

PRODUCT DATA SHEET

Coppashield®

Copper and copper-based alloys are typically characterised by a high thermal conductivity and high heat capacity. The high helium content of Coppashield® provides a very intense arc which allows these materials to be welded more readily than by using other gases. In many cases, preheating can be eliminated by the high arc energy available. Coppashield® is suitable for both GMAW and GTAW welding. Coppashield® can also be used on aluminium and aluminium alloys above 6 mm and is ideal because it is a fast welding gas with hotter arc, with low porosity at high productivity levels.

Afrox MSDS number: SG/MSDS 7

Hazards

- Asphyxiant in high concentrations
- Compressed – high pressure gas mixture in cylinders.

Classifications

Gas Components

Argon

Helium

Material Description	Mass (kg)	Cylinder Capacity (l)	Pressure @ 20°C (Bar)	Valve Outlet Connection	Item Number
COPPASHIELD® CYL 4,8 KG	4,8	50,0	200	5/8" BSPF right hand female	395-SE

Applications

- Copper-lined steel pressure vessels
- Bus-bar manufacture
- Spirit distillation vessels
- Arc furnace electrode holders
- Heat exchangers
- Petrochemical equipment
- Calorifiers.

Features	Benefits
Helium achieves hotter arc	Reduced preheat requirement – none required below 6 mm*
Good wetting characteristics	Excellent penetration
Good weld penetration profile	Increased strength
Low spatter	Smooth and flat weld surface profiles, less wire used
Ultra-high purity gas mixture	Reduced fusion defects
	Reduced clean-up time

*Above 6 mm preheat from 350-550°C.

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Precautions in Use

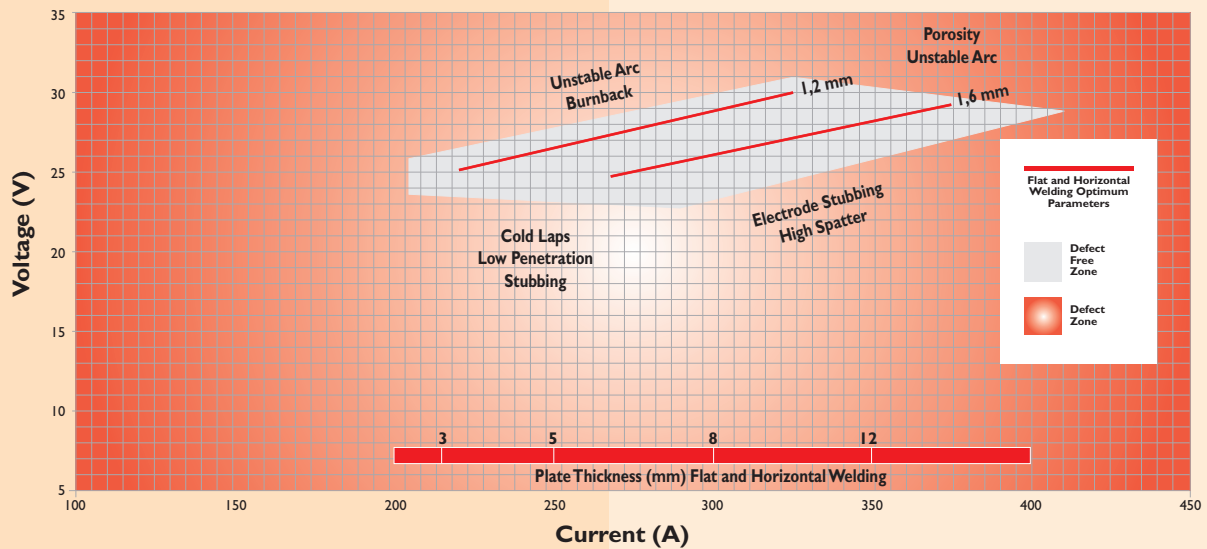
- Use only approved pressure rated equipment
- Use only in well ventilated areas
- Open cylinder valve slowly
- Close cylinder valve when not in use
- Do not allow oil or grease on cylinder or valve
- Cylinders should be secured from falling over
- Refer to MSDS for more information.

Material Compatibility

Coppashield® is non-corrosive and so any common metal is acceptable, provided the equipment is designed to withstand process pressure.

Current/Voltage Envelope

Operating limits for 1,2 mm and 1,6 mm diameter wires.



Electrode stick out, contact tip-to-work distance 15 mm for spray.
Gas flow rate 18 l/min

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