

MARYLAND METRICS

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TECHNICAL INFORMATION and DATA

Mechanical properties for fine thread nuts according DIN-ISO

ISO 898/part 6

Nominal size (thread diameter) mm over to		Property class									
		04		05			5		6		
		Stress under proof load S_p N/mm ²	Vickers hardness HV 30 min. max.	Stress under proof load S_p N/mm ²	Vickers hardness HV 30 min. max.	Stress under proof load S_p N/mm ²	Vickers hardness HV 30 ¹⁾ min. max.	Stress under proof load S_p N/mm ²	Vickers hardness HV 30 ¹⁾ min. max.		
7	10	380	188 302	500	272 353	690	175	302	770	188	302
10	16					720	190		780		
16	33								870		
33	39								920		

Nominal size (thread diameter) mm over to		Property class									
		8			10			12			
		Stress under proof load S_p N/mm ²	Vickers hardness HV 30 ^{1) + 2)} min. max.		Stress under proof load S_p N/mm ²	Vickers hardness HV 30 ^{1) + 2)} min. max.		Stress under proof load S_p N/mm ²	Vickers hardness HV 30 ²⁾ min. max.		
7	10	955 ¹⁾ 890 ²⁾	250 ¹⁾ 195 ²⁾	353 ¹⁾ 302 ²⁾	1100 ¹⁾	1055 ²⁾	295 ¹⁾ 250 ²⁾	353	1200	295	353
10	16				1110 ¹⁾						
16	33	1030 ¹⁾	295 ¹⁾	353 ¹⁾	1080 ²⁾	260 ²⁾	353	-	-	-	
33	39	1090 ¹⁾									

¹⁾ Nuts style 1 (ISO 8673/DIN 971 part 1) < 0,8 d nuts

²⁾ Nuts style 2 (ISO 8674/DIN 971 part 2) < 1,0 d nuts

Failure loads for nuts with nominal height of 0,5 D

The values of failure loads given for guidance in the following table apply to different bolt classes. Bolt stripping is the expected failure mode for lower strength bolts, while nut stripping can be expected for bolts of higher property classes.

Minimum failure loads for nuts in % of the screws proof load (for guidance only)

Property class of the nut	Property class of the bolt			
	6.8	8.8	10.9	12.9
04	85	65	45	40
05	100	85	60	50