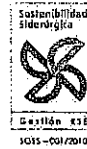


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CELSA  
 BARCELONA



Material (L=Length)	Heat Number	CHEMICAL ANALYSIS																MECHANICAL PROPERTIES			
		C	Mn	Si	S	P	Cr	Ni	Cu	Sn	Mo	V	Nb	Al	N	CE	Yield Str.	Ten- sile Str.	Yield/ Tens. Str.	Elong. 8 in. %	
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	MPA	MPA	MPA	%	
GRADO 50 W14X5.0X22 L.40fts(12.2m)	CE183308	0.110	1.240	0.180	0.026	0.022	0.120	0.130	0.430	0.016	0.024	0.068	0.002	0.003	0.0114	0.396	411	537	0.765	25.2	
GRADO 50 W14X5.0X22 L.40fts(12.2m)	CE183308	0.110	1.240	0.180	0.026	0.022	0.120	0.130	0.430	0.016	0.024	0.068	0.002	0.003	0.0114	0.396	405	526	0.770	26.2	
GRADO 50 W8X4X15 L.40fts(12.192m)	CE183308	0.110	1.240	0.180	0.026	0.022	0.120	0.130	0.430	0.016	0.024	0.068	0.002	0.003	0.0114	0.396	422	548	0.770	29.2	
GRADO 50 W8X4X15 L.40fts(12.192m)	CE183308	0.110	1.240	0.180	0.026	0.022	0.120	0.130	0.430	0.016	0.024	0.068	0.002	0.003	0.0114	0.396	418	544	0.768	29.9	
GRADO 50 W12X6.5X26 L.40fts(12.2m)	CE183309	0.090	1.240	0.180	0.020	0.020	0.110	0.130	0.380	0.014	0.023	0.069	0.002	0.003	0.0112	0.371	422	545	0.774	29.2	
GRADO 50 W12X6.5X26 L.40fts(12.2m)	CE183309	0.090	1.240	0.180	0.020	0.020	0.110	0.130	0.380	0.014	0.023	0.069	0.002	0.003	0.0112	0.371	425	552	0.770	29.9	
GRADO 50 W14X5.0X22 L.40fts(12.2m)	CE183309	0.090	1.240	0.180	0.020	0.020	0.110	0.130	0.380	0.014	0.023	0.069	0.002	0.003	0.0112	0.371	425	551	0.771	28.3	
GRADO 50 W14X5.0X22 L.40fts(12.2m)	CE183309	0.090	1.240	0.180	0.020	0.020	0.110	0.130	0.380	0.014	0.023	0.069	0.002	0.003	0.0112	0.371	408	529	0.771	27.5	
GRADO 50 W8X4X15 L.40fts(12.192m)	CE183309	0.090	1.240	0.180	0.020	0.020	0.110	0.130	0.380	0.014	0.023	0.069	0.002	0.003	0.0112	0.371	422	548	0.770	29.2	
GRADO 50 W8X4X15 L.40fts(12.192m)	CE183309	0.090	1.240	0.180	0.020	0.020	0.110	0.130	0.380	0.014	0.023	0.069	0.002	0.003	0.0112	0.371	425	552	0.770	29.5	
GRADO 50 W8X4X15 L.40fts(12.192m)	CE183309	0.090	1.240	0.180	0.020	0.020	0.110	0.130	0.380	0.014	0.023	0.069	0.002	0.003	0.0112	0.371	420	542	0.775	29.9	
GRADO 50 W8X4X15 L.40fts(12.192m)	CE183309	0.090	1.240	0.180	0.020	0.020	0.110	0.130	0.380	0.014	0.023	0.069	0.002	0.003	0.0112	0.371	428	554	0.773	29.7	

- Product suitable for galvanizing: 0.14<=Si<=0.25 & P<=0.035.
- Intended use: construction and civil engineering.
- Durability: not determined.
- Regulated substances: not determined

*[Signature]*  
 Castellbisbal, 30.06.2013  
 Juan Diego Martínez Gálvez  
 Quality Control Manager