

# S-309MoL.16

SHIELDED METAL ARC WELDING CONSUMABLE FOR WELDING OF DISSMILAR METALS STAINLESS STEELS AND CARBON STEELS OR STAINLESS STEELS AND LOW ALLOY METALS

2020.12

# HYUNDAI WELDING CO., LTD.

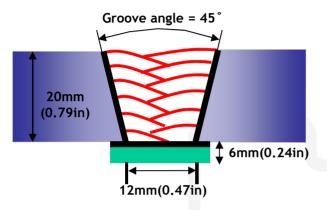
		S -30	09MoL.16			
Specification	AWS A5.4 JIS Z 3221 EN ISO 3851-A	E309LMo-16 ES309LMo-16 E 23 12 2 L R				
Applications	S-309MoL.16 is designed for welding of dissimilar metals such as Stainless steels and carbon steels or stainless steels and low alloy steels					
Characteristics on Usage	<ol> <li>S-308MoL.16 is a lime- titania type electrode.</li> <li>S-309MoL.16 is for dissimilar welding such as stainless steel to carbon steel or low-alloy steels, and for under-layer welding on cladded side groove of cladded stainless steel.</li> </ol>					
Note on Usage	<ol> <li>it is mostly effective to proceed with welding. Keeping the arc as short as possible in flat position.</li> <li>Remove dirts such as oil and dust from the groove.</li> <li>Dry the electrode at 350℃(662°F) for 60 minutes before use.</li> </ol>					
Type of Current	AC or DC+					
✤ Packing	Packet	2.5kg(5.5lbs)				
	Carton	2.5kg(5.5lbs) X 4 : 10kg(22lbs)				

S -309MoL.16

Method by AWS Spec.

# Mechanical Properties & Chemical Composition of All Weld Metal

#### **\* Welding Conditions**



Diameter	: 4.0mm(5/32in)
Amp./ Volt.	: 140/25
Travel speed	: 13~18(Cm/min)
Pre-Heat	: R.T.
Interpass Temp.	: 150±15℃(302±59°F)
Position	: Flat
Polarity	: AC or DC+

[Joint Preparation & Layer Details]

\* Mechanical Properties of All weld metal

Consumable	Tensile Test		CVN Impact Test Joule(ft·lbs)	
S 200Mal 16	TS MPa (Ibs/in²)	EI(%)	-20℃(-4°F)	-60℃(-76°F)
S-309MoL.16	690(99,000)	33.8	45(33)	35(26)
AWS A5.4 E309MoL-XX	≥520(75,000)	≥30	Not Specified	

Chemical Analysis of All weld metal(wt%)

Oceanity	Chemical Composition (%)								
Consumable	С	Si	Mn	Р	S	Ni	Cr	Мо	Cu
S-309MoL.16	0.02	0.72	1.30	0.027	0.013	12.7	23.7	2.4	0.015
AWS A5.4 E309LMo-XX	≤0.04	≤1.0	0.5 ~2.5	≤0.04	≤0.03	12.0 ~14.0	22.0 ~25.0	2.0 ~3.0	≤0.75

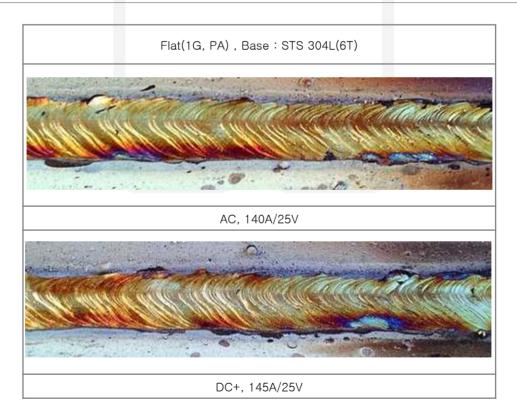
This information is provided solely for the purpose of confirming product conformance with applicable standards. The serviceability of a product or structure utilizing this type of information is and must be the sole responsibility of the builder/user. Many variables beyond the control of HYUNDAI WELDING CO., LTD. affect the results obtained in applying this type of information. These variables include, but are not limited to, welding procedure, shielding gas, plate chemistry and temperature, weldment design, fabrication methods and service requirements.

## Mechanical Properties & Chemical Composition of All Weld Metal

#### δ – Ferrite No.

		Diagram	FERITSCOPE MP-30 *		
Consumable	Schaeffler	Delong	WRC(1992)	(FISCHER)	
S-309MoL.16	11.5	18.0	12.5	14~19	

### Bead Appearance



This information is provided solely for the purpose of confirming product conformance with applicable standards. The serviceability of a product or structure utilizing this type of information is and must be the sole responsibility of the builder/user. Many variables beyond the control of HYUNDAI WELDING CO., LTD. affect the results obtained in applying this type of information. These variables include, but are not limited to, welding procedure, shielding gas, plate chemistry and temperature, weldment design, fabrication methods and service requirements.

# **Approvals**

#### ✤ AUTHORIZED APPROVAL DETAILS

Consumable	DNV	TUV	CE	
	309LMo	EN 1600 E 23 12 2 L R	EN 1600 E 23 12 2 L R	
S-309MoL.16	2.0~5.0	2.0~5.0	2.0~5.0	



This information is provided solely for the purpose of confirming product conformance with applicable standards. The serviceability of a product or structure utilizing this type of information is and must be the sole responsibility of the builder/user. Many variables beyond the control of HYUNDAI WELDING CO., LTD. affect the results obtained in applying this type of information. These variables include, but are not limited to, welding procedure, shielding gas, plate chemistry and temperature, weldment design, fabrication methods and service requirements.