future rulemaking.

V. Effective Date

The agency proposed a leadtime of 45 days. AP Technoglass, a glazing manufacturer, commented that the new requirements, including shade band, glass fracture test, and weathering test requirements, may affect glazing currently under production that does not conform to the new requirements. For instance, manufacturers may need to purchase new equipment to perform the weathering test with a xenon arc lamp. NHTSA agrees that these new requirements may take longer than 45 days to incorporate. In NHTSA’s judgment, these changes can be accomplished within 180 days. Consequently, the changes to FMVSS No. 205 will become effective, and compliance will be required, 180 days following the publication of the final rule. However, manufacturers may voluntarily comply with this rule earlier.

VI. Plain Language

In accordance with Executive Order 12866, we have rewritten or reorganized portions of the regulatory text for clarity and conformance to Plain Language practices. These include portions of the regulatory text that are not being
substantively changed by this rule. For example, we have replaced passive verbs with active verbs, replaced “shall” with “must,” and made explicitly clear who has the responsibility for acting.

Rewriting is especially apparent in the certification and marking requirements of section 6. We eliminated the marking requirement of former S6.1 because it is already incorporated in section 7 of ANSI/SAE Z26.1–1996. We moved the definition of prime glazing manufacturer in S6.1 into the S4 definitions section. To eliminate redundancy, former S6.2 and S6.3 have been combined in S6.1, and former S6.4 and S6.5 have been combined in S6.3. We do not intend by this rule to make any substantive changes in S6.

VII. Rulemaking Analyses

Executive Order 12866 and DOT Regulatory Policies and Procedures

This rulemaking action was not reviewed under Executive Order 12866. The rulemaking action is not significant under Department of Transportation regulatory policies and procedures. The effect of the rulemaking action is to clarify existing requirements. It will not impose any additional burden upon any person. Impacts of the final rule are, therefore, so minimal that preparation of a full regulatory evaluation is not warranted.

Regulatory Flexibility Act

We have considered the impacts of this rulemaking action in relation to the Regulatory Flexibility Act (5 U.S.C. 601 et seq.). I certify that this rulemaking action will not have a significant economic impact upon a substantial number of small entities.

The following is our statement providing the factual basis for the certification (5 U.S.C. 605(b)). The final rule affects manufacturers of motor vehicles and motor vehicle glazing. According to the size standards of the Small Business Association (at 13 CFR part 121.601), manufacturers of glazing are considered manufacturers of “Motor Vehicle Parts and Accessories” (SIC Code 3714). The size standard for SIC Code 3714 is 750 employees or fewer. The size standard for manufacturers of “Motor Vehicles and Passenger Car Bodies” (SIC Code 3711) is 1,000 employees or fewer. This Final Rule will not have any significant economic impact on a small business in these industries because it makes no significant substantive change to requirements currently specified in FMVSS No. 205. Small organizations and governmental jurisdictions that purchase glazing will not be significantly affected because this rulemaking will not cause price increases. Accordingly, we have not prepared a Regulatory Flexibility Analysis.

Federalism

Executive Order 13132 requires us to develop an accountable process to ensure “meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.” “Policies that have federalism implications” is defined in the Executive Order to include regulations that have “substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.” Under Executive Order 13132, we may not issue a regulation with Federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or unless we consult with State and local governments, or unless we consult with State and local officials early in the process of developing the proposed regulation. We also may not issue a regulation with Federalism implications and that preempts State law unless we consult with State and local officials early in the process of developing the proposed regulation. This final rule will not have any substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. Thus, the requirements of Section 6 of the Executive Order do not apply to this rule.

Civil Justice Reform

This rule does not have any retroactive effect. According to 49 U.S.C. 30103, whenever a Federal motor vehicle safety standard is in effect, a state may not adopt or maintain a safety standard applicable to the same aspect of performance which is not identical to the Federal standard. 49 U.S.C. 30161 sets forth a procedure for judicial review of final rules establishing, amending, or revoking Federal motor vehicle safety standards. That section does not require submission of a petition for reconsideration or other administrative proceedings before parties may file suit in court.

National Technology and Transfer and Advancement Act of 1995 (NTTAA)

Under the National Technology and Transfer and Advancement Act of 1995 (NTTAA) (Public Law 104–113), “all Federal agencies and departments shall use technical standards that are developed or adopted by voluntary consensus standards bodies, using such technical standards as a means to carry out policy objectives or activities determined by the agencies and departments.” Certain technical standards developed by the American National Standards Institute (ANSI) and Society of Automotive Engineers (SAE) have been considered and incorporated by reference in the formulation of these requirements.

Paperwork Reduction Act

Under the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501, et seq.), Federal agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct, sponsor, or require through regulations. NHTSA has reviewed this proposal and determined that it does not contain collection of information requirements.

Unfunded Mandates Reform Act of 1995

This rule does not impose a Federal mandate resulting in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of $100 million or more in any one year. (2 U.S.C. 1531 et seq.).

VIII. Regulatory Text

List of Subjects in 49 CFR Part 571

Imports, Incorporation by reference, Motor vehicle safety, Reporting and recordkeeping requirements, Tires.

In consideration of the foregoing, 49 CFR Part 571 is amended as follows:

PART 571—FEDERAL MOTOR VEHICLE SAFETY STANDARDS

1. The authority citation for Part 571 continues to read as follows:


2. Section 571.205 is amended by:

a. Revising paragraph S3,

b. Amending S4 by adding a new definition in alphabetical order,

c. Revising paragraph S5.1,

d. Revising paragraph S5.2,

e. Adding paragraph S5.3,

f. Adding paragraph S5.4,

g. Revising paragraphs S6.1 through S6.3,

h. Removing paragraphs S6.4 and S6.5,
§ 571.205 Standard No. 205, Glazing materials.

S3. Application and Incorporation by Reference.

S3.1 Application. This standard applies to passenger cars, multipurpose passenger vehicles, trucks, buses, motorcycles, slide-in campers, pickup covers designed to carry persons while in motion, and low speed vehicles, and to glazing materials for use in those vehicles.

S3.2 Incorporation by Reference.


S4. Definitions.

Prime glazing manufacturer means a manufacturer that fabricates, laminates, or tempers glazing materials.

§ 571.500 Standard No. 500; Low-speed vehicles.

S5. Requirements

S5.1 Glazing materials for use in motor vehicles must conform to ANSI/SAE Z26.1–1996 unless this standard provides otherwise.

S5.2 NHTSA may test any portion of the glazing when doing the fracture test (Test No. 7) described in section 5.7 of ANSI/SAE Z26.1–1996.

S5.3 Shade bands. Shade band areas for windshields shall comply with SAE J100, rev. June 95 except that the value of 7 degrees must be used in place of the value of 5 degrees specified in Section 4, Shade Band Boundary Requirements, of SAE J100, rev. June 95.


S6. Certification and marking.

S6.1 A prime glazing material manufacturer must certify, in accordance with 49 U.S.C. 30115, each piece of glazing material to which this standard applies that is designed—

(a) As a component of any specific motor vehicle or camper; or

(b) To be cut into components for use in motor vehicles or items of motor vehicle equipment.

S6.2 A prime glazing manufacturer certifies its glazing by adding to the marks required by section 7 of ANSI/SAE Z26.1–1996, in letters and numerals of the same size, the symbol “DOT” and a manufacturer’s code mark that NHTSA assigns to the manufacturer. NHTSA will assign a code mark to a manufacturer after the manufacturer submits a written request to the Office of Vehicle Safety Compliance, National Highway Traffic Safety Administration, 400 Seventh Street, SW., Washington, DC 20590. The request must include the company name, address, and a statement from the manufacturer certifying its status as a prime glazing manufacturer as defined in S4.

S6.3 A manufacturer or distributor who cuts a section of glazing material to which this standard applies, for use in a motor vehicle or camper, must—

(a) Mark that material in accordance with section 7 of ANSI/SAE Z26.1–1996; and

(b) Certify that its product complies with this standard in accordance with 49 U.S.C. 30115.


Jeffrey W. Runge,
Administrator.

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