

# QUALITY CERTIFICATE

Product: DIN931	Contract No: 14JDM044B	
Class: 10.9	Invoice No: -00967928	
Size: 16X55	Lot No: 3294270003	
Marking: JDF 10.9	Order No:	
Quantity: 15.540 mpcs	Part No:	

**Dimensions Of SPEC:**

**Certificate No.:**

Inspection Items	Standard	Result	Sample	Pass						
Visual Appearance		OK	20	20						
Body Diameter	16-15.73	15.82-15.86	20	20						
Thread	Go S	6gT	20	20						
	No Go	6gZ	20	20						
Width Across Flats	24-23.67	23.7-23.85	20	20						
Width Across Corners	min 26.75	27-27.3	20	20						
Major Diameter	15.962-15.682	15.82-15.85	20	20						
Lead Height	10.18-9.82	9.9-10.0	20	20						
Total Length	54.5-55.6	55-55.2	20	20						
Thread Length	min 38.5	40-41	20	20						
Key Engagement	/	/	20	20						
Lead Diameter	/	/	20	20						
<b>Mechanical Properties</b>										
CharacTeristics	Standard	Result								
Surface Hardness [30N]	32-39	34-35.5	10	10						
Core Hardness [HRC]	32-39	34-35.5	10	10						
Wedge Strength [Mpa]	min 1040	1122-1135	8	8						
Tensile Strength [Mpa]	min 1040	1122-1132	8	8						
Yield Strength [Mpa]	min 940	994-1038	8	8						
Elongation [%]	min 9	11.6-13.7	8	8						
Reduction Of area [%]	min 48	53.4-57.8	8	8						
Proof Load [kN]	130	130	4	4						
Impact test -20°C [AkV/J]	min 27	32.4-38.1	6	6						
Decarburization	E ≥ 2/3H1 HVO.3	355.20 355.19 362.80	6	6						
HV2=HV1+30, HV3<=HV1+30	G 7.00, 0.15max		6	6						
<b>CHEMICAL COMPOSITION (%)</b>										
Heat No	C	Si	Mn	P	S	Cr	Ni	Cu	Mo	B
40Cr	S11306901XXM16	0.24	0.75	0.016	0.004	1.05	0.02	0.03		
Thickness [UM]									20	20
Surface Coating:	BLACK									
Thread Specification: ISO 965-1 1998:LIMITS OF SIZES FOR GENERAL PURPOSE EXTERNAL AND INTERNAL SCREW THREADS - MEDIUM QUALITY										
Sampling Dimension Specification: ISO3269 2000 inspection and quality assurance for high-volume machine assembly fasteners										
Dimension Specification: DIN 931-1987, HEXAGON HEAD BOLTS (PRODUCT GRADES A AND B)										
sampling mechanical properties specification: ISO3269 2000 Standard Guide for Fastener Sampling for Specified Mechanical Properties and Performance Inspection										
Mechanical Properties: ISO 898-1 2013,MECHANICAL PROPERTIES OF FASTENERS MADE OF CARBON STEEL AND ALLOY STEEL -PART 1:BOLTS, SCREWS AND STUDS										
Surface Defect: ISO 6157-1:1988, FASTENERS - SURFACE DISCONTINUITIES -PART 1:BOLTS, SCREWS AND STUDS FOR GENERAL REQUIREMENTS										
Quality Control Supervisor							Quality Control Manager			