

## Industeel SUPERELSO® 690CR Quenched and Tempered High Strength Steel for Leg Components of Jack-up Rigs

Category : Metal , Ferrous Metal , Carbon Steel , Medium Carbon Steel

### Material Notes:

Superelso® 690 CR (SE 690 CR) is a 690MPa (100ksi) yield strength quenched and tempered steel adapted for jack-up rig legs of offshore drilling platforms. Superelso® 690 CR is manufactured via the electric furnace with dephosphorisation, ladle refining and vacuum degassing to provide a reproducible, clean and homogenous steel. This material has been specially designed for offshore applications requiring the use of heavy thick plates (up to 250 mm/10") with demanding mechanical properties requirements. The chemical composition of SE 690 CR has been carefully adapted and allows the achievement of high impact values (> 50 J at -60°C) across the thickness while respecting the tensile properties required. The main application of Superelso® 690 CR being the manufacturing of racks and chords, particular attention has been paid on forming, oxycutting and welding properties. The very low carbon content of this material allows cutting and welding under classical conditions, increasing in the way the cost efficiency of manufacturing. Mechanical properties for plates with thickness < 210 mm. ABS FH 40 Information provided by manufacturer.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Industeel-SUPERELSO-690CR-Quenched-and-Tempered-High-Strength-Steel-for-Leg-Components-of-Jack-up-Rigs.php](http://www.lookpolymers.com/polymer_Industeel-SUPERELSO-690CR-Quenched-and-Tempered-High-Strength-Steel-for-Leg-Components-of-Jack-up-Rigs.php)

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	840 MPa	122000 psi	Typical, 1/4 t
	790 - 940 MPa	115000 - 136000 psi	Guaranteed, 1/4 t
Tensile Strength, Yield	>= 690 MPa	>= 100000 psi	1/2 t
	770 MPa	112000 psi	Typical, 1/2 t
Charpy Impact	>= 46.0 J	>= 33.9 ft-lb	1/4 t
	@Temperature >=-60.0 °C	@Temperature >=-76.0 °F	
	65.0 J	47.9 ft-lb	Typical down to -60°C (1/4 t)
	@Temperature >=-60.0 °C	@Temperature >=-76.0 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.15 %	<= 0.15 %	
Chromium, Cr	<= 0.70 %	<= 0.70 %	
Iron, Fe	92.738 - 99.85 %	92.738 - 99.85 %	As remainder
Manganese, Mn	<= 1.2 %	<= 1.2 %	
Molybdenum, Mo	<= 0.70 %	<= 0.70 %	

<b>Nickel, Ni</b> Component Elements Properties	<b>&lt;= 4.0 %</b> Metric	<b>&lt;= 4.0 %</b> English	Comments
Phosphorous, P	<= 0.010 %	<= 0.010 %	
Silicon, Si	0.15 - 0.45 %	0.15 - 0.45 %	
Sulfur, S	<= 0.0020 %	<= 0.0020 %	
Vanadium, V	<= 0.050 %	<= 0.050 %	

## Contact Songhan Plastic Technology Co.,Ltd.

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