The Engineering Society For Advancing Mobility Land Sea Air and Space®
INTERNATIONAL
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SURFACE VEHICLE RECOMMENDED PRACTICE

SAE J674 REV. JUL97

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(R) SAFETY GLAZING MATERIALS—MOTOR VEHICLES AND MOTOR VEHICLE EQUIPMENT

Foreword—With the development of what is commonly termed "safety glass," the diversity in claims for its manufacture and use and its requirement for Federal and State motor vehicle laws or regulations led to the organization of a Sectional Committee in June, 1934, under the American Standards Association procedure to formulate a standard safety code for all safety glass. The first code developed under this procedure related to land motor vehicles only, and a Safety Glass Advisory Committee of the Association was appointed under the Passenger Car Division which cooperated with the Sectional Committee in developing the original American Tentative Standard, ASA Z-26.1-1935. This was subsequently revised, ASA Z-26.1-1938, with reference to trade marking of the glass, and again later to include test requirements for other safety glazing materials, ASA Z-26.1-1950. The standard was modified in 1966 to the extent necessary to include synthetic plastic materials along with glass under the general term of "safety glazing materials," ANSI/SAE Z-26.1-1966. The standard was further revised in 1977, and again in 1983 to include glass-plastic materials under the general term of "safety glazing materials." The standard was revised again in 1990, which is the latest complete updated version, ANSI/SAE Z-26.1-1990. This SAE Recommended Practice is intended primarily as a guide to the proper selection of safety glazing materials for use in land motor vehicles and motor vehicle equipment.

1. Scope—All glazing materials used in motor vehicles and motor vehicle equipment operating on land highways should comply with the requirements of the American National Standard, ANSI/SAE Z-26.1. The American National Standard for Safety Glazing Materials for Glazing Motor Vehicles and Motor Vehicle Equipment Operating on Land Highways—Safety Code, ANSI/SAE Z-26.1-1990 is the latest complete updated version and is referred to hereafter as "the safety code." This SAE Recommended Practice is not intended to preclude references to any governmental law, ordinance, or regulation which might apply to the glazing of motor vehicles and motor vehicle equipment operating on land highways.

2. References

2.1 Applicable Publications—The following publications form a part of this specification to the extent specified herein. Unless otherwise indicated, the latest version of SAE publications shall apply.

2.1.1 SAE PUBLICATION—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J673—Automotive Safety Glasses

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2.1.2 ANSI PUBLICATION—Available from American National Standards Institute, 11 West 42nd Street, New York NY 10036-8002.

ANSI/SAE Z-26.1-1990—American National Standard for Safety Glazing Materials for Glazing Motor Vehicles and Motor Vehicle Equipment Operating on Land Highways—Safety Code

3. Definitions

3.1 Safety Glazing Materials—Means a product consisting of organic and/or inorganic materials so constructed or treated to reduce, in comparison with annealed sheet, plate or float glass, the likelihood of injury to persons as a result of contact with these safety glazing materials when used in a vehicle, whether they may be broken or unbroken, and for which special requirements regarding visibility, strength and abrasion are set-forth .

3.2 Safety Glass—Means safety glazing materials predominantly ceramic in character that meet the appropriate requirements of the safety code, including (but not limited to) laminated glass, tempered glass, and wired glass.

3.2.1 LAMINATED GLASS—Means two or more pieces of sheet, plate, or float glass bonded together by an intervening layer or layers of plastic material. It will crack or break under sufficient impact, but the pieces of glass tend to adhere to the plastic. If a hole is produced, the edges are likely to be less jagged than would be the case with annealed glass.

3.2.2 TEMPERED GLASS—(Other terms such as “heat-treated glass,” “case-hardened glass,” and “chemically tempered glass” are used also.) Means a single piece of specially treated sheet, plate or float glass possessing mechanical strength substantially higher than annealed glass. When broken at any point, the entire piece breaks into small pieces that have relatively dull edges as compared to those of broken pieces of annealed glass.

3.2.3 WIRED GLASS—Means a single piece of glass with a layer of meshed wire completely imbedded in the glass but not necessarily in the center of the glass.

3.3 Safety Glazing Plastics—Means any safety glazing material, predominantly synthetic organic in character, that meets the appropriate requirements of the safety code, including single-ply and laminated products whether rigid or flexible.

3.4 Glass-Plastic Glazing Material—Means a laminate of one or more layers of glass and one or more layers of plastic in which a plastic surface of the glazing faces inward when the glazing is installed in a vehicle.

4. Use of Descriptive Terms—As the definition indicates, safety glazing materials, in comparison with annealed sheet, plate or float glass, are intended to reduce the likelihood of injury or the severity of injury in the event of their breakage. Therefore, terms such as “nonbreakable,” “nonscatterable,” and “nonsplinterable,” should not be interpreted by the driving public as meaning that absolute protection is afforded to the occupants of the vehicle by the safety glazing materials so described, as the descriptive terms might seem to warrant. No such terms are used in the safety code.

5. Degree of Safety—One safety glazing material may be superior for protection against one type of hazard, whereas another may be superior against another type. Since accident conditions are not standardized, no one type of safety glazing material can be shown to possess the maximum degree of safety under all conditions, against all conceivable hazards.

NOTE—See SAE J673.

6. *Notes*

6.1 Marginal Indicia—The change bar (l) located in the left margin is for the convenience of the user in locating areas where technical revisions have been made to the previous issue of the report. An (R) symbol to the left of the document title indicates a complete revision of the report.

PREPARED BY THE SAE GLAZING MATERIALS STANDARDS COMMITTEE