Declaration of Performance (DoP)

No. CT05 – EN 14399-4 PC 10.9

$C\epsilon$

0045

We   **Cooper & Turner**

of   **Sheffield Road**   **Canklow Meadows Ind Est**
            Sheffield   **Rotherham**
            England   **England**
            S9 1RS   **S60 2XL**

declare that our PC10.9 high-strength bolting assemblies for preloading produced in accordance with EN 14399-4 with the Intended use in Structural metallic works fulfil the requirements of EN 14399-1 and will be in be in conformity with the declared performance stated in the table below.

A Factory Production Control certificate for bolting assemblies in accordance with EN 14399-1:2005 Appendix ZA system 2+; certificate no: 0045-CPD-0877 - has been issued to Cooper & Turner by notified body:-

TÜV Nord Systems GmbH & Co. KG – 0045

Declared Performance		
Essential Characteristics	**Performance**	**Harmonised Technical Standard**
Tolerance on dimensions, form and position (bolts)	EN 14399-4 **Product grade C Pass**	
Percentage Elongation after fracture (bolts)	EN ISO 898-1 $A\% \geq 9$	
Minimum tensile strength (bolt) **Stress at 0.2% non-proportional elongation (bolts)** **Stress under proof load (bolts)** **Strength under wedge (bolts)** **Hardness (bolts)** **Impact strength (bolts)**	EN ISO 898-1 $R_m \geq 1040$ MPa $R_{p0.2} \geq 940$ MPa Sp of 830 MPa $R_m \geq 1040$ MPa ≥ 320 HV and ≤ 380 HV ≥ 27 J at -20°C	EN 14399-1:2005
Friction coefficient (k-class)	K1	
Tolerance on dimensions, form and position (nuts)	EN 14399-4 **Product grade B Pass**	
Stress under proof load (nuts) **Hardness (nuts)**	EN ISO 898-2 **Pass** **Pass**	
Tolerance on dimensions, form and position (chamfered washers)	EN 14399-6 **Product grade A Pass**	
Hardness (washers)	EN 14399-6 **Pass**	
Suitability of preloading (assemblies)	F_{bi} max $\geq 0.9\ f_{ub}\ A_s$ Δϴ2 – Pass k-class – K1 $0.10 \leq ki \geq 0.16$	

This declaration of performance (DOP) is issued under the sole responsibility of Cooper and Turner, and the CE mark is permitted to be affixed at the two locations stated above.

Signed: *DBriggs*   Position: **Quality Manager**
Name: **David Briggs**   Date: **18th June 2013**