

MARYLAND METRICS

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TECHNICAL INFORMATION and DATA

Mechanical properties for nuts according DIN (only valid for DIN 934/DIN 985)

DIN 267/part 4

Mechanical properties		Property class					
		4	5	6	8	10	12
Nominal proof load stress	N/mm ²	400	500	600	800	1000	1200
Vickers hardness ... HV 5	max.	302	302	302	302	353	353
Brinell hardness ... HB 30	max.	290	290	290	290	335	335
Rockwell hardness ... HRC	max.	30	30	30	30	36	36

Mechanical properties for nuts according ISO (for all other DIN-ISO-nuts)

ISO 898/part 2

Nominal size (thread diameter) mm over to		Property class											
		04		05			5			6			
		Stress under proof load Sp	Vickers hardness HV	Stress under proof load Sp	Vickers hardness HV	Stress under proof load Sp	Vickers hardness HV ₁₎	Stress under proof load Sp	Vickers hardness HV ₁₎				
	N/mm ²	min. max.	N/mm ²	min. max.	N/mm ²	min. max.	N/mm ²	min. max.	N/mm ²	min. max.			
-	4	380	188 302	500	272 353	520	130	302	600	150	302		
4	7											580	670
7	10											590	680
10	16											610	700
16	39											630	720
39	100	-	-	-	-	146	170	-	142				

Nominal size (thread diameter) mm over to		Property class								
		8		10			12			
		Stress under proof load Sp	Vickers hardness HV _{1) + 2)}	Stress under proof load Sp	Vickers hardness HV _{1) + 2)}	Stress under proof load Sp	Vickers hardness HV ₂₎			
	N/mm ²	min. max.	N/mm ²	min. max.	N/mm ²	min. max.	N/mm ²	min. max.		
-	4	800	180	1040	272	353	1140 ¹⁾ 1150 ²⁾	295 ¹⁾ 272 ²⁾	353	
4	7	855	200				302			1140 ¹⁾ 1150 ²⁾
7	10	870								1140 ¹⁾ 1160 ²⁾
10	16	880								1170 ¹⁾ 1190 ²⁾
16	39	920 ¹⁾ 890 ²⁾								1200 ²⁾
39	100	-	233 ¹⁾ 180 ²⁾	353 ¹⁾ 302 ²⁾	1060	-	-	-		

¹⁾ Nuts style 1 (ISO 4032) ≈ 0,8 d nuts

²⁾ Nuts style 2 (ISO 4033) ≈ 1,0 d nuts

Note:

- Minimum hardness is mandatory only for heat-treated nuts and nuts too large to be proof-load tested. For all other nuts, minimum hardness is provided for guidance only.
- Nuts of property class 05, 8 (Style 1 > M 16 only), 10 and 12 shall be hardened and tempered.
- Hardness values for nominal sizes (thread diameters) over 39 up to and including 100 mm are to be used for information and guidance only.