

## DECLARATION OF PERFORMANCE No. M33SB8.8/8SHER

**UIC of the product type:** M33SB8.8/8SHER (Unique Identification Code)  
**Intended use:** General building and engineering structures including off-shore structures  
**Manufacturer:** **Andrews Fasteners Ltd**  
**Latchmore Park, Latchmore Road,**  
**Leeds, LS12 6DN, West Yorkshire, United Kingdom**  
**System/s of AVCP:** System 2+  
**Harmonised standard:** EN 15048-1:2007  
**Notified Body/ies:** 0038 - Lloyds Register Verification Limited  
 71 Fenchurch Street, London EC3M 4BS UK  
**EC Certificate of Conformity No.:** 0038/CPR/LRQ 4009220/A  
**Declared performance:**

Essential characteristics	Performance	Harmonized technical specification
<b>Bolts</b>		
Tolerances on dim., form and position	EN ISO 4017	EN 15048-1:2007
Elongation after fracture	min. 12% (ISO 898-1)	EN 15048-1:2007
Minimum tensile strength	min. 830 MPa (ISO 898-1)	EN 15048-1:2007
Lower yield strength or Stress at 0.2% non-proportional	min. 660 MPa (ISO 898-1)	EN 15048-1:2007
Stress under proof load	min. 600 MPa (ISO 898-1)	EN 15048-1:2007
Strength under wedge loading	min. 576 kN (ISO 898-1)	EN 15048-1:2007
Hardness	req 255-335 HV, 250-331 HBW, 23-34 HRC (ISO 898-1)	EN 15048-1:2007
Impact strength	min. 27 J at -20 °C (ISO 898-1)	EN 15048-1:2007
Release of dangerous substances	Substances X: Less than 0.2 ppm	EN 15048-1:2007
Durability	pass (EN 13811, 15um min)	EN 15048-1:2007
<b>Nuts</b>		
Tolerances on dimensions, form and position	EN ISO 4032	EN 15048-1:2007
Stress under proof load	min. 638,5 kN (ISO 898-2)	EN 15048-1:2007
Hardness	233-353 HV, 221-336 HB, max. 36 HRC (ISO 898-2)	EN 15048-1:2007
Release of dangerous substances	Substances X: Less than 0.2 ppm	EN 15048-1:2007
Durability	pass (EN 13811, 15um min)	EN 15048-1:2007
<b>Washers</b>		
Tolerances on dimensions, form and position	ISO 7091	EN 15048-1:2007
Hardness (washer)	min. 100 HV	EN 15048-1:2007
Release of dangerous substances	Substances X: Less than 0.2 ppm	EN 15048-1:2007
Durability	pass (EN 13811, 15um min)	EN 15048-1:2007
<b>Assemblies</b>		
Tensile Resistance of the assembly	min. 576 kN (ISO 898-1)	EN 15048-1:2007
Durability	pass (EN 13811, 15um min)	EN 15048-1:2007

The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.



Signed for and on behalf of the manufacturer by:  
**Michael Carey**  
 Managing Director  
 At Leeds on 26/01/2016