HYUNDAI WELDING

Rev. 02

Supercored 308L

FLUX CORED ARC WELDING CONSUMABLE
FOR WELDING OF 18% Cr-8% Ni STAINLESS STEEL

2019.09

HYUNDAI WELDING CO., LTD.

Supercored 308L

❖ Specification

AWS A5.22	E308LT0-1/-4
JIS Z3323	TS308L-FB0
EN ISO 17633-A	T19 9 L R M21/C1 3

❖ Applications

Supercored 308L is designed for welding of 18%Cr-8%Ni stainless steels. (Petrochemical processing, textile industries etc.)

❖ Characteristics on Usage

Supercored 308L for stainless steels has a rapid solidifying slag which enables Flat and Horizontal position welding. It gives a stable arc and low spatter.

❖ Note on Usage

Use 100% CO_2 gas or Ar+20~25% CO2 gas

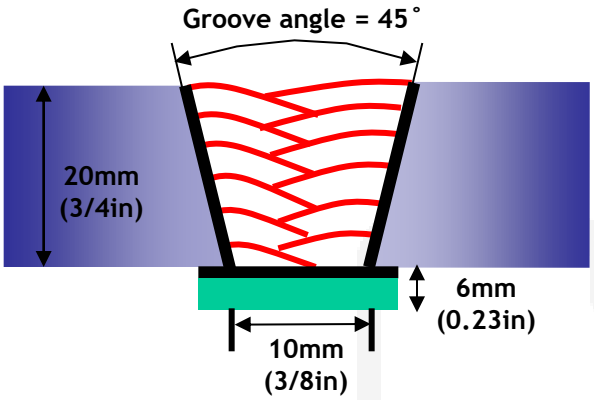
❖ Packing

Dia.(mm)	0.9mm (0.035in)	1.2mm (0.045in)	1.4mm (0.052in)	1.6mm (1/16in)
Spool (kg) *including ball pac	5Kg (11lbs)	12.5Kg (28(lbs)	15Kg (33lbs)	20Kg (44lbs)

Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions

Method by AWS Spec.



[Joint Preparation & Layer Details]

Diameter(mm)	:	1.2mm(0.045in)
Shielding Gas	:	100% CO_2
Flow Rate(ℓ /min.)	:	20~22
Amp./ Volt.	:	210 / 29
Stick-Out(mm)	:	20(3/4 in)
Pre-Heat(℃)	:	R.T . ℃(°F)
Interpass Temp.(℃)	:	≤150℃(302°F)
Polarity	:	DC(+)

❖ Mechanical Properties of All weld metal

Consumable	Tensile Test		CVN Impact Test J(ft · lbs)	
	TS (Mpa/ksi)	El (%)	-60℃ (-76°F)	-120℃ (-184°F)
Supercored 308L	563(82)	41.6	39(28.3)	30(22.1)
AWS A5.22 E308LTX-X	≥520(75)	≥ 35	Not Specified	

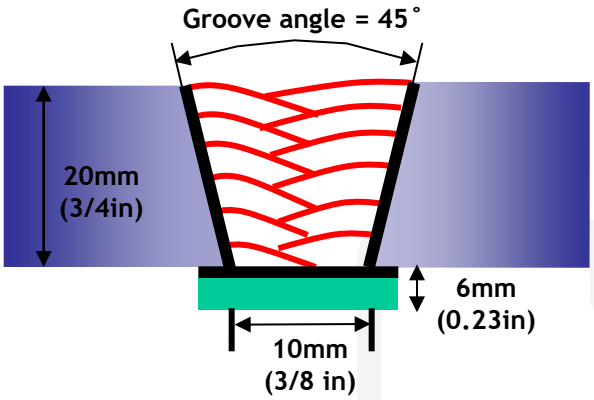
❖ Chemical Analysis of All weld metal(wt%)

Consumable	Shielding Gas	Chemical Composition (%)								
		C	Si	Mn	P	S	Ni	Cr	Mo	Cu
Supercored 308L	100%CO2	0.026	0.40	1.28	0.021	0.006	9.71	19.58	0.10	0.11
AWS A5.22 E308LTX-X		≤0.04	≤1.2	≤2.0	≤0.03	≤0.025	9.0 ~11.0	18.0 ~21.0	≤ 0.3	≤ 0.3

Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions

Method by AWS Spec.



[Joint Preparation & Layer Details]

Diameter(mm)	:	1.2mm(0.045in)
Shielding Gas	:	Ar+ 20% CO2
Flow Rate(ℓ /min.)	:	20~22
Amp./ Volt.	:	210 / 29
Stick-Out(mm)	:	20(3/4 in)
Pre-Heat(℃)	:	R.T . ℃(°F)
Interpass Temp.(℃)	:	≤150℃(302°F)
Polarity	:	DC(+)

❖ Mechanical Properties of All weld metal

Consumable	Tensile Test		CVN Impact Test J(ft · lbs)	
	TS (Mpa/ksi)	El (%)	-60℃ (-76°F)	-120℃ (-184°F)
Supercored 308L	569(83)	41.4	39(28.8)	30(22.1)
AWS A5.22 E308LTX-X	≥520(75)	≥ 35	Not Specified	

❖ Chemical Analysis of All weld metal(wt%)

Consumable	Shielding Gas	Chemical Composition (%)								
		C	Si	Mn	P	S	Ni	Cr	Mo	Cu
Supercored 308L	Ar+ 20% CO2	0.028	0.44	1.44	0.021	0.006	9.64	20.04	0.10	0.11
AWS A5.22 E308LTX-X		≤0.04	≤1.2	≤2.0	≤0.03	≤0.025	9.0 ~11.0	18.0 ~21.0	≤ 0.3	≤ 0.3

Mechanical Properties & Chemical Composition of All Weld Metal

❖ Bead Appearance

Horizontal Fillet(2F, PB) , Base : STS 304L(6T)

100% CO2(220A/30V)

Ar+20% CO2(220A/28V)

❖ δ – Ferrite No.

Consumable	Shielding Gas	Diagram			FERITSCOPE MP-30 * (FISCHER)
		Schaeffler	Delong	WRC(1992)	
Supercored 308L	100% CO2	9.4	13.1	11.7	7.0~8.0
	Ar+20% CO2	10.6	15.0	14.1	7.5~8.5

Approvals

❖ AUTHORIZED APPROVAL DETAILS

Consumable	Shielding Gas	TUV	CE	DB
Supercored 308L	C1	EN 12073 T 19 9 L R C3 0.9~1.6	EN 12073 T 19 9 L R C3 0.9~1.6	T 19 9 L R C 3(1.4316) DIN EN ISO 17633-A 0.9~1.6

Consumable	Shielding Gas	TUV	CE	DB
Supercored 308L	C1	EN 12073 T 19 9 L R M3 0.9~1.6	EN 12073 T 19 9 L R M3 0.9~1.6	T 19 9 L R M 3(1.4316) DIN EN ISO 17633-A 0.9~1.6