

## Industeel SUPERELSO® 500HR Quenched and Tempered High Strength Steel for Wet H2S Service

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

### Material Notes:

Description: Superelso® 500 HR (SE 500 HR, "Hydrogen Resistant") is a 500MPa (72ksi) yield strength quenched and tempered steel adapted for pressure equipment operating under sour service condition. It is designed to meet the requirements of NACE Standard MR0175, with a maximum hardness of 22 HRC in the heat-affected zone (HAZ) after post weld heat treatment (PWHT). SE 500 HR is manufactured via the electric furnace with dephosphorisation, ladle refining and vacuum degassing to provide a reproducible, clean steel. The use of special steelmaking practice imparting high steel cleanliness, along with a carefully adapted chemistry and a uniform structure provides SE500 HR with excellent resistance to wet H2S cracking, including SSC, HIC and SOHIC. The low carbon content of SE500 HR limits the HAZ hardness after welding and also improves weldability. This steel displays excellent toughness, with a low transition temperature (-60°C/-76°F). This steel is particularly suitable for pressure equipment in wet hydrogen sulfide service in the offshore oil and gas industry, where its high strength allows significant weight and cost reductions. Mechanical properties for 50-150 mm plates. Information provided by manufacturer.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Industeel-SUPERELSO-500HR-Quenched-and-Tempered-High-Strength-Steel-for-Wet-H2S-Service.php](http://www.lookpolymers.com/polymer_Industeel-SUPERELSO-500HR-Quenched-and-Tempered-High-Strength-Steel-for-Wet-H2S-Service.php)

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	590 - 770 MPa	85600 - 112000 psi	Typical
Tensile Strength, Yield	>= 480 MPa @Strain 0.200 %	>= 69600 psi @Strain 0.200 %	
Elongation at Break	17 %	17 %	Typical
Charpy Impact	>= 50.0 J @Temperature >=-60.0 °C	>= 36.9 ft-lb @Temperature >=-76.0 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.10 %	<= 0.10 %	
Iron, Fe	95.99 - 100 %	95.99 - 100 %	As remainder
Manganese, Mn	<= 2.0 %	<= 2.0 %	
Molybdenum, Mo	<= 0.50 %	<= 0.50 %	
Nickel, Ni	<= 1.0 %	<= 1.0 %	
Phosphorous, P	<= 0.0080 %	<= 0.0080 %	
Silicon, Si	<= 0.40 %	<= 0.40 %	

Component Elements Properties

Metric 20 %

English 20 %

Comments

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China