

# GMAW Solid Wire for High Tensile Strength Steel

# KM-54

## Classification

AWS	A5.18/A5.18M	ER70S-4/ER48S-4
JIS	Z3312	YGW12
EN	14341-A	G42 Z C1 3Si1
GB	T 8110	ER50-4

Shielding Gas: Ar+CO<sub>2</sub> or CO<sub>2</sub>

## Applications and Features

- (1) The shielding gases include Ar/CO<sub>2</sub> blends. All Positions electrode or single pass welding with high speed.
- (2) In welding metal, there is a lower oxygen level due to the excellent de-oxidative ability.
- (3) Ideal for ship-building, vehicles, bridges and pipes with less spatters and arc stability.

## Welding Position

All Positions

## Welding Instruction

Please refer to Appendix B.

## Typical Chemical Composition of Weld Metal (wt. %)

C	Si	Mn	P	S
0.090	0.70	1.06	0.014	0.011

## Typical Mechanical Properties of Weld Metal

Tensile Strength N/mm <sup>2</sup> (kgf/mm <sup>2</sup> )	Yield Strength N/mm <sup>2</sup> (kgf/mm <sup>2</sup> )	Elongation %	Charpy V-Notch		Shielding Gas
			°C	J (kgf -m)	
549(56.0)	460(47.0)	32	0	176(18.0)	CO <sub>2</sub>
578(59.0)	519(53.0)	33	-30	84(8.6)	80%Ar+20%CO <sub>2</sub>

## Size and Suggested Operating Range (DC+)

Diameter (mm)	0.8	0.9	1.0	1.2	1.4	1.6	
Amp	F	50~180	50~200	80~250	150~350	200~450	250~500
	V-up	50~100	50~140	80~160	80~180	—	—
	OH	50~100	50~100	70~120	80~150	—	—
	V-down	50~100	50~200	80~220	80~240	—	—