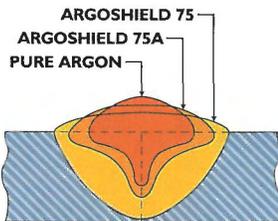


Argoshield® Argon/Helium Shielding Gases

For TIG Welding Applications And MIG Welding Nonferrous Metals

BENEFITS

- Decreases ozone concentration in the welder's breathing area
- Deep penetration and excellent fusion on non-ferrous metals and their alloys
- Overcomes the conductive nature of metals, reducing or eliminating preheat time
- Increased travel speeds enhance productivity



ARGON/HELIUM PENETRATION PROFILES

Argoshield 75A, Argoshield 50A and Argoshield 75 shielding gases provide more heat and greater control than other gases used for TIG welding and for MIG welding non-ferrous metals and their alloys. The mixtures not only improve welding performance, but also enhance the welder's work environment.

When MIG and TIG welding aluminum, nickel, copper and their alloys, the added heat input provided by these mixtures overcomes the conductive nature of the materials, allowing deeper penetration and better fusion. And, because the gases are inert, there is no reaction with the base metal, a feature that also makes these mixtures ideal for TIG welding mild and stainless steels.

Argoshield 75A Shielding Gas: For Medium-Thickness Nonferrous Metals

Argoshield 75A shielding gas is predominantly argon with a significant concentration of helium added. This helium content produces a more concentrated and hotter arc than pure argon, making it perfectly suited for MIG and TIG welding medium-thickness sections of aluminum and its alloys. This is an ideal mixture for applications in which weld appearance is critical.

Argoshield 50A Shielding Gas: For Automatic Welding on Nonferrous Materials

Argoshield 50A shielding gas is a 50/50 blend of argon and helium. This higher concentration of helium provides extra heat input. This feature, coupled with the controlled arc associated with argon, makes this mixture well suited for MIG and TIG weld-



ing nickel and its alloys. It is also an ideal shielding gas for automatic welding operations on all nonferrous materials.

Argoshield 75 Shielding Gas: Strong Welds on Heavy Nonferrous Materials

High in helium content, Argoshield 75 shielding gas produces a very intense arc that results in a hot, fluid weld pool, facilitating a faster weld with deeper penetration on thick or highly conductive metals. Welders can actually eliminate the preheating required for many conductive materials. Argoshield 75 shielding gas is ideal for MIG and TIG welding copper and its alloys, as well as heavy sections of nonferrous materials.



Argoshield Argon/Helium Shielding Gases

User-Friendly Shielding Gases

Airco's own laboratory research shows that the helium additions to argon in its Argoshield 75A, 50A, and 75 shielding gases significantly reduce the levels of ozone generally associated with gas-shielded welding. As the helium content of the shielding gas mixture is increased, there is a commensurate decrease in the amount of ozone that reaches the welder (see the Figure, right).

Delivered To Meet Your Needs

Airco Gases can supply Argoshield 75A, 50A and 75 argon/helium shielding gases to your site to suit your needs. Normal delivery is in high-pressure cylinders. However, for customers whose gas consumption is large enough, we can also install a cylinder manifold and gas piping system, or manifolded cylinder cradles. For larger gas users, liquid containers and bulk tanks are available. The gases are accurately blended using special mixing panels to give a final mixture of the correct proportions.

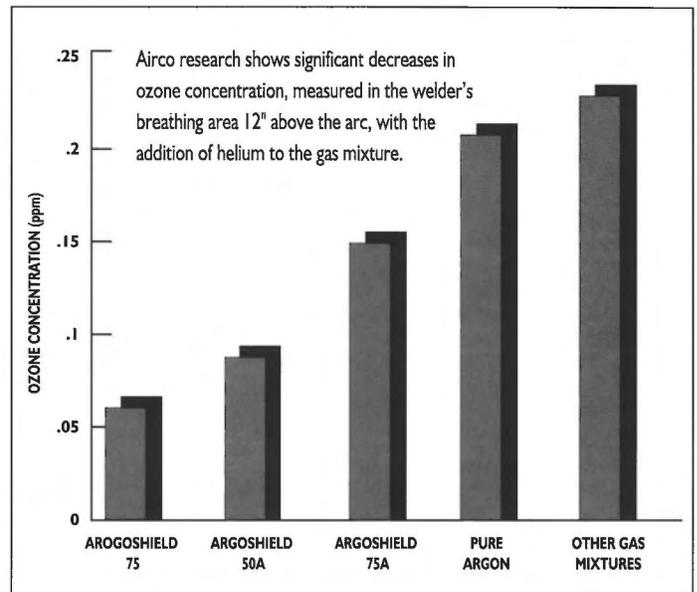
ARGOSHIELD 75A, 50A AND 75 SHIELDING GAS APPLICATIONS

- **Material** — Aluminum, nickel, copper and their alloys (MIG and TIG); stainless steel (TIG)
- **Thickness** — 1/8-in. (Argoshield 75A shielding gas) and up (Argoshield 50A and 75 shielding gases)
- **Profile and Penetration** — Increased helium concentration provides flatter bead with greater penetration

Airco Welding Expertise Can Optimize Your Process

With more than 650 locations nationwide, Airco's supplier network, which consists of both independent distributor and Airco-owned stores, is the largest in the U.S. An Airco team will review your operations and work with you to reduce your total costs by optimizing your weld process.

For more information on how Airco can help you with your welding process, contact your local authorized Airco distributor, or call Airco's Shielding Gas product manager at (908) 771-1094.



ARGOSHIELD SHIELDING GAS TIG WELDING PARAMETERS FOR ALUMINUM

	1/8	5/32	1/4	3/8
MATERIAL THICKNESS (in.)	1/8	5/32	1/4	3/8
ARGOSHIELD MIX	75A	75A	75	75
ELECTRODE DIAMETER (in.)	3/32	1/8	5/32	5/32
FILLER METAL DIAMETER (in.)	3/32	3/32	1/8	1/8-3/16
CURRENT (A)	110-150	100-140	140-220	190-240
GAS FLOW (cfh)	20	25	25	30

ARGOSHIELD SHIELDING GAS MIG WELDING PARAMETERS FOR ALUMINUM

	1/8	1/4	1/4	3/8	3/8	>3/8	>3/8
MATERIAL THICKNESS (in.)	1/8	1/4	1/4	3/8	3/8	>3/8	>3/8
ARGOSHIELD GAS MIXTURE	75A	75A	75A	75	75	75	75
TRANSFER MODE	Dip	Dip	Spray	Dip	Spray	Dip	Spray
WIRE DIAMETER (in.)	3/64	3/64	3/64	3/64	1/16	3/64	1/16-3/32
WIRE FEED SPEED (ipm)	195-280	255-335	315-390	255-335	280-355	255-315	355-550
VOLTAGE (V)	17-20	20-24	27-30	20-24	29-32	20-26	32-40
CURRENT (A)	105-120	120-140	160-200	120-140	240-300	130-200	300-500