

SC-450H

FLUX CORED ARC WELDING CONSUMABLE FOR HARDFACING



❖ Specification

JIS Z3326

YF2A-C-450

❖ Applications

For intermetallic abrasion, hardfacing of roller, gear, etc.
Cradling welding between worn metals

❖ Characteristics on Usage

SC-450H is a flux cored wire designed for hardfacing application with 100% CO₂ shielding gas. It is highly recommendable to use on wear plate and weld metal's hardness should be over Hv 450.

❖ Note on Usage

Preheat at 150°C(302°F) and more than that in general.
Use with 100% CO₂ shielding gas.

❖ Packing

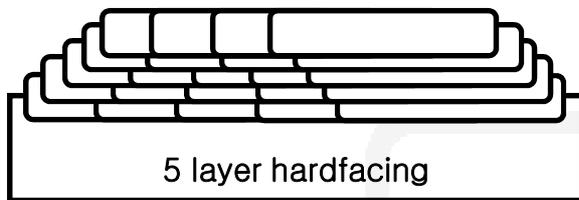
Dia.	1.2mm (0.045in)	1.4mm (0.052in)	1.6mm (1/16in)
Spool	15kg(33lbs)		



Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions

Method by JIS Spec.



5 layer hardfacing

Diameter	: 1.2mm(0.045in)
Shielding Gas	: 100% CO ₂
Flow Rate(ℓ /min.)	: 20~22
Amp./ Volt.	: 260/30
Stick-Out	: 20mm(0.79in)
Pre-Heat	: ≥150℃(302°F)
Interpass Temp.	: 150±15℃(302±59°F)
Polarity	: DC(+)

❖ Chemical Analysis of All weld metal(wt%)

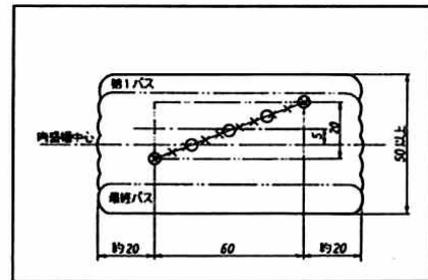
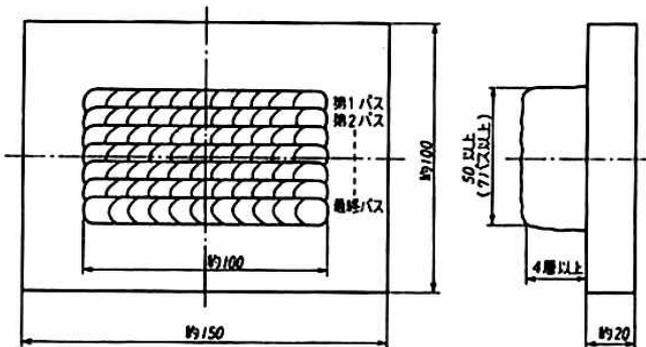
Consumable	Shielding Gas	Chemical Composition (%)							
		C	Si	Mn	P	S	Cr	Mo	Others
SC-450H 1.2mm (0.045in)	100%CO ₂	0.16	0.75	1.50	0.017	0.006	1.78	0.57	-
SC-450H 1.4mm (0.052in)		0.21	0.72	1.47	0.023	0.007	1.90	0.64	
SC-450H 1.6mm (1/16in)		0.20	0.74	1.36	0.018	0.007	1.84	0.59	-
JIS Z3326 YF2A-C-450		≤0.30	≤1.5	≤3.0	≤0.03	≤0.03	≤3.0	≤1.5	≤1.0

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.



Mechanical Properties & Chemical Composition of All Weld Metal

❖ Hardness test of All weld metal(HRc)



×印：ビッカース硬さ又はロックウェル硬さ測定位置（等間隔に10点測定）
○印：ブリネル硬さ測定位置（等間隔に5点測定）

[Method of Hardness Test for Deposited Metal(JIS Z3114 -1990)]

Consumable	Hardness(HRc)										Avg.
SC-450H 1.2mm(0.045in)	46	46	46	46	47	47	48	48	48	49	47.1(475Hv)
SC-450H 1.4mm(0.052in)	45	45	46	46	47	47	47	48	48	48	46.7(468Hv)
SC-450H 1.6mm(1/16in)	45	45	45	46	47	47	47	48	48	49	46.7(468Hv)
JIS Z3326 YF2A-C-450	40.8~49.0(400~500Hv)										

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Test Results

❖ Bead Appearance

SC-450H 1.2mm(0.045in)	Horizontal Fillet, Base : Mild Steel, 100%CO2(260A/30V)
SC-450H 1.4mm(0.052in)	Flat(Bead on plate), Base : Mild Steel, 100%CO2(260A/30V)
SC-450H 1.4mm(0.052in)	Horizontal Fillet, Base : Mild Steel, 100%CO2(280A/30V)
SC-450H 1.4mm(0.052in)	Flat(Bead on plate), Base : Mild Steel, 100%CO2(280A/30V)
SC-450H 1.6mm(1/16in)	Horizontal Fillet, Base : Mild Steel, 100%CO2(300A/30V)
SC-450H 1.6mm(1/16in)	Flat(Bead on plate), Base : Mild Steel, 100%CO2(300A/30V)

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