

CS87-41

Lanterns, electric; warning, red

U. S. DEPARTMENT OF COMMERCE

JESSE H. JONES, Secretary

NATIONAL BUREAU OF STANDARDS

LYMAN J. BRIGGS, Director

RED ELECTRIC WARNING  
LANTERNS

Bureau of Standards

NOV 16 1940

COMMERCIAL STANDARD CS87-41

Effective Date for New Production From January 1, 1941



Reference book not to be taken from the Library.

A RECORDED VOLUNTARY STANDARD  
OF THE TRADE

UNITED STATES  
GOVERNMENT PRINTING OFFICE  
WASHINGTON : 1940

PROMULGATION  
of  
COMMERCIAL STANDARD CS87-41  
for  
RED ELECTRIC WARNING LANTERNS

---

On January 11 and 12, 1940, at the instance of the Safety Equipment Manufacturers Association, a general conference of representative manufacturers, distributors, regulatory officials, testing laboratories, and users of red electric warning lanterns adopted a recommended commercial standard for this commodity. Those concerned have since accepted and approved for promulgation by the United States Department of Commerce, through the National Bureau of Standards, the standard as shown herein.

The standard is effective for new production from January 1, 1941.

Promulgation recommended.

I. J. Fairchild,  
*Chief, Division of Trade Standards.*

Promulgated.

Lyman J. Briggs,  
*Director, National Bureau of Standards.*

Promulgation approved.

Jesse H. Jones,  
*Secretary of Commerce.*

# RED ELECTRIC WARNING LANTERNS

## COMMERCIAL STANDARD CS87-41

### EXPLANATORY

These specifications are intended to apply primarily to sample equipments submitted by the manufacturer to the testing laboratory for original approval but may be applied to equipments purchased on the open market or to equipments taken at random from regular production. Should the first sample fail to pass one or more of the test requirements, two more samples may be tested, and, if two out of the three samples comply with each of the requirements, the equipment shall be considered to be satisfactory.

### PURPOSE

1. The purpose is to establish standard specifications and methods of test for red electric warning lanterns for the guidance of manufacturers, distributors, and users.

### SCOPE

2. This standard covers the requirements and methods for construction, vibration and shock, weatherproof, dust, reliability and life, and photometric tests of red electric warning lanterns.

### DEFINITION

3. A red electric warning lantern, as herein contemplated, is a device capable of displaying an electric light, either flashing or steady burning, warning the driver of an approaching vehicle that beyond the first lantern there is a hazard and that he should proceed with caution.

### GENERAL REQUIREMENTS

4a. The warning indication shall be red.

4b. A red lens shall be a lens the color of which, under service conditions, employing a light source having the quality of International Commission on Illumination illuminant *A* (incandescent lamp at 2,848° K), has a value of  $y$  not greater than 0.335, and a value of  $z$  not greater than 0.002,  $y$  and  $z$  being trichromatic coefficients derived on the basis of the 1931 ICI standard observer and coordinate system.

4c. Standard light-limit glasses (or lenses) representing the pale and yellow limits for red lenses may be obtained from the Electrical Testing Laboratories, East End Avenue and 79th Street, New York City. (No standard dark-limit glasses are required for the red, since the minimum candlepower requirements should eliminate lenses which are too dark.)

4d. A red lens shall not be acceptable if it is paler or yellower than the light-limit standard, when the two are illuminated by incandescent-lamp light.

5a. Lanterns shall be provided in sets of three (3) contained in a substantial metal box or rack which can be securely mounted on the motor vehicle.

5b. Any such metal box may be equipped with drain holes to permit the escape of water.

6. When placed in operating position on a 10-percent grade, lanterns shall be stable and stand up against a 40-mph down-grade wind.

#### INSTRUCTIONS FOR USE

7. The manufacturer shall furnish with each set of lanterns submitted for laboratory test, printed instructions as to the method of operation, type and designation of bulb, type of battery, and such other details as the manufacturer may deem necessary in order that the user of these lanterns may be able to operate them at their maximum efficiency.

#### LAMP BULBS

8. Lamp bulbs used in lanterns shall be of American manufacture. The physical and electrical characteristics of the bulbs used in red electric warning lanterns shall be in accordance with the current standard SAE or SEMA specifications for such bulbs.

#### SAMPLES FOR TEST

9. Sample lanterns submitted for laboratory test shall be representative of the devices as regularly manufactured and marketed. Each sample shall include all accessory equipment peculiar to the device and necessary to operate it in normal manner. The vibration and shock, weatherproof, dust, and reliability and life tests shall be made on the same sample in that order.

10. Bulbs used in photometric tests shall be those designated to be regularly supplied with the lanterns.

11. Each battery shall comply with Federal Specification W-B-101a, or be a nondeteriorating reserve-cell type.

#### LABORATORY FACILITIES

12. All laboratory tests shall be made by a recognized, impartial engineering laboratory having all facilities and equipment necessary to make accurate physical and optical tests herein specified in accordance with established laboratory practices.

#### VIBRATION AND SHOCK TEST

13a. Three sample lanterns in the metal box or rack in which they were submitted to the laboratory and mounted, as would obtain in service, shall be bolted to the anvil end of the table of the vibration rack and vibrated approximately 750 times per minute through a distance of  $\frac{1}{8}$  inch. The table shall be spring mounted at one end and fitted with steel calks on the under side of the other end. These calks are to make contact with the steel anvil once during each cycle at the completion of the fall. The rack shall be operated under a spring tension of 60 to 70 pounds. This test shall be continued for 1 hour.

13b. The lanterns shall then be examined. Any lantern showing evidence of structural failure, material physical weakness, loosening, or rupture of parts shall be considered to have failed. Failure of the bulb shall not be considered as failure of the unit.

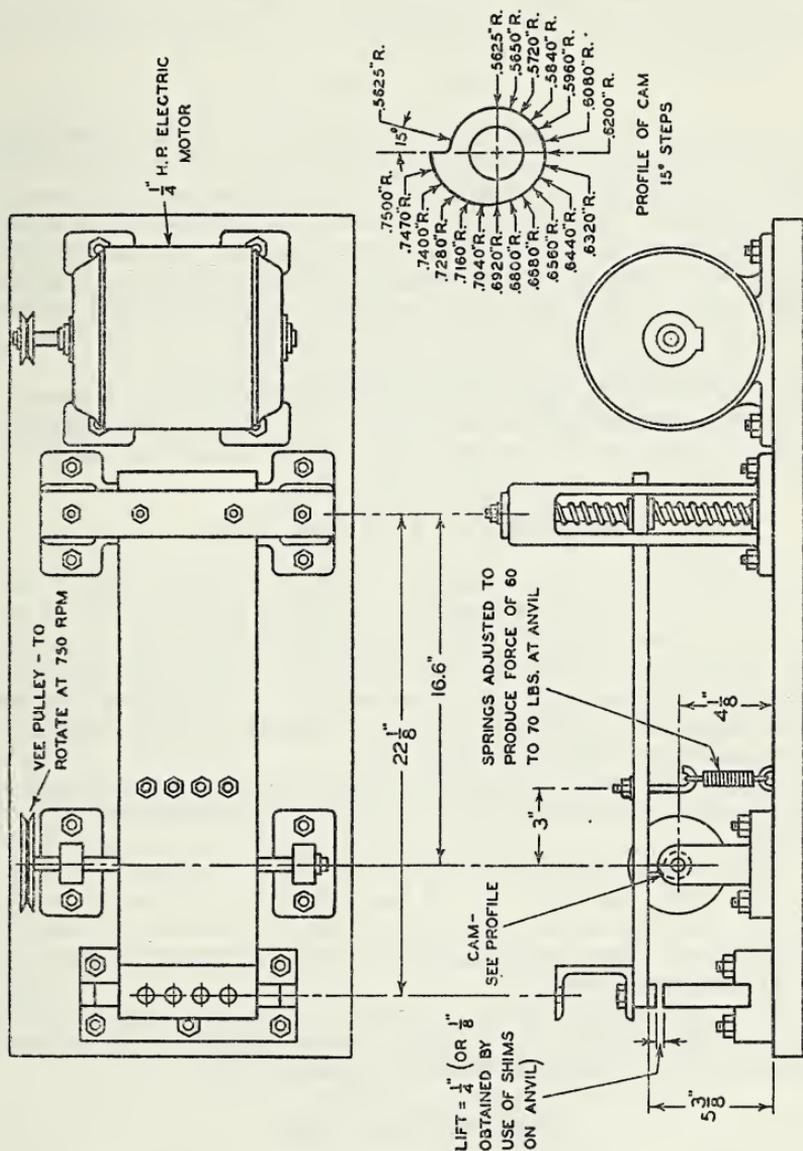


FIGURE 1.—Vibration and shock-testing machine

13c. It is recommended that for the purpose of standardizing the vibration and shock test, the testing machine should be made substantially in accordance with the drawing, figure 1.

MOISTURE TEST

14a. A sample lantern, mounted in its normal operating position, and the container in its normal service position with drain holes open, shall be subjected to a precipitation of 0.1 inch of water per minute,

delivered at an angle of 45 degrees from a nozzle with a solid-cone spray. During the moisture test, the lamp shall revolve about its vertical axis at a rate of 4 rpm. This test shall be continued for 12 hours.

14b. The lantern and container shall then be examined. An accumulation of more than  $\frac{1}{2}$  ml of water inside the lantern shall constitute a failure.

#### DUST TEST

15a. A sample unit shall be mounted in its normal operating position, at least 6 inches from the wall, in a box measuring 3 feet in all directions, containing 10 pounds of fine powdered cement in accordance with ASTM Specification C9-38. At intervals of 15 minutes, this dust shall be agitated by compressed air or fan blower by projecting blasts of air for a 2-second period in a downward direction into the dust in such a way that the dust is completely and uniformly diffused throughout the entire cube. The dust is then allowed to settle. This test shall be continued for 5 hours.

15b. After the dust test, the exterior surface shall be cleaned, and if the maximum candlepower is within 10 percent of the maximum as compared with the condition after the unit is cleaned inside and out, it shall be considered adequately dust tight.

#### RELIABILITY AND LIFE TEST

16a. In the case of red electric warning lanterns which can be turned on or off at will, a sample unit shall be set up in complete form and operated for 1,000 cycles, using the operating unit or switch submitted with the device as a part thereof. This test shall be made at a rate not to exceed 50 times per minute. In the case of flashing units, the rate shall be slow enough to permit the unit to flash at least twice for each operation of the switch.

16b. When this test is completed, the operating unit shall not show any evidence of material physical weakness, excessive wear, or high resistance.

16c. The lantern shall be turned on for a period of 12 hours. During this test, the "on" period for the flasher, if one is provided, shall be long enough at all times to permit the filament to come up to full brightness. The rate of flashing during the test shall not be more than 150 cycles per minute.

16d. The device shall be operated in the manner intended and shall provide red light of at least the intensity prescribed below at the end of the 12-hour test, as provided in paragraph 16c.

#### PHOTOMETRIC TEST

17. The lamps shall meet the current photometric requirements<sup>1</sup> of the IES, SAE, and SEMA (Illuminating Engineering Society, Society of Automotive Engineers, and Safety Equipment Manufacturers Association).

<sup>1</sup> The 1939 photometric requirements of the IES, SAE, and SEMA are as follows:

Directly to the front and rear of the lantern on a horizontal line through the light source parallel to the road, the light shall have an intensity of at least 0.50 cp.

In all directions within 10 degrees of this line, there shall be at least 0.30 cp.

In all directions within 30 degrees of this line, there shall be at least 0.10 cp.

The intensity shall not exceed 25 cp in any direction.

## MARKING AND LABELING

18. Each red electric warning lantern and lens manufactured and sold as conforming to this standard shall bear a distinctive designation prominently and permanently indicating the trade-mark of the manufacturer duly applied for or registered under the laws of the United States, or the trade name or other distinctive model, designation, or other means of identification.

19. In order to provide the purchaser with a ready means for distinguishing between red electric warning lanterns which meet the requirements of this standard and those which do not, the Safety Equipment Manufacturers Association has adopted the wording quoted below for labels or statements on cartons. The mark "SEMA-APPROVED" on the lanterns, and the lens where so specified, is based upon tests on samples and reexaminations by a recognized impartial engineering laboratory. It illustrates a method of certifying that these items comply with the commercial standard.

This Red Electric Warning Lantern, marked SEMA-APPROVED, is certified by the Safety Equipment Manufacturers Association and by the manufacturer as conforming to Commercial Standard CS87-41.

## EFFECTIVE DATE

The standard is effective for new production from January 1, 1941.

## STANDING COMMITTEE

The following individuals comprise the membership of the standing committee, which is to review, prior to circulation for acceptance, revisions proposed to keep the standard abreast of progress. Each association nominated its own representatives. Comment concerning the standard and suggestions for revision may be addressed to any member of the committee or to the Division of Trade Standards, National Bureau of Standards, which acts as secretary for the committee.

*Manufacturers:*

- H. B. DONLEY (chairman), Columbus Metal Products, Inc., 767 North 4th St., Columbus, Ohio. Representing Safety Equipment Manufacturers Association.
- A. B. DETTMER, K-D Lamp Co., 610 West Court St., Cincinnati, Ohio. Representing Safety Equipment Manufacturers Association.
- R. R. WHIPPLE, The Trippe Manufacturing Co., 564 W. Adams St., Chicago, Ill. Representing Safety Equipment Manufacturers Association.
- CHARLES W. ANKLAM, C. M. Hall Lamp Co., 1035 E. Hancock Ave., Detroit, Mich. Representing Society of Automotive Engineers.
- R. N. FALGE, Guide Lamp Division, General Motors Corp., Anderson, Ind. Representing Society of Automotive Engineers.
- WILLIAM F. LITTLE, Electrical Testing Laboratories, East End Ave. at 79th St., New York, N. Y. Representing Society of Automotive Engineers.

*Distributors:*

- W. E. BLANCHARD, National Automobile Dealers Association, 154 Bagley Avenue, Detroit, Mich.
- G. B. CORNWELL, Sears, Roebuck & Co., Homan Ave. and Arthington St., Chicago, Ill. Representing Mail Order Association of America.
- L. S. JULLIEN, L. S. Jullien, Inc., 1439 P St., NW., Washington, D. C. Representing Motor & Equipment Wholesalers Association.

*Users:*

- CHARLES G. MORGAN, Jr., American Trucking Associations, Inc., 1013 16th St., NW., Washington, D. C.  
 LEON F. BANIGAN, National Council of Private Motor Truck Owners, Inc., National Press Bldg., Washington, D. C.  
 BURTON W. MARSH, American Automobile Association, Mills Bldg., 17th and Pennsylvania Ave., Washington, D. C.  
 Alternate: EARL ALLGAIER.  
 MARTIN SCHREIBER, Public Service Coordinated Transport, 80 Park Place, Newark, N. J. Representing National Association of Motor Bus Operators.

*General Interest:*

- H. H. ALLEN, Interstate Commerce Commission, Washington, D. C.  
 H. H. KELLY, Interstate Commerce Commission, Washington, D. C. Representing Federal Interdepartmental Safety Council.  
 Alternate: H. H. ALLEN.  
 FRANK W. MATSON, Minnesota Railroad and Warehouse Commission, St. Paul, Minn. Representing National Association of Railroad and Utilities Commissioners.  
 J. J. SHANLEY, Department of Motor Vehicles, Trenton, N. J. Representing American Association of Motor Vehicle Administrators.

*Laboratories:*

- SYDNEY V. JAMES, Underwriters' Laboratories, Inc., 207 E. Ohio St., Chicago, Ill.  
 MONROE L. PATZIG, American Council of Commercial Laboratories, 2215 Ingersoll Ave., Des Moines, Iowa.  
 WM. F. LITTLE, Electrical Testing Laboratories, East End Ave. at 79th St., New York, N. Y.  
 Alternate: HERMAN KOENIG.

## HISTORY OF PROJECT

Pursuant to a request on July 18, 1938, from the Safety Equipment Manufacturers Association (then known as the MEMA Light and Signal Group) for the cooperation of the National Bureau of Standards in the establishment of commercial standards for nine items of lamps and signal equipment for vehicles (after market), preliminary conferences of all interested manufacturers were held in Detroit on September 22 and 23, 1938, and again on March 1 and 2, 1939, in order to adjust the drafts to suit the consensus of producers.

The proposed standards, as adjusted by the preliminary manufacturers' conferences, were then submitted to the American Association of Motor Vehicle Administrators and other key organizations for advance consideration and recommendations. Following receipt of these recommendations, a general conference was held in Washington, D. C., on January 11 and 12, 1940, to which all interested producers, distributors, users, regulatory bodies, and testing laboratories were invited. The report of the general conference was circulated on February 20, 1940.

On April 8, 1940, copies of the Recommended Commercial Standards as adopted by the general conference, including recommendations of two subcommittees appointed by the conference, were circulated to all concerned for written acceptance. Upon receipt of written acceptances from a preponderant majority, announcement was issued on July 10, 1940, that the standards would become effective for new production from January 1, 1941.

## ACCEPTANCE OF COMMERCIAL STANDARD

If acceptance has not previously been filed, this sheet properly filled in, signed, and returned will provide for the recording of your organization as an acceptor of this commercial standard.

Date .....

Division of Trade Standards,  
National Bureau of Standards,  
Washington, D. C.

Gentlemen:

Having considered the statements on the reverse side of this sheet, we accept the Commercial Standard CS87-41 as our standard of practice in the

Production <sup>1</sup>                      Distribution <sup>1</sup>                      Use <sup>1</sup>

of red electric warning lanterns.

We will assist in securing its general recognition and use and will cooperate with the standing committee to effect revisions of the standard when necessary.

Signature of individual officer .....  
(In ink)

(Kindly typewrite or print the following lines)

Name and title of above officer .....

Organization .....  
(Fill in exactly as it should be listed)

Street address .....

City and State .....

<sup>1</sup> Please designate which group you represent by drawing lines through the other two. Please file separate acceptances for all subsidiary companies and affiliates which should be listed separately as acceptors. In the case of related interests, trade papers, colleges, etc., desiring to record their general approval, the words "in principle" should be added after the signature.

## TO THE ACCEPTOR

The following statements answer the usual questions arising in connection with the acceptance and its significance:

1. *Enforcement.*—Commercial standards are commodity specifications voluntarily established by mutual consent of those concerned. They present a common basis of understanding between the producer, distributor, and consumer and should not be confused with any plan of governmental regulation or control. The United States Department of Commerce has no regulatory power in the enforcement of their provisions, but since they represent the will of the interested groups as a whole, their provisions through usage soon become established as trade customs, and are made effective through incorporation into sales contracts by means of labels, invoices, and the like.

2. *The acceptor's responsibility.*—The purpose of commercial standards is to establish for specific commodities, nationally recognized grades or consumer criteria and the benefits therefrom will be measurable in direct proportion to their general recognition and actual use. Instances will occur when it may be necessary to deviate from the standard and the signing of an acceptance does not preclude such departures; however, such signature indicates an intention to follow the commercial standard where practicable, in the production, distribution, or consumption of the article in question.

3. *The Department's responsibility.*—The major function performed by the Department of Commerce in the voluntary establishment of commercial standards on a Nation-wide basis is fourfold: first, to act as an unbiased coordinator to bring all interested parties together for the mutually satisfactory adjustment of trade standards; second, to supply such assistance and advice as past experience with similar programs may suggest; third, to canvass and record the extent of acceptance and adherence to the standard on the part of producers, distributors, and users; and fourth, after acceptance, to publish and promulgate the standard for the information and guidance of buyers and sellers of the commodity.

4. *Announcement and promulgation.*—When the standard has been endorsed by a satisfactory majority of production or consumption in the absence of active, valid opposition, the success of the project is announced. If, however, in the opinion of the standing committee or the Department of Commerce, the support of any standard is inadequate, the right is reserved to withhold promulgation and publication.

## ACCEPTORS

The organizations and individuals listed below have accepted this standard as their standard of practice in the production, distribution, and use of red electric warning lanterns. Such endorsement does not signify that they may not find it necessary to deviate from the standard, nor that producers so listed guarantee all of their products in this field to conform with the requirements of this standard. Therefore, specific evidence of conformity should be obtained where required.

## ASSOCIATIONS

American Transit Association, New York, N. Y.  
 Michigan Trucking Association, Detroit, Mich.  
 National Council of Women of the U.S., Inc., New York, N. Y.  
 National Standard Parts Association, Detroit, Mich. (In principle.)  
 Safety Equipment Manufacturer's Association, Inc., New York, N. Y.

## FIRMS

A. G. Sales Co., Inc., New York, N. Y. (In principle.)  
 Adley Express Co., Inc., New Haven, Conn.  
 Aetna Motor Products Co., Boston (Dorchester), Mass.  
 Anthes Force Oiler Co., Fort Madison, Iowa.  
 Appleton Electric Co., Chicago, Ill.  
 Approved Patents Corporation, New York, N. Y.  
 Arrow Safety Device Co., Medford, N. J.  
 Atlantic Greyhounn Corporation, Arrow Safety Device Co., Medford, N. J.  
 Atlantic Greyhound Corporation, Charleston, W. Va.  
 Atlantic Refining Co., The, Philadelphia, Pa.  
 Autocar Co., The, Ardmore, Pa.  
 Automotive Lighting Equipment, Inc., Franklinton, La.  
 Bendix Aviation Corporation, Bendix Products Division, New York, N. Y.  
 Bolser Corporation, The, Cedar Falls, Iowa.  
 Carlton Lamp Corporation, Union City, N. J. (In principle.)  
 Casco Products Corporation, Bridgeport, Conn.  
 Central Co-operative Wholesale, Superior, Wis.  
 Coleman Motors Corporation, Littleton, Colo.  
 Columbus Metal Products, Inc., Columbus, Ohio.  
 Connecticut, State Motor Vehicle Department of, Hartford, Conn.

Connecticut Telephone & Electric Corporation, Meriden, Conn.  
 Culver-Stearns Manufacturing Co., Worcester, Mass.  
 Dallas, Better Business Bureau of, Dallas, Tex. (In principle.)  
 Delta Electric Co., Marion, Ind.  
 Detroit Testing Laboratory, The, Detroit, Mich. (In principle.)  
 Dietz Co., R. E., New York, N. Y. (In principle.)  
 Diveco-Twin Truck Co., Detroit, Mich.  
 Dixie Motor Coach Corporation, Dallas, Tex.  
 Economy Electric Lantern Co., Inc., Milwaukee, Wis.  
 Electric Service Supplies Co., Philadelphia, Pa.  
 Electrical Testing Laboratories, New York, N. Y. (In principle.)  
 Firestone Tire & Rubber Co., The, Akron, Ohio.  
 Hunt & Co., J. R., Baltimore, Md.  
 Idaho, State of, Boise, Idaho.  
 K-D Lamp Co., The, Cincinnati, Ohio.  
 Lancaster Lens Co., The, Lancaster, Ohio.  
 Long Beach, Calif., Ltd., Better Business Bureau of, Long Beach, Calif.  
 Machine Reporter Corporation, Portland, Oreg.  
 Maryland Casualty Co., Baltimore, Md. (In principle.)  
 Moreland Motor Truck Co., Los Angeles, Calif.  
 National Transportation Co., Inc., Bridgeport, Conn.  
 Nebraska State Railway Commission, Lincoln, Nebr.  
 New Orleans, Inc., Better Business Bureau of, New Orleans, La. (In principle.)  
 Oklahoma Department of Public Safety, Oklahoma City, Okla.  
 Packard Properties, Inc., General Accessories Division of, New York, N. Y.  
 Patzig Testing Laboratories, Des Moines, Iowa.  
 Peltier Glass Co., The, Ottawa, Ill.

- Perfection Motor Products Co., The, Bridgeport, Conn.  
 Pittsburgh & Weirton Bus Co., Weirton, W. Va.  
 Pollak Corporation, Joseph, Boston (Dorchester), Mass.  
 Premier Signal Co. Bellevue, Ohio.  
 Protectall Motor Signal, Inc., Syracuse, N. Y.  
 Purdue University, Engineering Experiment Station, Lafayette, Ind. (In principle.)  
 Reo Motors, Inc., Lansing, Mich.  
 Rich Foglite, Inc., Bellaire, Ohio.  
 Sears, Roebuck & Co., Chicago, Ill.  
 Sunshine Bus Lines, Inc., Dallas, Tex.  
 Tennessee Department of Safety, Nashville, Tenn.  
 Trippe Manufacturing Co., Chicago, Ill.  
 Triumph Explosives, Inc., Elkton, Md.  
 Turnsignal Corporation, Germantown, Philadelphia, Pa.  
 U. S. Metal Products Co., New York, N. Y.  
 Underwriters Laboratories, Inc., Chicago, Ill. (In principle.)
- Unity Manufacturing Co., Chicago, Ill. Virginia, Division of Motor Vehicles of, Richmond, Va. (In principle.)  
 Walter Motor Truck Co., Ridgewood, L. I., N. Y.  
 Ward Motor Vehicle Co., Mt. Vernon, N. Y.  
 Washington, State of, Olympia, Wash.  
 Western Auto Supply Co., Kansas City, Mo.  
 Wisconsin, Motor Vehicle Department of, Madison, Wis.

## U. S. GOVERNMENT

- Agriculture, U. S. Department of, Office of Plant & Operations, Washington, D. C.  
 Foreign & Domestic Commerce, Bureau of, Electrical Division, Washington, D. C. (In principle.)  
 Panama Canal, The, Transportation Division, Supply Department, Balboa Heights, Canal Zone.  
 Veterans Administration, Washington, D. C.  
 War Department, Washington, D. C.

## COMMERCIAL STANDARDS

CS No.	Item	CS No.	Item
0-40.	Commercial standards and their value to business (third edition).	49-34.	Chip board, laminated chip board, and miscellaneous boards for bookbinding purposes.
1-32.	Clinical thermometers (second edition).	50-34.	Binders board for bookbinding and other purposes.
2-30.	Mopsticks.	51-35.	Marking articles made of silver in combination with gold.
3-40.	Stoddard solvent (third edition).	52-35.	Mohair pile fabrics (100-percent mohair plain velvet, 100-percent mohair plain frieze, and 50-percent mohair plain frieze).
4-29.	Staple porcelain (all-clay) plumbing fixtures.	53-35.	Colors and finishes for cast stone.
5-40.	Pipe nipples; brass, copper, steel, and wrought iron.	54-35.	Mattresses for hospitals.
6-31.	Wrought-iron pipe nipples (second edition). Superseded by CS5-40.	55-35.	Mattresses for institutions.
7-29.	Standard weight malleable iron or steel screwed unions.	56-36.	Oak flooring.
8-33.	Gage blanks (second edition).	57-40.	Book cloths, buckrams, and impregnated fabrics for bookbinding purposes except library bindings (second edition).
9-33.	Builders' template hardware (second edition).	58-36.	Woven elastic fabrics for use in overalls (overall elastic webbing).
10-29.	Brass pipe nipples. Superseded by CS5-40.	59-39.	Woven dress fabrics—testing and reporting (second edition).
11-29.	Regain of mercerized cotton yarns.	60-36.	Hardwood dimension lumber.
12-40.	Fuel oils (fifth edition).	61-37.	Wood-slat venetian blinds.
13-39.	Dress patterns (second edition).	62-38.	Colors for kitchen accessories.
14-39.	Boys' button-on waists, shirts, junior and polo shirts (made from woven fabrics) (second edition).	63-38.	Colors for bathroom accessories.
15-29.	Men's pajamas.	64-37.	Walnut veneers.
16-29.	Wall paper.	65-38.	Wool and part-wool fabrics.
17-32.	Diamond core drill fittings (second edition).	66-38.	Marking of articles made wholly or in part of platinum.
18-29.	Hickory golf shafts.	67-38.	Marking articles made of karat gold.
19-32.	Foundry patterns of wood (second edition).	68-38.	Liquid hypochlorite disinfectant, deodorant, and germicide.
20-36.	Staple vitreous china plumbing fixtures (second edition).	69-38.	Pine oil disinfectant.
21-39.	Interchangeable ground-glass joints, stopcocks, and stoppers (fourth edition).	70-38.	Coal tar disinfectant (emulsifying type).
22-40.	Builders' hardware (nontemplate) (second edition).	71-38.	Cresylic disinfectants.
23-30.	Feldspar.	72-38.	Household insecticide (liquid spray type).
24-30.	Standard screw threads.	73-38.	Old growth Douglas fir standard stock doors.
25-30.	Special screw threads.	74-39.	Solid hardwood wall paneling.
26-30.	Aromatic red cedar closet lining.	75-39.	Automatic mechanical draft oil burners.
27-36.	Mirrors (second edition).	76-39.	Hardwood interior trim and molding.
28-32.	Cotton fabric tents, tarpaulins, and covers.	77-40.	Sanitary cast-iron enameled ware.
29-31.	Staple seats for water-closet bowls.	78-39.	Ground-and-polished lenses for sun glasses.
30-31.	Colors for sanitary ware.	79-39.	Blown, drawn, and dropped lenses for sun glasses.
31-38.	Wood shingles (fourth edition).	80-41.	Electric direction signal systems other than semaphore type for commercial and other vehicles subject to special motor-vehicle laws (after market).
32-31.	Cotton cloth for rubber and pyroxylin coating.	81-41.	Adverse-weather lamps for vehicles (after market).
33-32.	Knit underwear (exclusive of rayon).	82-41.	Inner-controlled spot lamps for vehicles (after market).
34-31.	Bag, case, and strap leather.	83-41.	Clearance, marker, and identification lamps for vehicles (after market).
35-31.	Plywood (hardwood and eastern red cedar).	84-41.	Electric tail lamps for vehicles (after market).
36-33.	Fourdriner wire cloth (second edition).	85-41.	Electric license-plate lamps for vehicles (after market).
37-31.	Steel bone plates and screws.	86-41.	Electric stop lamps for vehicles (after market).
38-32.	Hospital rubber sheeting.	87-41.	Red electric warning lanterns.
39-37.	Wool and part wool blankets (second edition).	88-41.	Liquid-burning flares.
40-32.	Surgeons' rubber gloves.	89-40.	Hardwood stair treads and risers.
41-32.	Surgeons' latex gloves.		
42-35.	Fiber insulating board (second edition).		
43-32.	Grading of sulphonated oils.		
44-32.	Apple wraps.		
45-40.	Douglas fir plywood (domestic grades) (fourth edition).		
46-40.	Hosiery lengths and sizes (third edition).		
47-34.	Marking of gold-filled and rolled-gold-plate articles other than watch cases.		
48-34.	Domestic burners for Pennsylvania anthracite (underfeed type).		

NOTICE.—Those interested in commercial standards with a view toward accepting them as a basis of everyday practice may secure copies of the above standards, while the supply lasts, by addressing the Division of Trade Standards, National Bureau of Standards, Washington, D. C.

