

BS ISO 7041:2012



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Prevailing torque type hexagon nuts (with non-metallic insert), style 2 — Property classes 9 and 12

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National foreword

This British Standard is the UK implementation of ISO 7041:2012. It supersedes BS ISO 7041:2002 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee FME/9/3, Fasteners - Product Standards.

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

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INTERNATIONAL STANDARD

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Prevailing torque type hexagon nuts (with non-metallic insert), style 2 — Property classes 9 and 12

*Écrous hexagonaux autofreinés (à anneau non métallique), style 2 —
Classes de qualité 9 et 12*



Reference number
ISO 7041:2012(E)

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Foreword

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Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 7041 was prepared by Technical Committee ISO/TC 2, *Fasteners*, Subcommittee SC 12, *Fasteners with metric internal thread*.

This fourth edition cancels and replaces the third edition (ISO 7041:2002), of which it constitutes a minor revision.

Prevailing torque type hexagon nuts (with non-metallic insert), style 2 — Property classes 9 and 12

1 Scope

This International Standard specifies the characteristics of prevailing torque type hexagon nuts (with non-metallic insert), style 2, with threads from M5 up to and including M36, in product grade A for threads up to and including M16, and product grade B for threads above M16, and with property classes 9 and 12.

NOTE The dimensions of the nuts correspond to those given in ISO 4033 plus prevailing torque feature.

If other specifications are required, they can be selected from existing International Standards, e.g. ISO 261, ISO 724, ISO 898-2, ISO 965-2, ISO 2320 and ISO 4759-1.

2 Normative references

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

ISO 225, *Fasteners — Bolts, screws, studs and nuts — Symbols and descriptions of dimensions*

ISO 261, *ISO general purpose metric screw threads — General plan*

ISO 724, *ISO general-purpose metric screw threads — Basic dimensions*

ISO 898-2, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 2: Nuts with specified property classes — Coarse thread and fine pitch thread*

ISO 965-2, *ISO general purpose metric screw threads — Tolerances — Part 2: Limits of sizes for general purpose external and internal screw threads — Medium quality*

ISO 2320, *Prevailing torque type steel nuts — Mechanical and performance properties*

ISO 3269, *Fasteners — Acceptance inspection*

ISO 4042, *Fasteners — Electroplated coatings*

ISO 4759-1, *Tolerances for fasteners — Part 1: Bolts, screws, studs and nuts — Product grades A, B and C*

ISO 6157-2, *Fasteners — Surface discontinuities — Part 2: Nuts*

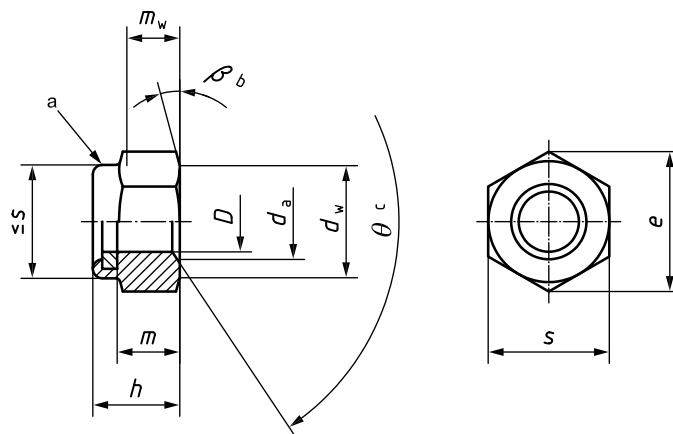
ISO 8992, *Fasteners — General requirements for bolts, screws, studs and nuts*

ISO 10683, *Fasteners — Non-electrolytically applied zinc flake coatings*

3 Dimensions

See Figure 1 and Table 1.

Symbols and descriptions of dimensions are specified in ISO 225.



- a Prevailing torque element; the shape is at the discretion of the manufacturer.
- b $\beta = 15^\circ$ to 30° .
- c $\theta = 90^\circ$ to 120° .

Figure 1

Table 1 — Dimensions

Dimensions in millimetres

Thread <i>D</i>		M5	M6	M8	M10	M12	(M14) ^a	M16	M20	M24	M30	M36
<i>p</i> ^b		0,8	1	1,25	1,5	1,75	2	2	2,5	3	3,5	4
<i>d_a</i>	max.	5,75	6,75	8,75	10,80	13,00	15,10	17,30	21,60	25,90	32,40	38,90
	min.	5,00	6,00	8,00	10,00	12,00	14,00	16,00	20,00	24,00	30,00	36,00
<i>d_w</i>	min.	6,88	8,88	11,63	14,63	16,63	19,64	22,49	27,70	33,25	42,75	51,11
<i>e</i>	min.	8,79	11,05	14,38	17,77	20,03	23,36	26,75	32,95	39,55	50,85	60,79
<i>h</i>	max.	7,20	8,50	10,20	12,80	16,10	18,30	20,70	25,10	29,50	35,60	42,60
	min.	6,62	7,92	9,50	12,10	15,40	17,00	19,40	23,00	27,40	33,10	40,10
<i>m</i> ^c	min.	4,80	5,40	7,14	8,94	11,57	13,40	15,70	19,00	22,60	27,30	33,10
<i>m_w</i> ^d	min.	3,84	4,32	5,71	7,15	9,26	10,70	12,60	15,20	18,10	21,80	26,50
<i>s</i>	max.	8,00	10,00	13,00	16,00	18,00	21,00	24,00	30,00	36,00	46,00	55,00
	min.	7,78	9,78	12,73	15,73	17,73	20,67	23,67	29,16	35,00	45,00	53,80

^a The size in parentheses/brackets should be avoided, if possible.
^b *p* is the pitch of the thread.
^c Minimum thread height.
^d Minimum wrenching height.

4 Requirements and reference International Standards

See Table 2.

Table 2 — Requirements and reference International Standards

Material	Nut body	Steel
	Insert	For example polyamide
General requirements	International Standard	ISO 8992
Thread	Tolerance class	6H
	International Standards	ISO 261, ISO 724, ISO 965-2
Mechanical and performance properties	Property class	9, 12
	International Standards	ISO 898-2, ISO 2320
Tolerance	Product grade	For $D \leq M16$: A For $D > M16$: B
	International Standard	ISO 4759-1
Finish — Coating		As processed. Requirements for electroplating are specified in ISO 4042. Requirements for non-electrolytically applied zinc flake coatings are specified in ISO 10683. Additional requirements or other finishes or coatings shall be agreed between the supplier and the purchaser.
Surface integrity		Limits for surface discontinuities are specified in ISO 6157-2.
Acceptability		Acceptance inspection is specified in ISO 3269.

5 Designation

EXAMPLE A prevailing torque type hexagon nut, style 2, with non-metallic insert, thread M12 and property class 12, is designated as follows:

Prevailing torque type hexagon nut ISO 7041 - M12 - 12

Bibliography

- [1] ISO 4033, *Hexagon nuts, style 2 — Product grades A and B*

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