



I.S. 145 : 1985

IRISH STANDARD SPECIFICATION

ZINC AND ALUMINIUM ZINC COATED  
CORRUGATED STEEL SHEETS

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DECLARATION  
OF  
SPECIFICATION  
ENTITLED  
ZINC AND ALUMINIUM ZINC COATED CORRUGATED STEEL SHEETS  
AS  
THE IRISH STANDARD SPECIFICATION FOR  
ZINC AND ALUMINIUM ZINC COATED  
CORRUGATED STEEL SHEETS

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The Institute for Industrial Research and Standards in exercise of the power conferred by Section 20 of the Industrial Research and Standards Act, 1961 (No. 20 of 1961), and with the consent of the Minister for Industry, Trade, Commerce and Tourism, hereby declares as follows:

1. This instrument may be cited as the Standard Specification (Zinc and Aluminium Zinc Coated Corrugated Steel Sheets) Declaration, 1985.

2. (1) The Specification set forth in the Schedule to this declaration is hereby declared to be the standard specification for Zinc and Aluminium Zinc Coated Corrugated Steel Sheets.

(2) The said standard specification may be cited as Irish Standard 145 : 1985 or as I.S. 145 : 1985.

3. (1) The Standard Specification (Galvanised Corrugated Steel Sheets) Declaration, 1983, and its Amendment No. 1 : 1984, are hereby revoked.

(2) Reference in any other standard specification to the Instruments hereby revoked and to Irish Standard 145 : 1983, and its Amendment No. 1 : 1984, thereby prescribed, shall be construed, respectively, as references to this Instrument and to Irish Standard 145 : 1985.

## SCHEDULE

### ZINC AND ALUMINIUM ZINC COATED

### CORRUGATED STEEL SHEETS

#### 1. SCOPE

This specification covers the materials, profiles and dimensions of hot-dipped zinc or aluminium-zinc alloy coated corrugated steel sheets for general purposes.

#### 2. DEFINITIONS

2.1 Producer means the company or organization which makes available to manufacturers coated steel coil which complies with the relevant requirements of this specification.

2.2 Manufacturer means the company or organization which fabricates corrugated sheets from coated steel coil supplied by the producer.

2.3 Coated means steel sheets which are protected by zinc or aluminium-zinc alloy applied by the hot-dip method.

2.4 Aluminium-zinc alloy: The composition by mass of this alloy is nominally 55% aluminium, 1.6% silicon and the balance zinc. Significant departures from these percentages shall be declared by the producer.

#### 3. METHOD OF MANUFACTURE

The processes used for making the steel and manufacturing the product are left to the discretion of the producer and the manufacturer.

#### 4. QUALITY OF COATED STEEL SHEETS

The steel sheets shall be made in accordance with the accepted current practice and shall be manufactured from good quality coated steel coil. For design purposes, it may be assumed that the lower yield strength will be not less than 210 MPa. If material with specified mechanical properties is required, reference shall be made to the appropriate quality in Euronorm 147-79, "Continuous hot-dip zinc coated unalloyed steel sheet and coil with specified minimum yield strengths for structural purposes - Quality standard".

#### 5. FREEDOM FROM DEFECTS

The coated surfaces shall be free from obvious harmful contamination and defects.

#### 6. CHEMICAL PASSIVATION

After coating, the material shall be subjected to a chemical passivation treatment, unless otherwise specified on the order.

When passivation is used, the surface of the finished material must not exhibit white rusting, a discolouration, over more than 10% of the tested area when tested for 24 h in accordance with ASTM D 2247-80 "Coated metal specimens at 100% relative humidity", test method A2.

**Note:** Chemical passivation protects the surface against humidity and reduces the risk of formation of wet storage stains. However, the protection afforded is limited. This treatment may interfere with certain painting procedures. Further information on the subject of white rust is contained in "White rust on galvanised roof decking", published by the Institute for Industrial Research and Standards.

## 7. COATING MASS DETERMINATION

**7.1 General:** The producer and manufacturer shall make such tests as they deem necessary to ensure that the material complies with the requirements of this specification.

The mass (per unit area) of coating may be verified by the method described in 7.2. Other methods of test may be used for acceptance but not rejection.

### 7.2 Sampling and testing:

**7.2.1 Sampling:** The test shall be performed on one sheet per 50 tonne lot, or fraction thereof, of the same thickness and number of corrugations. The test shall be performed on three samples, one taken from the mid-width of the sheet and the other two taken from positions at least 25 mm and not more than one quarter of the sheet width from each side edge.

**7.2.2 Testing:** The test method shall be as given in Appendix A. The result of the test shall be expressed (a) as the average of the three determinations ('triple spot test') and (b) as the minimum coating mass found on any one of the three samples ('single spot test').

**7.3 Retests:** If a test sample fails to meet the coating mass requirements of this specification, two further test samples shall be taken from the lot of up to 50 tonnes represented and the test repeated. One of the samples shall be from the original bundle. If either of these test samples fails to comply with the specified requirements, the material shall be deemed not to comply with this specification.

The producer and manufacturer shall have the option to carry out rectification processing or sorting, and to resubmit the material for testing.

## 8. INSPECTION AND ACCEPTANCE

The purchaser or his representative shall have reasonable access to the works of the producer or manufacturer for the purpose of inspection. If such inspection is to be carried out, this shall be stated when placing the order.

It is desirable that the purchaser or his representative use the manufacturer's records available wherever possible, but shall have all reasonable facilities to determine that the product is being supplied in accordance with the requirements of this specification.

If the purchaser elects to test and inspect the product after delivery, any of the product that does not appear to comply with the requirements of this specification shall be set aside, and be properly and correctly identified and adequately protected. The manufacturer shall be informed.

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