AIRBUS

NUT - HEXAGONAL, SELF-LOCKING, BIHEX, SHEAR TYPE

Issue : **L**
Date : **Nov 06**
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SUMMARY

1 - SCOPE AND FIELD OF APPLICATION

This standard specifies the dimensions, tolerances, required characteristics and the masses of a self-locking hexagonal nut.

2 - REFERENCES

ABS1419	:	Aerospace series – Nut, break-off groove, calibrated for short-thread bolts, recessed on thread end.
AMS4340	:	Aluminium alloy extrusions. Solution heat treated, stress relieved, and overaged.
EN2424	:	Aerospace series - Marking of aerospace products.
EN6117	:	Aerospace series - Specification for lubrication of bolts with cetyl alcohol.
MIL-A-8625	:	Anodic coatings, for aluminium and aluminium alloys.

AS-8879	:	Screw threads – UNJ profile, inch - Controlled radius root with increased minor diameter, general.
AMS2770	:	Heat treatment of wrought aluminium alloy parts.
AMS2772	:	Heat treatment of aluminium alloy raw materials.
AMS-QQ-A-225/9	:	Aluminium alloy 7075, bar, rod, wire and special shapes ; rolled, drawn or cold finished.

3 - TERMINOLOGY

Not applicable.

4 - REQUIRED CHARACTERISTICS

4.1 - Configuration, dimensions, tolerances, mass

4.1.1 - Configuration shall be in accordance with the figure.

All dimensions are given after finish and before lubrication.

4.1.2 - Dimensions shall be in accordance with table 1.

4.1.3 - Tolerances shall be in accordance with table 1.

4.1.4 - Mass shall be in accordance with table 1.

4.2 - Material, thermal treatment, finish, lubrication

Material, thermal treatment, finish and lubrication shall be in accordance with table 2.

4.3 - Mechanical characteristics

Tensile strength shall be in accordance with table 1.

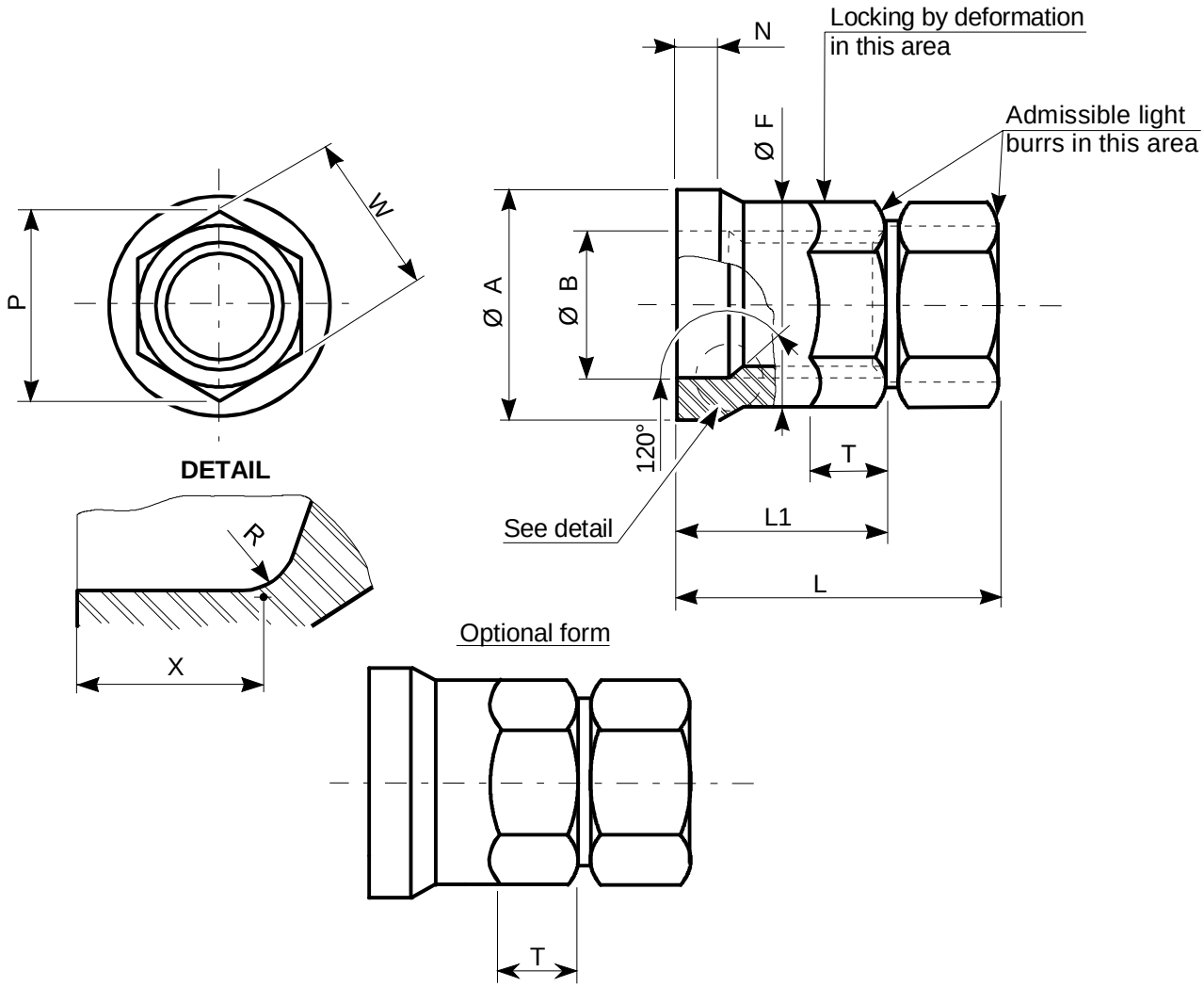


Figure – Configuration

Table 1 - Dimensions, tolerances, mechanical characteristics, mass

ITEM CODE No.	NOMINAL Ø	THREAD AS PER AS-8879	Ø A	Ø B	Ø F MAX.	L	L1 REF.	N MAX.	P REF.	R MAX.
2	5/32	.1640-32UNJC-3B	7,47 7,26	4,39 4,29	6,60	10,29 9,78	6,15	2,29	6,35	0,6
3	3/16	.1900-32UNJF-3B	9,02 8,76	5,79 5,66	7,49	10,54 10,03	6,45	2,41	7,24	0,8
3A	7/32	.2160-28UNJF-3B	9,91 9,65	6,60 6,48	8,38	11,81 11,30	6,95		8,13	0,9
4	1/4	.2500-28UNJF-3B	11,18 10,92	7,31 7,19	9,27	12,32 11,81	7,45	2,54	9,02	1,0
5	5/16	.3125-24UNJF-3B	13,59 13,33	8,89 8,76	11,18	14,35 13,84	8,60	2,92	10,92	0,6
6	3/8	.3750-24UNJF-3B	17,35 17,09	10,49 10,34	14,86	16,13 15,62	9,40	3,05	14,55	
7	7/16	.4375-20UNJF-3B	19,68 19,43	12,09 11,94	16,64	18,16 17,65	10,69		16,33	0,8
8	1/2	.5000-20UNJF-3B	22,35 22,10	13,66 13,51	20,32	19,68 19,18	11,50	3,18	20,01	
9	9/16	.5625-18UNJF-3B	23,49 23,24	15,49 15,29	22,23	21,97 21,46	13,00	3,30	21,84	1,0
10	5/8	.6250-18UNJF-3B	25,40 25,15	17,07 16,86		24,13 23,62	14,40			

ITEM CODE No.	NOMINAL Ø	THREAD AS PER AS-8879	T Min.	W	X		ULTIMATE TENSILE STRENGTH MIN. (daN)	MASS (g)
					Min.	Max.		
2	5/32	.1640-32UNJC-3B	2,29	5,59 5,41	2,54	2,75	623	0,57
3	3/16	.1900-32UNJF-3B	2,50	6,40 6,12			712	0,77
3A	7/32	.2160-28UNJF-3B		7,19 6,88			1 001	0,95
4	1/4	.2500-28UNJF-3B	2,70	7,97 7,67	2,64	2,85	1 335	1,50
5	5/16	.3125-24UNJF-3B	3,20	9,60 9,27	2,69	2,94	2 225	3,55
6	3/8	.3750-24UNJF-3B	3,80	12,78 12,45	2,74	3,00	3 115	5,20
7	7/16	.4375-20UNJF-3B	4,60	14,35 13,97	2,84	3,15	4 227	4,14
8	1/2	.5000-20UNJF-3B		17,53 17,14	2,89	3,20	5 562	6,69
9	9/16	.5625-18UNJF-3B	6,50	19,13 18,69	2,99	3,30	6 452	7,79
10	5/8	.6250-18UNJF-3B	7,90				8 010	8,19

Dimensions in mm.

Table 2 - Material, thermal treatment, finish, lubrication

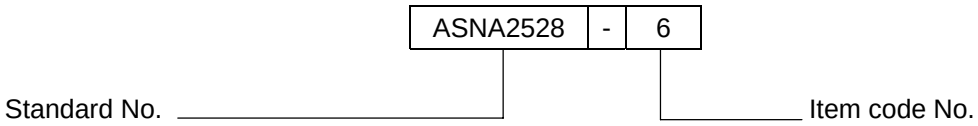
MATERIAL	THERMAL TREATMENT	FINISH	COLOR	LUBRICATION
Aluminium alloy 7050 as per AMS4340 or Aluminium alloy 7075 as per AMS-QQ-A-225/9	T 73 as per AMS2770 or AMS2772	Anodizing as per MIL-A-8625	Black	Cethyl alcohol as per EN6117

5 - DESIGNATION

Example of part number identification to be used on drawing schedules :

ASNA2528-6 , Nut

Example of part number construction :



6 - MARKING

Parts shall be marked as per EN2424, category F.

7 - TECHNICAL SPECIFICATION

ABS1419.

8 - MANUFACTURERS

Refer to the list of qualified manufacturers and products.

AMENDMENT RECORD SHEET

Issue	Modified paragraph	Modification summary	Justification
A.11.88		New standard.	Following note No. 437.127/88
B.04.89	1	Dimension F and "locking area" displaced. "* see chapter 5" added in drawing. Dimensions modified in table for ∅ A and Ø F. Note added in chapter 5.	A 320
C.10.89		Mass modified.	Following manufacturer's information
D.11.89	1	Detail of rounded edge of recess root diameter precised.	Mod. 9999
E.05.93		Standard fully amended. Shear torque of bush modified for item code Nos 3 and 4 : for item code No. 3 : $\frac{0,40}{0,28}$ changed to $\frac{0,36}{0,25}$, for item code No. 4 : $\frac{0,90}{0,68}$ changed to $\frac{0,77}{0,59}$.	Note A/DET/CG No. 531.345/93
F.04.99		Item code No. 3A added.	DA request Ref. EIA-1067/99 TF3-WG1 item 858
G.02.00		Values of Ø L and L1 modified for item code No. 3A in table 1 : $\frac{11,56}{11,05}$ mm changed to $\frac{11,81}{11,30}$ mm and 6,35 mm changed to 6,60 mm. Tensile strength modified for item code No. 3A in table 1 : 889 daN changed to 1 000 daN. Tensile resistance changed to tensile strength in table 1. Manufacturer's specification No. 381 added in technical specification.	DA request Ref. EIS-1033/00

NOTE : Modification to the last standard issue are indicated by a vertical line in the margin.

AMENDMENT RECORD SHEET

Issue	Modified paragraph	Modification summary	Justification
H.10.00		Values of Ø B modified for item code No. 3A in table 1 : $^{6,48}_{6,35}$ mm changed to $^{6,40}_{6,48}$ mm. Shear torque of bush modified for item code No. 3A in table 1 : $^{0,52}_{0,38}$ m.daN changed to $^{0,59}_{0,42}$ m.daN.	DA request
J.01.04		Item code No. 2 added. Dimensions N and F modified.	A 380 program
K.01.05		Torque-off and go thread gage penetration requirements deleted. Min. tensile strength for –3A updated. Marking requirement modified.	ABS1419 update
L.11.06		Chapter 2 updated. Dimensions L1, R, T and mass modified in table 1. Dimensions X max. added in table 1. Reference modified in table 2: MIL-H-6088 changed to AMS2770 or AMS2772. Title deleted in § 7. Optional form added in figure. ”Self-locking” added in § 1.	

NOTE : Modification to the last standard issue are indicated by a vertical line in the margin.