Alushield® is a gas mixture of argon and helium for GMAW and GTAW welding of aluminium and its alloys. It is a versatile, high specification gas suitable for welding over a range of thicknesses, giving consistently good penetration and bead shape. The mixture is chemically inert providing a stable, steady and controllable arc. Alushield® can also be used on automated welding processes and by allowing faster welding speeds with lower defect rates, can significantly reduce fabrication costs.

Helium content provides a higher arc energy to combat the high thermal conductivity of these alloys, increasing penetration and minimising the need for preheating.

Afrox MSDS number: SG/MSDS 7

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

Classifications
Gas Components
Argon
Helium

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Mass (kg)</th>
<th>Cylinder Capacity (l)</th>
<th>Pressure @ 20ºC (Bar)</th>
<th>Valve Outlet Connection</th>
<th>Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALUSHIELD® CYL 8.4 KG</td>
<td>8.4</td>
<td>50.0</td>
<td>200</td>
<td>5/8” BSPF right hand female</td>
<td>94-SE</td>
</tr>
</tbody>
</table>

Applications
- Ship and marine superstructures
- Pressure vessels
- Chemical and petrochemical plant
- Pipework.

Features
- Excellent arc stability
- Low oxidation potential
- Uses less wire
- Used in dip, pulsed and spray metal transfer modes
- Fast, high arc energy
- High heat input
- High purity argon/helium mixture

Benefits
- Little/no spatter
- Strong weld
- Reduces wire wastage of high value wires
- Easy to use
- Low production costs
- Low defect levels
- Reduced repair
- Reduced clean-up
- Can be used on machines and robots
**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**

Alushield® 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 19-25 mm for spray, 8-13 mm for dip. Gas flow rate 15-18 l/min