British Standard

BS EN
3139:2001

Aerospace series — Rivets, solid, 100° countersunk normal head, in corrosion resisting steel FE-PA11, passivated, inch based series

The European Standard EN 3139:2001 has the status of a British Standard

ICS 49.030.60

National foreword

This British Standard is the official English language version of EN 3139:2001.

The UK participation in its preparation was entrusted to Technical Committee ACE/12/1, Aerospace Fastener, Fastening Systems, Details and Parts (International), which has the responsibility to:

— aid enquirers to understand the text;

— present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;

— monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

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This British Standard, having been prepared under the direction of the Engineering Sector Committee, was published under the authority of the Standards Committee and comes into effect on 15 September 2001

Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 6, an inside back cover and a back cover.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 3139

June 2001

ICS 49.030.60

English version

Aerospace series - Rivets, solid, 100° countersunk normal head, in corrosion resisting steel FE-PA11, passivated, inch based series

Série aérospatiale - Rivets ordinaires, à tête fraisée 100° normale, en acier résistant à la corrosion FE-PA11, passivés, série base inches

Luft- und Raumfahrt - Vollniete, mit 100° normalem Senkkopf, aus korrosionsbeständigem Stahl FE-PA11, passiviert, Zoll-Reihe

This European Standard was approved by CEN on 28 February 2001.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN 3139:2001 E

Foreword

This European Standard has been prepared by the European Association of Aerospace Manufacturers (AECMA).

After inquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of AECMA, prior to its presentation to CEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2001, and conflicting national standards shall be withdrawn at the latest by December 2001.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This standard specifies the characteristics of solid rivets, with 100° countersunk normal head, in corrosion resisting steel FE-PA11, passivated, inch based series, for maximum operating temperature 700 °C.

2 Normative references

This European Standard incorporates by dated or undated reference provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

ISO 10299 Aerospace – Rivets, solid – Material and metric series identification

EN 2000 Aerospace series – Quality assurance – EN aerospace products – Approval of the quality system of manufacturers

EN 2424 Aerospace series – Marking of aerospace products

EN 2470 Steel FE-PA11 – Softened and cold drawn – Wires for rivets 1 mm ≤ *D* ≤ 10 mm – Aerospace series [1)]

EN 2516 Aerospace series – Passivation of corrosion resisting steels and decontamination of nickel base alloys

EN 2898 Aerospace series – Corrosion and heat resisting steel rivets – Technical specification [2)]

3 Required characteristics

3.1 Configuration - Dimensions - Masses

See figure 1 and tables 1 and 2.

Dimensions and tolerances are: expressed in millimetres and apply after surface treatment.

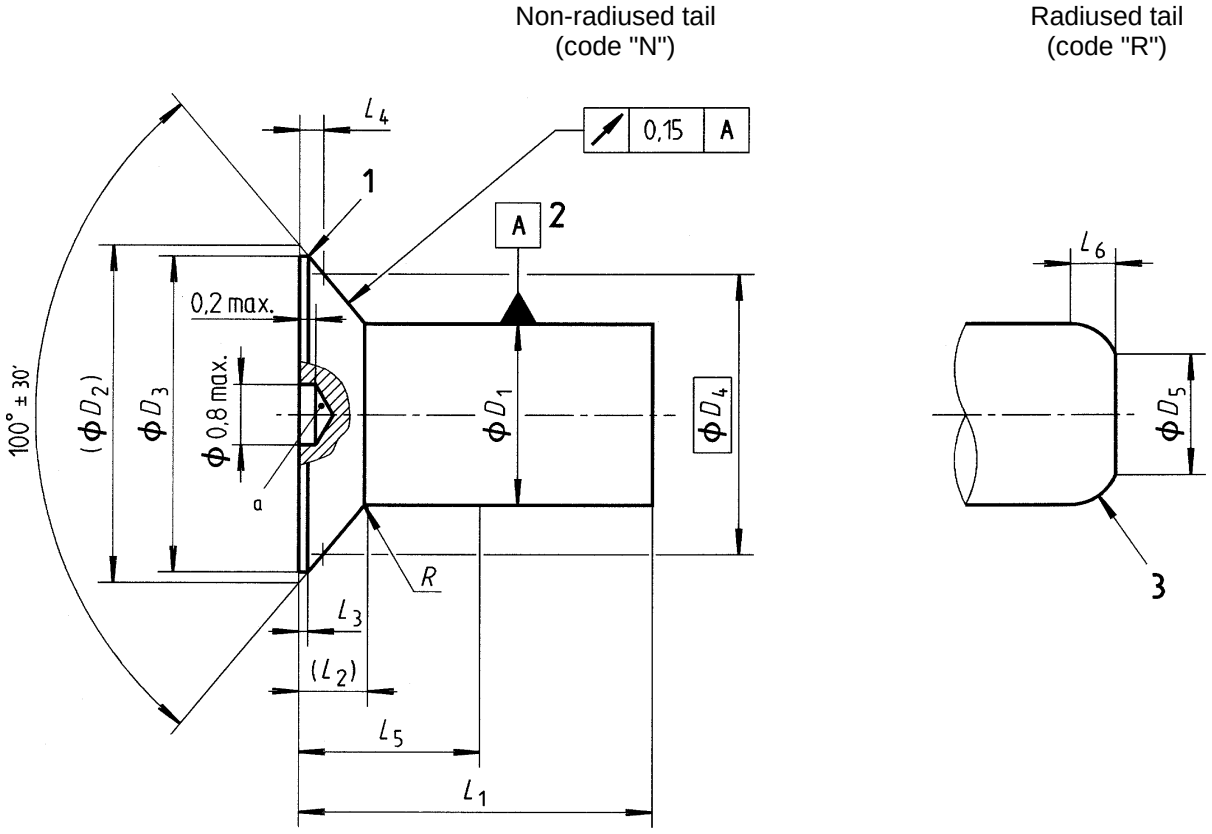
3.2 Material

EN 2470

3.3 Surface treatment

EN 2516

1) Published as AECMA Standard at the date of publication of this standard
2) Published as AECMA Prestandard at the date of publication of this standard



Key

1 Rounded edge permissible within limiting dimensions
2 Area of this datum shall be between L_5 and $L_5 + 1$.
3 Chamfer or convex radius, at manufacturer's option

[a] Drill start (code 1) optional, shape optional

Figure 1

Table 1

Diameter code	D_1 [a]		D_2 [b]	D_3	D_4	D_5		L_2	L_3	L_4	L_5	L_6		R
	max.	min.		min.		max.	min.		min.	0 −0,08		max.	min.	± 0,08
016	1,65	1,55	3	2,7	2,25	–	–	0,6	0,03	0,31	2,1	–	–	0,15
024	2,45	2,35	4,45	4	3,54	1,9	1,6	0,9	0,05	0,38	2,4	0,8	0,5	
032	3,25	3,15	5,95	5,35	4,82	2,6	2,3	1,1	0,06	0,47	2,6	1	0,7	
036	3,65	3,55	6,7	6	5,46	2,9	2,5	1,3	0,07	0,52	2,9	1,1		0,25
040	4,05	3,94	7,4	6,6	5,79	3,2	2,8	1,4	0,08	0,68	3	1,2	0,8	
048	4,85	4,73	8,9	7,95	7,39	3,8	3,3	1,8	0,1	0,63	3,8	1,5	1	
056	5,65	5,53	10,4	9,3	8,36	4,5	3,9	2,1		0,86	4,1	1,8	1,2	
064	6,45	6,33	11,85	10,65	9,64	5,1	4,5	2,4		0,95	4,4	2,1	1,4	

[a] D_1 max. may increase by 0,03, over length ($L_5 - L_2$).
[b] Maximum condition

Table 2

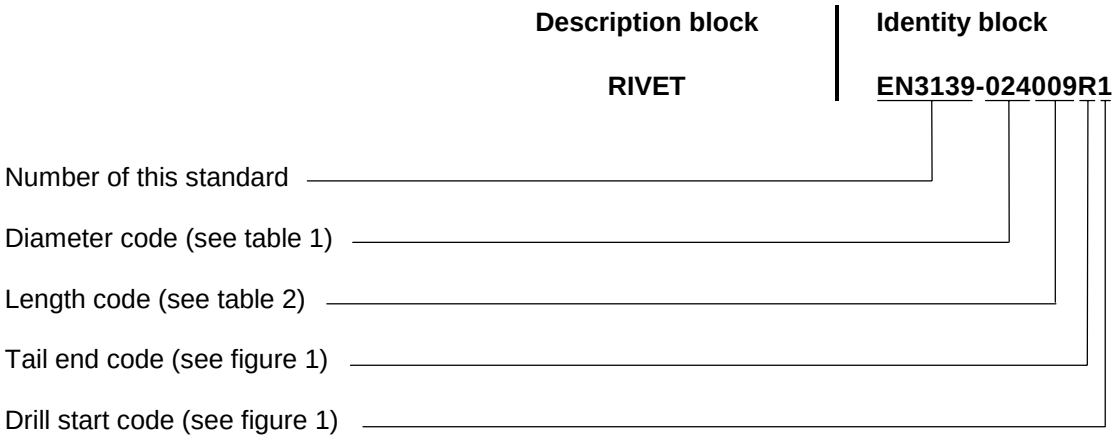
Diameter code		016		024			032			036			040			048			056			064		
Length		[a]	Mass [b]	[a]		Mass [b]	[a]		Mass [b]	[a]		Mass [b]	[a]		Mass [b]	[a]		Mass [b]	[a]		Mass [b]	[a]		Mass [b]
code	L_1 $^{+0,5}_{0}$	N		N	R		N	R		N	R		N	R		N	R		N	R		N	R	
003	3	X	0,058			—			—						—			—			—			—
004	4	X	0,074	X	X	0,207	X	X	0,366	X	X	0,451			—			—			—			—
005	5	X	0,090	X	X	0,244	X	X	0,431	X	X	0,521			—			—			—			—
006	6	X	0,106	X	X	0,281	X	X	0,496	X	X	0,591	X	X	0,749			—			—			—
007	7	X	0,122	X	X	0,318	X	X	0,561	X	X	0,660	X	X	0,848			—			—			—
008	8	X	0,138	X	X	0,355	X	X	0,626	X	X	0,730	X	X	0,946	X	X	1,534			—			—
009	9	X	0,154	X	X	0,392	X	X	0,691	X	X	0,800	X	X	1,045	X	X	1,680			—			—
010	10	X	0,170	X	X	0,429	X	X	0,756	X	X	0,870	X	X	1,144	X	X	1,826	X	X	2,556	X	X	3,427
011	11	X	0,186	X	X	0,466	X	X	0,821	X	X	0,940	X	X	1,243	X	X	1,972	X	X	2,754	X	X	3,685
012	12	X	0,202	X	X	0,503	X	X	0,886	X	X	1,010	X	X	1,341	X	X	2,118	X	X	2,952	X	X	3,943
013	13	X	0,218	X	X	0,540	X	X	0,951	X	X	1,080	X	X	1,440	X	X	2,264	X	X	3,150	X	X	4,201
014	14	X	0,234	X	X	0,577	X	X	1,016	X	X	1,150	X	X	1,539	X	X	2,410	X	X	3,348	X	X	4,459
015	15	X	0,250	X	X	0,614	X	X	1,081	X	X	1,220	X	X	1,638	X	X	2,556	X	X	3,546	X	X	4,717
016	16	X	0,262	X	X	0,651	X	X	1,146	X	X	1,290	X	X	1,736	X	X	2,702	X	X	3,744	X	X	4,975
017	17		—	X		0,688	X	X	1,211	X	X	1,360	X	X	1,835	X	X	2,848	X	X	3,942	X	X	5,233
018	18		—	X		0,725	X	X	1,276	X	X	1,430	X	X	1,934	X	X	2,994	X	X	4,140	X	X	5,491
019	19		—	X		0,762	X		1,341	X	X	1,500	X	X	2,032	X	X	3,140	X	X	4,338	X	X	5,749
020	20		—	X		0,799	X		1,406	X	X	1,570	X	X	2,131	X	X	3,286	X	X	4,536	X	X	6,007
022	22		—			—	X		1,536	X		1,710	X	X	2,328	X	X	3,578	X	X	4,932	X	X	6,523
024	24		—			—	X		1,666	X		1,850	X	X	2,525	X	X	3,870	X	X	5,328	X	X	7,039
026	26		—			—			—	X		1,990	X		2,722	X	X	4,162	X	X	5,724	X	X	7,555
028	28		—			—			—	X		2,130	X		2,919	X	X	4,454	X	X	6,120	X	X	8,071
030	30		—			—			—			—	X		3,016	X		4,746	X	X	6,516	X	X	8,587
032	32		—			—			—			—	X		3,313	X		5,038	X	X	6,912	X	X	9,103
035	35		—			—			—			—			—	X		5,476	X		7,506	X		9,877
040	40		—			—			—			—			—	X		6,206	X		8,496	X		11,167

[a] Tail end code (see figure 1)

[b] Approximate values (kg/1 000 pieces), calculated on the basis of 7,9 kg/dm^3, given for information purposes only

4 Designation

EXAMPLE:



NOTE If necessary, the code I9005 shall be placed between the description block and the identity block.

5 Marking

5.1 Rivet

EN 2424, style G

5.2 Material

ISO 10299

6 Technical specification

ISO 2898, plus EN 2000 for the approval of manufacturers

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