

Data sheet: EG 3

## Electro-Galvanised Structural Steel Sheet

### General description

Electro-galvanised structural steel sheet may be welded using any of the standard arc or resistance welding processes, usually without special precautions.

Electro-galvanised structural steel sheet is produced in six grades of strength levels intended primarily for the automotive industry in applications such as body panels, bumpers, brackets, door panels and seat components, where severe forming is carried out on higher strength steel sheet.

All grades are eminently suitable for painting. Refer to the paint manufacturers' prescribed methods for pre-treatment and application.

### Chemical composition

Table 1. Chemical composition specification (ladle analysis, percent)

Specification	C max	Mn max	P max	S max	Si max	Al min	Nb max	Ti max
JIS G3135 SPFC 340 +ZE	0,08	0,5	0,08	0,03	0,05	0,02	-	-
JIS G3135 SPFC 440 +ZE	0,18	1,5	0,08	0,03	0,3	0,02	-	-
EN 10268 HC 220P +ZE	0,070	0,70	0,080	0,025	0,50	0,020		
EN 10268 HC 260LA +ZE	0,10	0,060	0,025	0,025	0,5	0,015		0,15
EN 10268 HC 340LA +ZE	0,10	1,00	0,025	0,025	0,5	0,015	0,09	0,15
EN 10268 HC 380LA +ZE	0,10	1,20	0,025	0,025	0,5	0,015	0,09	0,15

Notes:

- It is recommended that JIS G3135 SPFC 340 +ZE and EN 10268 HC 220P +ZE not be used for horizontal outer skin panels.

For further information, contact:

ArcelorMittal South Africa Limited, PO Box 2, Vanderbijlpark 1900. Toll free number 0800 005043, Fax (016) 889-0070  
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Care has been taken to ensure that the information in this data sheet is accurate. ArcelorMittal South Africa Limited does not, however, assume responsibility for any inaccuracies or misinterpretations of this data. We are continuously engaged in product development and revised data sheets will be issued from time to time. Please ensure that you have the most recent issue. **Effective date: Aug 2010**

## Mechanical properties

Table 2. Mechanical properties

Specification	Minimum yield strength (MPa)	Minimum tensile strength (MPa)	Minimum elongation (%)	Mandrel diameter for 180° bend test for strip thickness $t$
* JIS G3135 SPFC 340 +ZE	180	340	34	0t
* JIS G3135 SPFC 440 + ZE	265	440	26	0t
EN 10268 HC 220P +ZE	220	320	32	0t
EN 10268 HC 260LA +ZE	260	350	26	0t
EN 10268 HC 340LA +ZE	340	410	21	0t
EN 10268 HC 380LA +ZE	380	440	19	0.5t

Notes:

1. The tensile test is carried out as described in EN 10002 Part 1 using type 2 specimens (initial gauge length  $L_0 = 80$  mm), except for (\*). Yield strength is determined by the 0,2 % offset method.
2. The tensile test for (\*) is carried out as described in JIS Z 2241 using No.5 test piece of JIS Z 2201 (initial gauge length  $L_0 = 50$  mm). Yield strength is determined by the 0,5 % offset method.
3. The test pieces for the tensile test are taken at right angles (transverse) to the direction of rolling.

## Surface texture

The material may be supplied in standard surface texture with 'light matt', 'normal' or 'matt' surface textures as set out in the data sheets: Electro-galvanised Steel Sheet (file reference EG 1) and Cold Rolled Products (file reference B1). It is also available in improved surface finish with 'light matt' or 'matt' surface textures.

## Available Dimensions

Refer to Price List 148

Table 3. Available dimensions

Thickness $t$ (mm)	Width (mm)
$0,40 \leq t < 0,50$	800 - 1250
$0,50 \leq t < 0,60$	800 - 1300
$0,60 \leq t \leq 1,60$	800 - 1600

Notes:

1. Thicknesses and Widths are available in increments in accordance with Price List 148.
2. Within the ranges shown in the above table, certain specific sizes are Standard Items (refer to Price List 148). Standard Items are preferentially priced and are available in smaller quantities than non-standard items

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### Dimensional tolerances

Electro-galvanised sheet is produced to the same tolerances as cold rolled sheet. Refer to Data Sheet: Cold Rolled Product Tolerances (file reference B1.1).

### Coil inside diameter

The standard inside diameter is 610 mm.

### Certification

Test and analysis certificates are supplied.

### Supply conditions

Electro-galvanised structural steel sheet is supplied in terms of Price List 148 and ArcelorMittal South Africa's General Conditions of Sale.

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