



PLANT STANDARD

HPBP TIRUCHIRAPPALLI

BPS 41319

Rev. No. 03

PAGE 1 OF 2

NUTS FOR TEMPERATURE USE

(For medium of temperature upto 425 ° C)

1.0 SCOPE

Covers the requirements of hexagon nuts for use in medium of temperature upto 425 ° C and in the size range M8 to M45x3.

2.0 SPECIFICATION AND REFERENCE STANDARDS

Dimensions and preferred sizes	Fig 1 & Table 1 of this standard	
Tolerance	Product grade	A for nuts with d ≤ M16 B for nuts with d > M16
	Indian Standard	IS 1367 (Part 2)
Thread	Pitch	Table 1 of this standards
	Tolerance	6H
	Indian Standard	IS 4218 (Part 3, 5 & 6)
Material	Steel to ASTM A 194 2H Certified	
Testing	The finished nut shall satisfy the requirements of hardness, proof load and cone proof load, tests as specified in ASTM A194	
General requirements	Nuts shall comply with TDC:5:166 in respect of requirements not covered in this standard, except for cadmium plating	

2.1 Referred standards (Only the relevant parts of current versions are applicable)

IS 1367 (Part 2)	Technical supply conditions for threaded steel fasteners
IS 4218 (Part 3, 5 & 6)	ISO metric screw threads
TDC:5:166	Carbon steel nuts for OFE & other applications as per A 194 GR 2H/2HM
ASTM A194	Specification for carbon and alloy steel nuts for bolts for high pressure and high temperature service.

3.0 DESIGNATION

A Grade 'A' hexagon nut to this standard of thread size M8 shall be designated as :

3.1 On Drawings

i) Material Specification column	ASTM A 194 - 2H
ii) Description Column	NUT HEX GR A T425 M8
iii) Drawing Number Column	BPS 41319
iv) Material Code column:	4131900008

Revisions

Brought upto date

Approved

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3.2 Ordering Description

For placing indents, issuing enquiries and on purchase order, Ordering Description given below shall be followed.(Typical examples)

Hex Nut M8 to BPS : 41319-A-ASTM A194-2H for nuts with $d \leq M16$

Hex Nut M20 to BPS : 41319-B-ASTM A194-2H for nuts with $d > M16$ and $d < M36 \times 3$

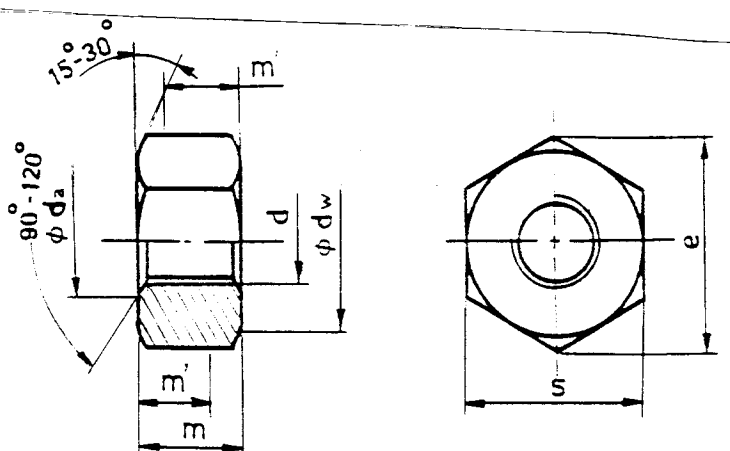
Hex Nut M36x3 to BPS: 41319-B-ASTM A194-2H for nuts with $d \geq M36 \times 3$

4.0 ADDITIONAL INFORMATION

4.1 Copies of this standard and TDC:5:166 shall be enclosed along with the purchase order.

Figure 1 DIMENSIONS FOR HEXAGON NUTS

(All dimensions are in millimetres)



'm' = Effective gauging height

TABLE 1

(All dimensions are in millimetres)

Thread Size d	d _a		d _w	e		m		m'	s		Weight
	Min	Max	Min	Max	Min	Max	Min	Min	Max	Min	
M8	8	8.75	11.6		14.38	8	7.64	6.1	13	12.73	6.0
M10	10	10.80	14.6		17.77	10	9.64	7.7	16	15.73	10.8
M12	12	13.00	16.6		20.03	12	11.57	9.3	18	17.73	16.5
M16	16	17.30	22.5		26.75	17.1	16.40	13.1	24	23.67	33.0
M20	20	21.60	27.7		32.95	20.7	19.40	15.5	30	29.16	64.5
M24	24	25.90	33.2		39.55	24.2	22.90	18.3	36	35.00	110.0
(M27)					45.20	27.6	26.30	21.0	41	40.00	166.0
M30	30	32.40	42.7		50.85	30.7	29.10	23.3	46	45.00	231.0
(M33)					55.37	33	31.40	25.1	50	49.00	299.0
M36x3	36	38.90	51.1		60.79	36.6	35.00	28.6	55	53.80	364.0
(M39x3)					66.44	39	37.40	29.9	60	58.80	485.0
(M45x3)				80.8		45	43.40	34.7	70	68.80	750.0

NOTE :

1. Sizes in brackets are non-preferred.
2. Weights are given in Kg per 1000 numbers only.