

## ThyssenKrupp N-A-XTRA® 700 Structural Steel

Category : Metal , Ferrous Metal , Carbon Steel , Low Carbon Steel

### Material Notes:

This Material Specification applies to quenched and tempered heavy plates made of the special structural steel N-A-XTRA® This steel can be supplied in 3 different grades with a minimum yield strength of 550, 620 and 700 MPa. All steel grades can be delivered in two qualities with different toughness properties. 1) Quality for low service temperature with minimum impact energy at - 40 °C (N-A-XTRA® M) in a thickness range from 3 to 100 mm. 2) Special quality for low service temperature with minimum impact energy at - 60 °C (classic N-A-XTRA®) in a thickness range from 3 to 50 mm. Application: The steels are used for welded constructions of all kinds, such as pressure vessels, penstocks, bridges and structures, as well as transport vehicles, mobile cranes, mining equipment, hoistings and earth moving equipment, which are utilized in different types of climatic conditions. If continuous yielding occurs, the yield strength is determined as Rp0,2. Information Provided by Thyssen Krupp

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_ThyssenKrupp-N-A-XTRA-700-Structural-Steel.php](http://www.lookpolymers.com/polymer_ThyssenKrupp-N-A-XTRA-700-Structural-Steel.php)

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	>= 530 MPa	>= 76900 psi	
	@Strain 0.200 %, Temperature 400 °C	@Strain 0.200 %, Temperature 752 °F	
	>= 550 MPa	>= 79800 psi	
	@Strain 0.200 %, Temperature 350 °C	@Strain 0.200 %, Temperature 662 °F	
	>= 570 MPa	>= 82700 psi	
	@Strain 0.200 %, Temperature 300 °C	@Strain 0.200 %, Temperature 572 °F	
	>= 585 MPa	>= 84800 psi	
	@Strain 0.200 %, Temperature 250 °C	@Strain 0.200 %, Temperature 482 °F	
	>= 605 MPa	>= 87700 psi	
	@Strain 0.200 %, Temperature 200 °C	@Strain 0.200 %, Temperature 392 °F	
>= 640 MPa	>= 92800 psi		
@Strain 0.200 %, Temperature 150 °C	@Strain 0.200 %, Temperature 302 °F		
>= 660 MPa	>= 95700 psi		
@Strain 0.200 %, Temperature 100 °C	@Strain 0.200 %, Temperature 212 °F		
Elongation at Break	>= 14 %	>= 14 %	

Mechanical Properties	27.0 J Metric	19.9 ft-lb English	Comments
	@Temperature -60.0 °C	@Temperature -76.0 °F	
	30.0 J	22.1 ft-lb	Transverse
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	30.0 J	22.1 ft-lb	Longitudinal
	@Temperature -60.0 °C	@Temperature -76.0 °F	
	35.0 J	25.8 ft-lb	Transverse
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	40.0 J	29.5 ft-lb	Longitudinal
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	40.0 J	29.5 ft-lb	Transverse
	@Temperature 0.000 °C	@Temperature 32.0 °F	
	50.0 J	36.9 ft-lb	Longitudinal
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	60.0 J	44.3 ft-lb	Longitudinal
	@Temperature 0.000 °C	@Temperature 32.0 °F	

Component Elements Properties	Metric	English	Comments
Aluminum, Al	<= 1.5 %	<= 1.5 %	
Carbon, C	<= 0.20 %	<= 0.20 %	
Chromium, Cr	<= 1.5 %	<= 1.5 %	
Manganese, Mn	<= 1.6 %	<= 1.6 %	
Molybdenum, Mo	<= 0.60 %	<= 0.60 %	
Phosphorous, P	<= 0.020 %	<= 0.020 %	
Silicon, Si	<= 0.80 %	<= 0.80 %	
Sulfur, S	<= 0.010 %	<= 0.010 %	

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