

BS EN 3902:2016



BSI Standards Publication

**Aerospace series — Washers
for rivet assemblies, in
aluminium alloy, anodized,
metric series**

National foreword

This British Standard is the UK implementation of EN 3902:2016.

The UK participation in its preparation was entrusted to Technical Committee ACE/12, Aerospace fasteners and fastening systems.

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

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EUROPEAN STANDARD

EN 3902

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2016

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English Version

Aerospace series - Washers for rivet assemblies, in aluminium alloy, anodized, metric series

Série aérospatiale - Rondelles pour assemblages par rivets, en alliage d'aluminium, anodisées, série métrique

Luft- und Raumfahrt - Scheiben für Nietverbindungen, aus Aluminiumlegierung, anodisiert, metrische Reihe

This European Standard was approved by CEN on 12 March 2016.

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European foreword

This document (EN 3902:2016) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries 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 ASD, 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of an identical text or by endorsement, at the latest by June 2017, and conflicting national standards shall be withdrawn at the latest by June 2017.

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1 Scope

This European Standard specifies the characteristics of washers for rivet assemblies, in aluminium alloy, anodized, metric series, for maximum operating temperature 120 °C, for aerospace applications.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 2090, *Aerospace series — Aluminium alloy AL-P2024- — T3 — Clad sheet and strip — $0,3 \text{ mm} \leq a \leq 6 \text{ mm}$*

EN 2091, *Aerospace series — Aluminium alloy 2024-T4 — Clad sheet and strip — $0,4 \leq a \leq 6 \text{ mm}$ 1)*

EN 2284, *Aerospace series — Sulphuric acid anodizing of aluminium and wrought aluminium alloys*

EN 2320, *Aerospace series — Aluminium alloy 2024-T4 — Drawn bar $a \leq 75 \text{ mm}$ 1)*

EN 2321, *Aluminium alloy 2024-T3 — Bars and sections $a \leq 150 \text{ mm}$ — Aerospace series 1)*

EN 2424, *Aerospace series — Marking of aerospace products*

EN 9100, *Aerospace series — Quality Management Systems — Requirements for Aviation, Space and Defence Organizations*

3 Required characteristics

3.1 Configuration - Dimensions - Masses

See Figure 1 and Table 1. Dimensions and tolerances are in millimetres and apply after surface treatment.

3.2 Materials

EN 2090, EN 2091, EN 2320 or EN 2321

3.3 Surface treatment

EN 2284B

1) Published as ASD-STAN Standard at the date of publication of this standard by AeroSpace and Defence industries Association of Europe - Standardization (ASD-STAN) (www.asd-stan.org)

$\sqrt{\text{Ramax } 6,3}$

values in micrometres apply prior to surface treatment.

Remove sharp edges 0,1 to 0,2.

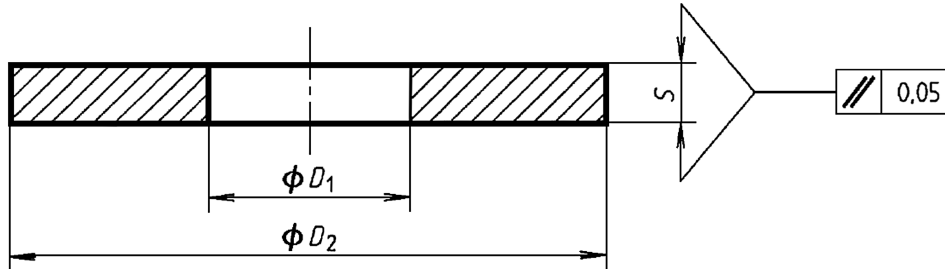


Figure 1

Table 1

Size code ^a	Corresponding rivet diameter for information Nom.	$\emptyset D_1$	$\emptyset D_2$	S	Mass ^c
		H13	H14	$\pm 10 \%$ ^b	
015	1,6	1,8	5	0,8	0,038
020	2	2,2	6		0,055
025	2,5	2,7	8		0,100
030	3	3,2	9	1	0,156
035	3,5	3,7	10		0,190
040	4	4,2	12		0,278
050	5	5,2	15	1,6	0,696
060	6	6,2	18		0,968
080	8	8,2	24		1,789

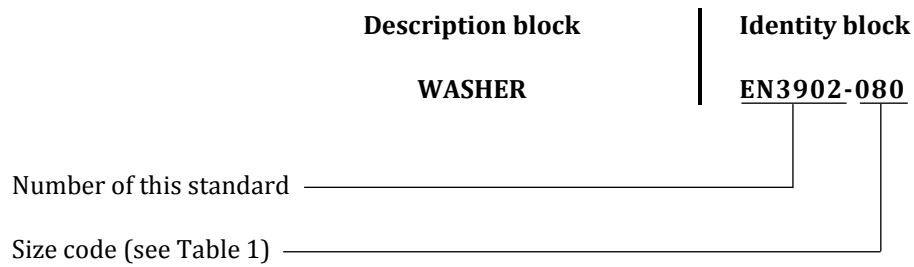
^a Corresponds to the nominal diameter.

^b Includes also the flatness tolerance.

^c Approximate values (kg/1 000 pieces), calculated on the basis of 2,8 kg/dm³, 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

EN 2424, style G

6 Quality assurance

EN 9100

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