StarGold™ LowHY 15 | StarGold™ LowHY 25

PRAXAIR
Making our planet more productive

Reach for the Gold; *StarGold™ LowHY* for Higher Strength Steels

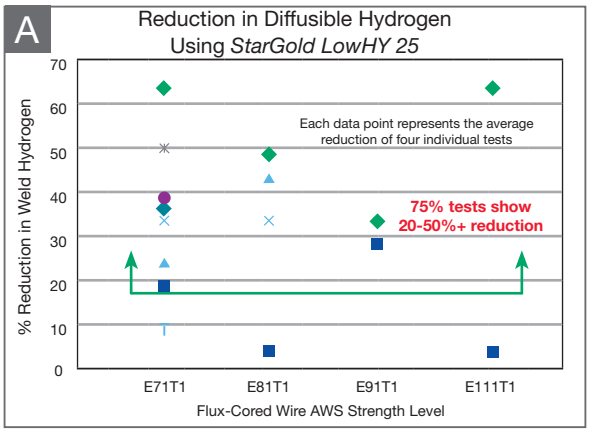
Praxair's *StarGold LowHY* blends are carefully designed mixtures of argon and carbon dioxide, with a precisely controlled addition of high purity carbon tetrafluoride (CF4), and are used to reduce diffusible hydrogen levels in weld metal. This is especially critical for fabricated materials used in challenging applications and under severe service conditions. Lowering hydrogen in a weld will reduce the chance of hydrogen-induced weld metal cracking which can be an issue when joining medium and high strength materials.

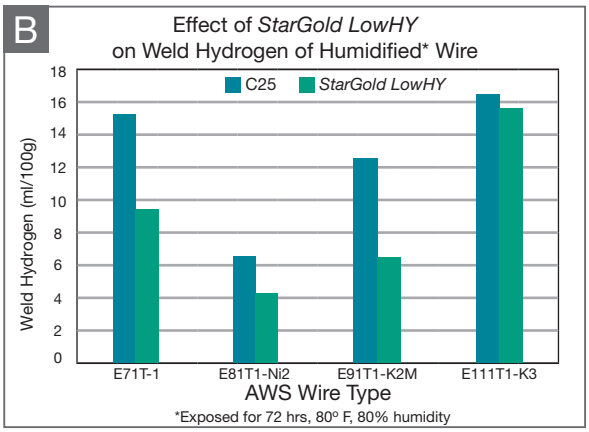
Product features	Product benefits
Controlled CO_2 content	■ Optimum performance with both flux-cored and metal-cored wire electrodes ■ Reduced spatter, good penetration and controlled bead shape
Carefully determined addition of carbon tetrafluoride	■ Approximately 20-50% reduction in weld hydrogen can be achieved when compared with conventional shielding gases (refer to chart A on back) ■ Helps to reduce weld hydrogen even in high humidity environments or when using consumables possibly exposed to moisture in use or storage (refer to chart B on back) ■ Can minimize variability in weld hydrogen as a result of changing product hydrogen levels within "H" wire classification (refer to chart C on back) ■ Fume generation rate is unaffected (refer to chart D on back): fume constituents essentially unchanged
Balanced blend of gases optimized for use with either flux or metal-cored wires	■ Lower weld hydrogen levels can be achieved while providing a wire/gas combination with operator appeal, easier slag removal, and reduced post-weld cleaning ■ Excellent choice for multi-pass, high productivity welding in all welding positions. Shielding gas provides fast-freezing puddle for better out-of-position control

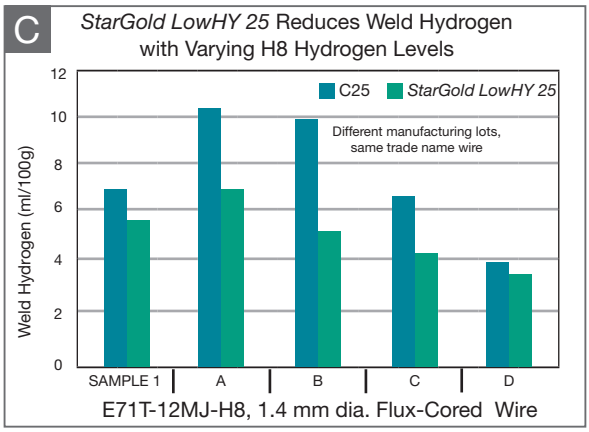
Typical applications

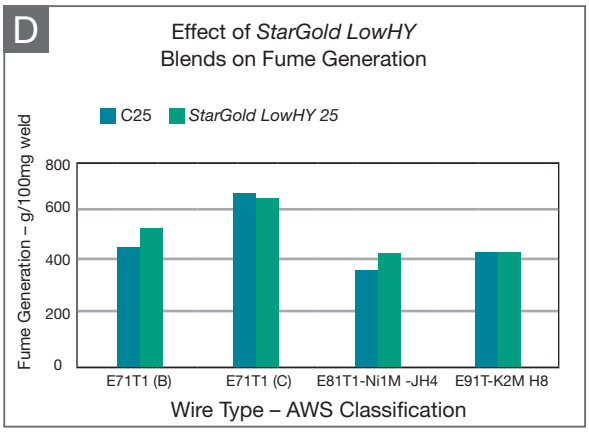
- *StarGold LowHY 25* can be used with flux-cored wires and *StarGold LowHY 15* can be used with metal-cored wires for joining a variety of medium and higher strength steels
- Compatible with consumables used to build offshore drill rigs, for shipbuilding, transportation, heavy equipment and structural steel fabrication
- *StarGold LowHY 25* is recommended for use with all position flux-cored wires for fabrication of tanks, piping components and other support structures used in low temperature service
- *StarGold LowHY 15* is recommended for use with metal-cored wires in the 75ksi (500 MPa) and above strength range to produce a variety of high deposition rate welds in the flat and horizontal weld positions

Typical performance comparisons of Praxair's *StarGold LowHY* gas blends vs. conventional shielding gases:









Graph information is based on tests conducted at Praxair Technology, Inc.'s R&D lab in Tonawanda, New York, USA.

Shielding gas flow rates: Flat/horizontal: 16 – 19 l/min (35-40 cfh)
Out-of-position: 19 – 21 l/min (40-45 cfh)

Suggested flux-cored wire welding parameters: *StarGold LowHY 25* shielding gas

Wire Diameter (mm/in)	Process	Wire Feed Speed m/min (ipm)	Amperage (amps)	Voltage (volts)
1.2 (.045)	Globular	6.4-10.2 (250-400)	140-185	23-27
1.2 (.045)	"	10.2-15.2 (400-600)	185-245	27-30
1.4 (.052)	"	3.8-8.9 (150-350)	140-225	24-28
1.4 (.052)	"	8.9-12.7 (350-500)	225-290	28-31
1.6 (.063)	"	3.8-6.4 (150-250)	200-255	25-29
1.6 (.063)	"	6.4-10.2 (250-400)	255-340	29-32

Suggested metal-cored wire welding parameters: *StarGold LowHY 15* shielding gas

Wire Diameter (mm/in)	Process	Wire Feed Speed m/min(ipm)	Amperage (amps)	Voltage (volts)
1.2 (.045)	Spray	8.6 – 16.5 (340-650)	240-360	25-32
1.6 (.063)	Spray	5.7-11.5 (225-450)	280-420	26-34

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