

Zinc-Coated (Galvanized) Steel Sheets A653 CQ**1. SCOPE**

1.1 This standard covers steel sheet of commercial quality in coils and cut lengths, zinc-coated (galvanized).

1.2 Sheet of this quality is intended primarily for bending and moderate forming applications.

1.3 Sheet supplied under this standard shall meet the applicable requirements of standard 86050115 (FNHA 2-A-026.00).

2. DRAWING SPECIFICATIONS

Galv. Sheet ASTM A653 CS type B G90

3. RELATED SPECIFICATIONS**3.1 REFERENCE STANDARDS**

86050092 (FNHA-2-A-001.00)—Hot-Rolled Sheets A569

86050115 (FNHA-2-A-026.00)—General Requirements, Sheet and Strip

86572109 (FNHA-2-A-054.01)—Materials List 86050095

ASTM A653—Steel Sheet, Hot-Dipped Galvanized Process, Commercial Quality

ASTM A591—Steel Sheet, Electrolytic Zinc-Coated

3.2 This standard replaces the following company standard:

Versatile

MS - 605

3.3 This standard replaces ASTM A526 callout. Existing drawings will not be changed, but the new ASTM Standard A653 requirements will apply.

4. CHEMICAL REQUIREMENTS

Base material is ASTM A1008 CS type B (formerly A366) Commercial Quality (CQ) cold rolled sheet.

Table 1: Chemical Requirements

Element	Composition, %
Carbon, max.	0.15
Manganese, max.	0.60
Phosphorus, max.	0.035
Sulfur, max.	0.040
Copper (when specified), min.	0.20

5. MECHANICAL REQUIREMENTS

Commercial quality sheets shall be capable of being bent through 180 degrees flat on itself in any direction without fracture or major cracking of the base metal on the outside of the bent portion.

6. DIMENSIONS AND TOLERANCES

See the appropriate sections of standard 86050115 (FNHA 2-A-026.00).

7. FINISH

Material furnished under this standard shall conform to the appropriate requirements of the standard 86050115 (FNHA 2-A-026.00).

8.0 GENERAL DELIVERY REQUIREMENTS

Material furnished under this standard shall conform to the applicable general requirements of standard 86050115 (FNHA 2-A-026.00).

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					 NEW HOLLAND			ENGINEERING SPECIFICATION
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Appendix: Galvanized Finish

A1. TYPES OF COATING

A1.1 REGULAR SPANGLE

Regular spangle galvanized sheet is coated on continuous lines. Regular spangles are the result of the unrestricted growth of zinc crystals during normal solidification. This produces a bright galvanized finish not suitable for painting.

A1.2 IRON-ZINC ALLOY

Iron-Zinc alloy galvanized sheet is produced by processing the sheet through the galvanizing line to produce a completely alloy coating. This product is not spangled, is normally dull gray in appearance, and is suitable for immediate painting with further treatment. The lack of ductility of the iron-zinc coating may result in powdering of the coating during fabrication.

A2. COATING TESTS

A2.1 WEIGHT OF COATING

A2.1.1 The weight of coating shall conform to the requirements for triple-and-single-spot minimum checks prescribed in 3.0. The weight of coating is the total amount on both sides of a sheet, expressed in ounces per square foot of sheet.

A2.1.2 Triple-Spot Test—The result of the triple-spot test shall consist of the average of determinations from the three specimens cut from the test sheet or sample piece as provided in 2.1.4. Material 18 inches (457 mm) and under is normally produced by splitting from wider width coils and therefore is subject to the single-spot test only.

A2.1.3 Single-Spot Test—The minimum check limit by the single-spot test shall be that one of the triple-spot test bearing the lightest coating, or the purchaser may select a single specimen taken from any part of the test sheet providing it is taken within the boundaries outlined in 2.1.4. For material narrower than 2.25 inches (57 mm), the test specimen length shall be chosen to give an area of 5.06 inches squared (3265 mm squared).

A2.1.4 Test specimens for coils and cut lengths coated in coils shall be taken from a sample piece approximately 1 ft (300 mm) in length by the as-coated width. For the triple-spot test, one specimen shall be cut from the middle of the width and one from each side closer than 2 in (51 mm) from the side edge.

A2.1.5 Coating Thickness Measurement with Magnetic Gages—A reasonable estimate of weight of coating may be obtained by converting coating thickness measurements made with magnetic gages. An accuracy of +15 percent in determining the thickness may be used as a basis of acceptance but rejection shall be governed by the weight of coating tests described in 2.1.1 through 2.1.4.

A2.2 COATING BEND TEST

A2.2.1 All qualities, other than physical (structural) quality, sheet with spangled coating shall be capable of being bent through 180 degrees flat on itself in any direction without flaking on the coating on the outside of bend only. Flaking of coating within 1/4 inch (6.4 mm) of the edge of the bend specimen shall not be cause for rejection.

A2.2.2 Alloy coatings shall not be subject to bend testing.

A2.2.3 Coating bend test specimens shall be 2 to 4 inch (51 to 102 mm) wide. The specimen shall be cut no less than 2 inches (51 mm) from the edges of the test sheet.

A3. COATING WEIGHT REQUIREMENTS

Coating weight is G90, unless otherwise specified.

Coating Desig.	Min. Check Limit Triple-Spot Test		Min. Check Limit Single-Spot Test	
	oz/ft ²	g/m ²	oz/ft ²	g/m ²
ASTM A653				
G01	no minimum		no minimum	
G90	0.90	275	0.80	235

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