

Steel Grade: ESTE420(S420NL1)   Material No: 1.8913														
CHEMICAL COMPOSITION														
C(%) ≤	Si (%)	Mn (%)≤	P (%)≤	S (%)≤	N (%)≤	Al (%)	Cr (%)≤	Cu (%)≤	Mo (%)≤	Ni (%)≤	Nb (%)≤	Ti (%)≤	V (%)	Nb+Ti +V(%)⑥
0.2	0.10~0.60	1.00~1.70	0.025	0.015	0.02	0.02	0.3	0.7	0.1	1	0.05	—⑤	0.2	0.22
MECHANICAL PROPERTIES														
Tensile Strength   $\sigma_b$ /Mpa					Normal Temp Yield Strength   $\sigma$ /Mpa									
≤70mm	70-85mm	85-100mm	100-125mm	125-150mm	≤16mm	16-35mm	35-50mm	50-60mm	60-70mm	70-85mm	85-100mm	100-125mm	125-150mm	
530~680	520~670	510~660	500~650	490~640	420	410	400	390	385	375	365	355	345	
Extensibility   $\delta_5 \geq$ (%)	Flexural Center Dia Cold-bend Test		Sample Direction L/T⑧⑨	Ballistic   $ak_v \geq$ (J/cm <sup>2</sup> )										
	180°C/L	180°C/T ⑥⑦		+20°C	+10°C	+0°C	-10°C	-20°C	-30°C	-40°C	-50°C	-60°C		
19	2.5a	3.5a	L/T	100/80	95/75	90/70	80/60	65/45	50/35	40/30	30/27	25/20		

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