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**NUT - HEXAGONAL, SELF-LOCKING, BALL, BIHEX,  
SHEAR TYPE, CRES**

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THIS STANDARD HAS BEEN PREPARED ACCORDING TO MANUFACTURE R DEFINITIONS.  
POSSIBLE PATENTS WHICH MAY REFER TO THE PRODUCT ARE NOT MENTIONED.  
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**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**

- AMS 5520 : Steel, corrosion and moderate heat resistant, sheet, strip, foil and plate 15Cr - 7.1Ni - 2,5Mo - 1.1Al solution heat treated, precipitation hardenable.
- AMS 5528 : Steel sheet, strip, and plate, corrosion resistant 17Cr - 7.1Ni - 1.1Al solution heat treated.
- AMS 5640 : Steel bars, wire and forgings, corrosion resistant 18Cr-9.0Ni (SAE 30303, 30303Se, 30303Mod) free machining.

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AMS 5643	: Steel, corrosion resistant, bars, forgings, tubing, and rings 16Cr - 4.0Ni - 0.30 (Cb + Ta) - 4.0Cu solution heat treated.
AMS 5686	: Steel rivet wire, corrosion resistant 18Cr -11.5Ni – (SAE 30305) Solution heat treated.
AMS-QQ-P-416	: Plating, cadmium (electrodeposited).
ABS1419	: Nut - Break-off groove, calibrated for short-thread bolts, recessed on thread end.
ASTM A493	: Standard specification for stainless and heat-resisting steel for cold heading and cold forging wire.
ASTM A582	: Standard specification for free-machining stainless and heat-resisting steel bars, hot-rolled or cold-finished.
EN 6117	: Specification for lubrication of bolts with cetyl alcohol.
EN 2424	: Aerospace series - Marking of aerospace products.
MIL-H-6875	: Heat treatment of steel process for
AS 8879	: Screw threads - UNJ profile inch.
QQ-S-763	: Steel bars, wire, shapes and forgings, corrosion resistant.

### 3 - TERMINOLOGY

Not applicable.

### 4 - REQUIRED CHARACTERISTICS

#### 4.1 - Configuration, dimensions, tolerances, mass

4.1.1 - Configuration shall be in accordance with the figure.

4.1.2 - Dimensions shall be in accordance with the figure and Table 1.

All dimensions are given after finish and before lubrication.

4.1.3 - Tolerances shall be in accordance with Table 1.

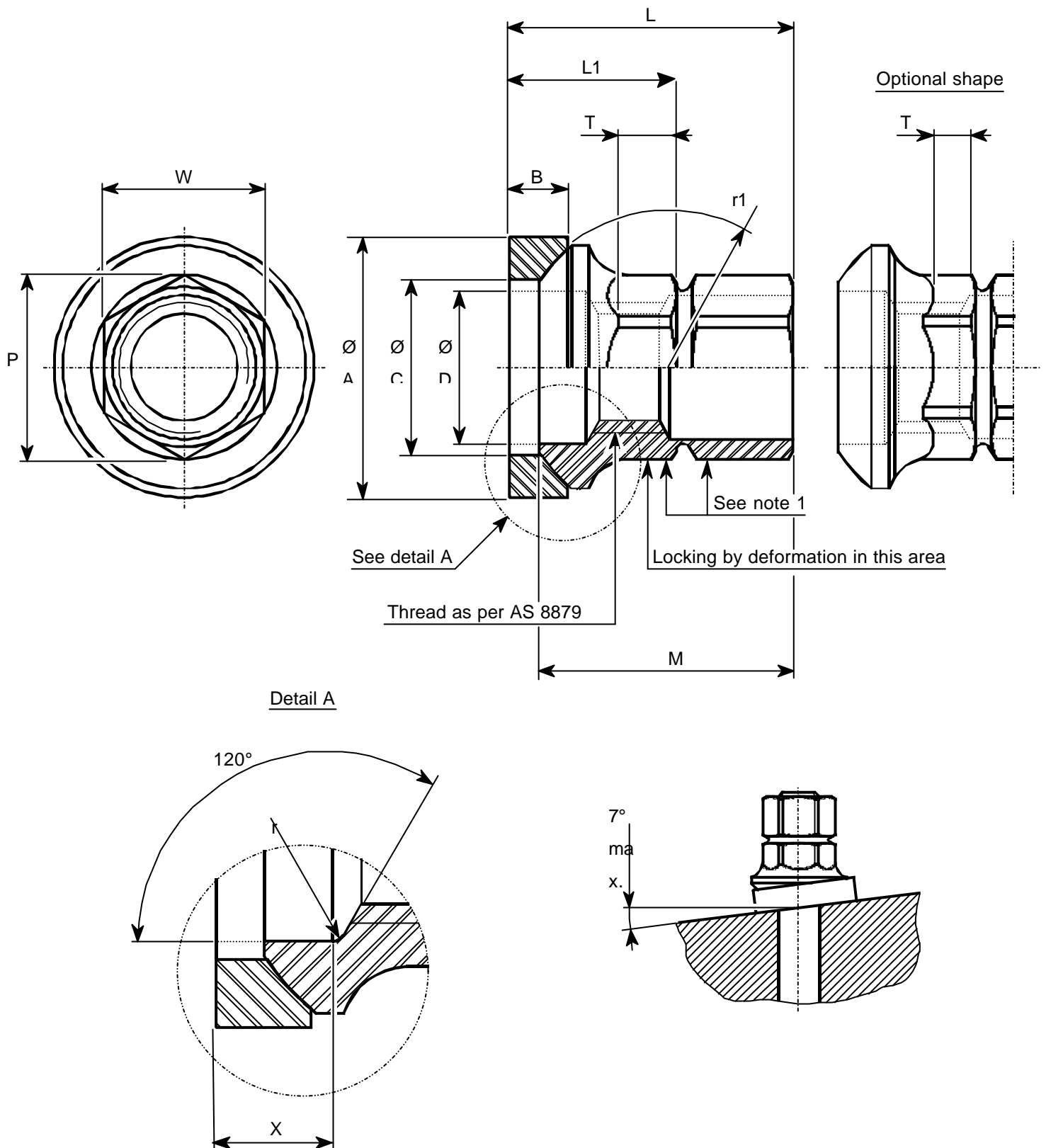
4.1.4 - Mass shall be in accordance with Table 1.

#### 4.2 - Materials, finishes, lubrications

Materials, finishes and lubrications shall be in accordance with Table 2.

#### 4.3 - General characteristics

Go thread gage penetration shall be of one revolution minimum before stopping in the deformation area.



**NOTE 1 :** Slight machining burrs are tolerated in this zone.

Dimensions in mm.

Figure - Configuration, dimensions

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Table 1 - Dimensions, tolerances, mass

ITEM CODE No.	NOMINAL Ø	THREAD as per AS 8879	Ø A	B	Ø C (Ref.)	Ø D (Ref.)	L (Ref.)	L1 (Ref.)	M	P (Ref.)	r 1 (Sph.)
2	3,97	.1640-32UNJC-3B	8,76 8,51	1,80 1,55	6,48	4,67	10,03	5,84	9,53 9,02	6,30	5,21 4,95
3	4,76	.1900-32UNJF-3B	10,03 9,78	2,23 1,98	7,24	5,71	10,29	6,10	9,65 9,14	7,24	6,22 5,97
3A	5,56	.2160-28UNJF-3B	11,94 11,68	2,41 2,16	8,13	6,53	11,56	6,73	10,92 10,41	8,13	6,86 6,60
4	6,35	.2500-28UNJF-3B	13,08 12,83	3,12 2,87	9,27	7,31	12,06	7,11	11,30 10,79	9,02	7,87 7,62
5	7,94	.3125-24UNJF-3B	16,76 16,51	4,06 3,81	11,43	8,84	14,10	8,25	12,95 12,45	10,92	9,78 9,52
6	9,52	.3750-24UNJF-3B	20,06 19,81	4,57 4,32	13,33	10,49	15,87	9,27	14,99 14,47	14,55	11,30 11,05
7	11,11	.4375-20UNJF-3B	22,68 22,43	6,02 5,76	15,37	12,14	17,91	11,30	16,26 15,75	16,33	12,82 12,57
8	12,70	.5000-20UNJF-3B	25,53 25,27	6,73 6,48	17,53	13,72	19,43	12,32	17,14 16,64	20,01	14,35 14,10
9	14,29	.5625-18UNJF-3B	30,10 29,84	6,86 6,60	20,50	15,37	21,72	13,08	20,32 19,81	21,84	18,16 17,91
10	15,88	.6250-18UNJF-3B	34,92 34,54	8,00 7,75	22,15	16,97	23,88	14,22	22,10 21,59		19,30 19,05

ITEM CODE No.	NOMINAL Ø	THREAD as per AS 8879	r max.	T min.	W hex.	X min.	Min. TENSILE RESISTANCE (daN)	MASS (kg/1 000)
2	3,97	.1640-32UNJC-3B	0,5	2,29	5,59 5,41	2,54	1 024	1,167
3	4,76	.1900-32UNJF-3B		2,49	6,40 6,12		1 223	1,647
3A	5,56	.2160-28UNJF-3B			7,19 6,88		1 669	2,110
4	6,35	.2500-28UNJF-3B			7,97 7,67	2,64	2 225	3,263
5	7,94	.3125-24UNJF-3B	0,6	2,92	9,60 9,27	2,69	3 693	6,367
6	9,52	.3750-24UNJF-3B		3,30	12,78 12,45	2,74	5 651	10,197
7	11,11	.4375-20UNJF-3B	0,8	3,60	14,35 13,97	2,84	8 455	16,107
8	12,70	.5000-20UNJF-3B		4,19	17,53 17,14	2,89	11 347	22,439
9	14,29	.5625-18UNJF-3B	1,0	4,70	19,13	2,99	12 905	39,764
10	15,88	.6250-18UNJF-3B		5,08	18,69		14 240	56,708

Dimensions in mm.

Table 2 - Materials, finishes, lubrications

MATERIAL AND FINISH CODE	PART	MATERIAL	THERMAL TREATMENT	FINISH	IDENTIFICATION	LUBRICATION
-	Nut	CRES S30430 (302HQ) as per ASTM A493 type XM-7 or 305 as per QQ-S-763 and AMS 5686 or 303Se as per ASTM A582 (AMS 5640) or 302 as per QQ-S-763	-	Cadmium plating as per AMS-QQ-P-416 type II class 2	Yellow color	Cetyl alcohol as per EN 6117
	Washer	CRES 17.4 PH as per AMS 5643 17.7 PH as per AMS 5528 PH 15.7 MO as per AMS 5520	H.1025 TH.1050 MIL-H-6875		Yellow color. Purple paint layer item code Nos 9 and 10 only	-
P	Nut	CRES S30430 (302HQ) as per ASTM A493 type XM-7 or 305 as per QQ-S-763 and AMS 5686 or 303Se as per ASTM A582 (AMS 5640) or 302 as per QQ-S-763	-	Passivated and Dry film lub as per HS292	Grey color	Cetyl alcohol as per EN 6117
	Washer	CRES 17.4 PH as per AMS 5643 17.7 PH as per AMS 5528 PH 15.7 MO as per AMS 5520	H.1025 TH.1050 MIL-H-6875	Passivated as per AMS-QQ-P-35	Light grey color	-

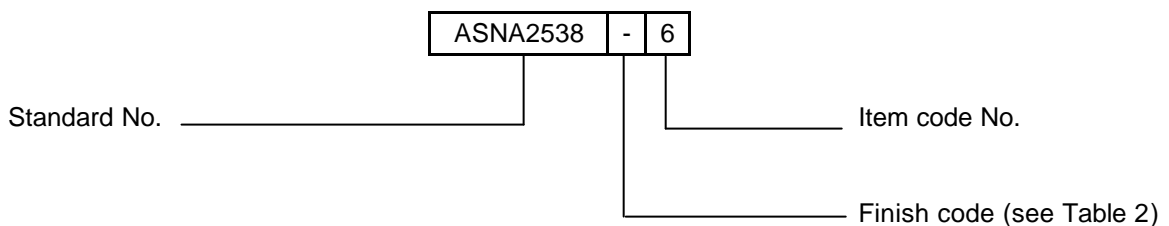
NOTES : (1) Elements which can not be machined, stored or used separately.  
(2) Identification colors correspond to typical protection colors.

## 5 - DESIGNATION

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

ASNA2538-6 , Nut

Example of part number construction :



## 6 - MARKING

Parts shall be marked as per EN 2424, category G.

Unless otherwise specified by contract, marking shall include :

- The manufacturer's name or trademark.

## 7 - TECHNICAL SPECIFICATION

ABS1419. "Collar break-off groove, for lightweight threaded pins".

## 8 - MANUFACTURERS

Refer to the list of qualified manufacturers and products.

## AMENDMENT RECORD SHEET

Issue	Modified paragraph	Modification summary	Justification
A.11.88	3	New standard.	Following note No. 437127/88
B.04.89		Locking by deformation area modified. Table material, finish modified. General characteristics modified.	Mod. 9999
C.10.89		Masses modified.	Following manufacturer information
D.01.91		In technical specification : A/DET 0064 changed to 0063.	Mod. 9999
E.11.91		Standard amended.	PMS8592 A 320 - Mod. 21407
F.03.92		Classification page numbering modified.	Following mistake
G.09.02		Standard fully amended. Item code No. 2 added. "Passivated...as per HS292" and EN 6117 added for nut in table 2. In technical specification : A/DET 0063 changed to ASNA2849.	A 380
H.09.04		Dimensions of Item code No. 2 updated. Item code No. 3A added. Table 2 modified. Technical specification modified : ASNA2849 changed to ABS1419.	A 380

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