Praxair and TAFA
thermal spray wires

Praxair Surface Technologies, Inc. and TAFA Incorporated offers a complete line of arc spray wires in its portfolio of thermal spray materials. Proud of our role in the emergence and growth of the arc spray process, we continue to develop and refine thermal spray wires of all types – solid or cored, soft or hard – to help you take full advantage of the exceptional value arc spray provides.

Whether your application calls for a reliable bond coat, dimensional restoration or resistance to wear and corrosion, Praxair and TAFA has a wire to meet the challenge. Understanding that “not all wires are alike”- in part because we optimize wires for superior arc spray coatings – we provide materials that perform every time. And we offer the complete “system”, including six hardware options, to start you on the way to productive solutions.

When you search for the right thermal spray wire, remember the company that built its reputation on arc spray technology: Praxair and TAFA. Let us work with you to continue to develop and perfect quality arc spray wires and coatings.

Phone: 1-603-223-2100
Fax: 1-603-225-4342
E-mail: psti-info@praxair.com

Quality thermal spray wires must be made to tight compositional tolerances, have the appropriate surface finish, and be spooled properly for consistent performance.
We recognize that high quality spray equipment without compatible, first-rate coating materials can lead to less than desirable coatings. For arc spray, only wires designed and produced for thermal spraying ensure trouble-free application and superior, consistent coatings.

All Praxair and TAFA wires are engineered and manufactured exclusively for the specialized needs of thermal spray. Strict specifications and production controls guarantee that each wire is manufactured to a precise metallurgical composition and free from defects such as slivers or contaminants. Care is taken to ensure that our wires have the proper physical properties for thermal spraying – tensile strength, hardness, and surface finish – and that they are properly spooled for reliable performance. Post manufacturing testing and analysis assure that the targeted characteristics are achieved.

Praxair and TAFA wires are available in a number of packaging options. We offer several sizes of level-layer wound spools and larger dispensing containers for high volume applications.

An extensive inventory of wires, available in 25 or 30 pound spools as well as bulk pay-off packs, assures prompt delivery and reinforces our commitment to the growth and development of arc spray applications.
<table>
<thead>
<tr>
<th>Wire Name</th>
<th>Material</th>
<th>Diameter</th>
<th>Coverage (/ft²/0.001&quot;)</th>
<th>Spray Rate (/h/100 A)</th>
<th>Approved Specs</th>
<th>Application Data</th>
</tr>
</thead>
</table>
| Al-1800   | Nickel Aluminum Molybdenum| 1/16" (1.6 mm) | 0.8 oz 1.0 kg | 10 lbs 4.5 kg | • Bond Coat  
• Oxidation, Shock and Abrasion Resistance                                      | • Bond Coat                                              |
| Alcro     | Iron Chrome Aluminum      | 1/16" (1.6 mm) | 0.8 oz 1.0 kg | 10 lbs 4.5 kg | • Good for Buildup  
• Excellent Wear Resistance                                                          | • Bond Coat                                              |
| 01A       | Aluminum 12% Silicon      | 1/16" (1.6 mm) | 0.3 oz 0.3 kg | 6 lbs 2.8 kg | AWS C2.25/C2.25M  
PWA 36933 (PWA 271-35 Rev G) GE B50TF92 (Chemical Composition) | • Dimensional Restoration  
• Aircraft Approved                                       |
| 01P       | Aluminum 1100             | 1/8" (3.2 mm)  | 0.3 oz 0.3 kg | 6 lbs 2.8 kg | AWS C2.25/C2.25M  
PWA 36933 (PWA 271-35 Rev G) GE B50TF92 (Chemical Composition) | • Bond Coat                                              |
| 01S       | Aluminum 6% Silicon       | 1/16" (1.6 mm) | 0.3 oz 0.3 kg | 6 lbs 2.8 kg | AWS C2.25/C2.25M  
PFA045 Type VIII, Rev AB | • Dimensional Restoration  
• Aircraft Approved                                       |
| 01T       | Aluminum                  | 1/16" (1.6 mm) | 0.3 oz 0.3 kg | 6 lbs 2.8 kg | AWS C2.25/C2.25M  
PFA045 Type VI, Rev AB GE Manual # 70-49-40 (Alternate to 70-49-01) | • Corrosion Protection  
• Electrical Conductivity  
• Aircraft Approved                                      |
| 02A       | Zinc Aluminum             | 2 mm 1/16" (1.6 mm) | 0.8 oz 1.0 kg | 21 lbs 9.5 kg | • Corrosion Protection                                                      | • Corrosion Protection  
• Capacitors                                                  |
| 02T       | Zinc Tin                  | 2 mm      | 0.9 oz 11 kg | 45 lbs 20.4 kg | • Capacitors  
Solderable Coating                                                             | • Capacitors  
Solderable Coating                                           |
| 02W       | Pure Tin                  | 2 mm      | 0.9 oz 11 kg | 50 lbs 22.7 kg | AWS C2.25/C2.25M  
PWA 36933 (PWA 271-35 Rev G) GE B50TF92 (Chemical Composition) | • Corrosion Protection  
• Capacitors                                                  |
| 02Z       | Zinc                      | 1" gauge (2.5 mm) | 0.9 oz 11 kg | 21 lbs 9.5 kg | AWS C2.25/C2.25M  
PFA045 Type VIII, Rev AB GE Manual # 70-49-40 (Alternate to 70-49-01) | • Corrosion Protection  
• Capacitors                                                  |
| 04T       | Babbitt                   | 1/8" (3.2 mm)  | 0.9 oz 11 kg | 50 lbs 22.7 kg | AWS C2.25/C2.25M  
PFA045 Type VIII, Rev AB GE Manual # 70-49-40 (Alternate to 70-49-01) | • Bearing Reclamation  
• Capacitors                                                  |
| 05T       | Copper                    | 1/8" (3.2 mm)  | 0.9 oz 11 kg | 11 lbs 5.0 kg | • Electric Conductivity  
• Copper Reclamation  
• Decorative Coatings                                           | • Electric Conductivity  
• Copper Reclamation  
• Decorative Coatings                                           |
| 06C       | Nickel Chrome             | 1/16" (1.6 mm) | 0.9 oz 11 kg | 11 lbs 5.0 kg | Conforms to PWA 1317D | • Oxidation Resistance  
• Aircraft Approved                                        |
| 06T       | Nickel                    | 1/16" (1.6 mm) | 0.9 oz 11 kg | 10 lbs 4.5 kg | AWS C2.25/C2.25M  
PFA045 Type VIII, Rev AB GE Manual # 70-49-40 (Alternate to 70-49-01) | • Oxidation Resistance  
• Aircraft Approved                                        |
| 10T       | Aluminum Bronze           | 1/16" (1.6 mm) | 0.9 oz 11 kg | 9 lbs 4.1 kg | AWS C2.25/C2.25M  
PFA045 Type VIII, Rev AB GE Manual # 70-49-40 (Alternate to 70-49-01) | • Bond Coat  
• Reclamation  
• Cavitation  
• Aircraft Approved                                     |
| 11T       | Aluminum Bronze Nickel    | 1/16" (1.6 mm) | 0.9 oz 11 kg | 9 lbs 4.1 kg | • Bond Coat  
• Reclamation  
• Cavitation  
• Aircraft Approved                                     |
| 12T       | Brass                     | 1/16" (1.6 mm) | 0.9 oz 11 kg | 9 lbs 4.1 kg | • Use Where Tobin Bronze is Required  
• Pump Impellers  
• Bronze Castings                                               | • Use Where Tobin Bronze is Required  
• Pump Impellers  
• Bronze Castings                                               |
| 13T       | Molybdenum                | 1/8" (3.2 mm)  | 1.1 oz 1.3 kg | 10 lbs 4.5 kg | PWA 36993 (PWA 271-13 Rev F) GE B50TF92 (Chemical Composition) | • Galling and Scuffing Resistance  
• Aircraft Approved                                          |
| 14T       | Titanium                  | 1/16" (1.6 mm) | 0.4 oz 0.5 kg | 3 lbs 1.4 kg | ASTM B348/Grade 1  
ASTM F67-89/Grade 1 (Chemical Composition) | • Medical Implants                                            |
| 16T       | Silicon Bronze            | 1/16" (1.6 mm) | 0.9 oz 11 kg | 9 lbs 4.1 kg | • Cosmetic Repairs  
• Decorative Coatings  
• Automotive Approved                                         | • Cosmetic Repairs  
• Decorative Coatings  
• Automotive Approved                                         |
## Metal and alloy wires

<table>
<thead>
<tr>
<th>Wire Name</th>
<th>Material</th>
<th>Diameter</th>
<th>Coverage (ft²/0.001”) (m²/100 µm)</th>
<th>Spray Rate (ft³/h/100 A)</th>
<th>Approved Specs</th>
<th>Application Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>30S</td>
<td>Silver Copper Zinc</td>
<td>1/16” (16 mm)</td>
<td>1.0 oz 1.2 kg</td>
<td>12 lbs 5.4 kg</td>
<td>GE B20A4 (Chemical Composition) GE Manual # 70-49-44 FAA RDE#00-630 CFM70-48-16-340-007</td>
<td>• Stationary Seals in Aircraft Engines • Good Rub Wear Characteristics</td>
</tr>
<tr>
<td>30T</td>
<td>Low Carbon Steel</td>
<td>1/16” (16 mm)</td>
<td>0.9 oz 1.1 kg</td>
<td>10 lbs 4.5 kg</td>
<td></td>
<td>• Dimensional Restoration of Mismachined and Worn Parts</td>
</tr>
<tr>
<td>38T</td>
<td>High Carbon Steel (0.80 C)</td>
<td>1/16” (16 mm)</td>
<td>0.9 oz 1.1 kg</td>
<td>10 lbs 4.5 kg</td>
<td>AWS C2.25/C2.25M</td>
<td>• Reclamation • Wear and Erosion Resistance • ID Fans</td>
</tr>
<tr>
<td>39T</td>
<td>High Carbon Steel (10 C)</td>
<td>1/16” (16 mm)</td>
<td>0.9 oz 1.1 kg</td>
<td>10 lbs 4.5 kg</td>
<td></td>
<td>• Excellent Wear Resistance • Harder than 38T</td>
</tr>
<tr>
<td>45CT®</td>
<td>Nickel Chrome Titanium</td>
<td>1/16” (16 mm)</td>
<td>0.9 oz 1.1 kg</td>
<td>11 lbs 5.0 kg</td>
<td></td>
<td>• Protection Against High Temperature Sulfidation</td>
</tr>
<tr>
<td>55T</td>
<td>18/8 Stainless 200 Series Stainless</td>
<td>1/16” (16 mm)</td>
<td>0.8 oz 1.0 kg</td>
<td>10 lbs 4.5 kg</td>
<td>AWS C2.25/C2.25M FP5045 Type IV, Rev AB</td>
<td>• Low Carbon • Low Shrinkage • Good Machinability • Aircraft Approved</td>
</tr>
<tr>
<td>58T</td>
<td>Copper Nickel Indium</td>
<td>1/16” (16 mm)</td>
<td>0.8 oz 1.0 kg</td>
<td>10 lbs 4.5 kg</td>
<td>GE B50TF72 CL A (Chemical Composition) GE Manual #70-49-05</td>
<td>• Fretting Resistance • Dense, Low Oxide Coatings • Aircraft Approved</td>
</tr>
<tr>
<td>60T</td>
<td>420 Stainless Steel</td>
<td>1/16” (16 mm)</td>
<td>0.8 oz 1.0 kg</td>
<td>10 lbs 4.5 kg</td>
<td>AWS C2.25/C2.25M OMAT#3/45D</td>
<td>• Reclamation • Low Shrinkage Allows Thick Buildups • Good Wear Resistance • Aircraft Approved</td>
</tr>
<tr>
<td>61T</td>
<td>430 Stainless Steel</td>
<td>1/16” (16 mm)</td>
<td>0.8 oz 1.0 kg</td>
<td>10 lbs 4.5 kg</td>
<td></td>
<td>• Slightly More Machinable and Better Corrosion Resistance than 60T</td>
</tr>
<tr>
<td>70T</td>
<td>Nickel Copper</td>
<td>1/16” (16 mm)</td>
<td>0.8 oz 1.0 kg</td>
<td>10 lbs 4.5 kg</td>
<td>AWS C2.25/C2.25M</td>
<td>• Marine Corrosion Protection • Print Rolls</td>
</tr>
<tr>
<td>71T</td>
<td>Nickel Chrome Molybdenum</td>
<td>1/16” (16 mm)</td>
<td>0.8 oz 1.0 kg</td>
<td>11 lbs 5.0 kg</td>
<td></td>
<td>• Prohibits Caustic Corrosion • Paper Mill Digesters</td>
</tr>
<tr>
<td>75B®</td>
<td>BondArc® Nickel 5% Aluminum</td>
<td>1/16” (16 mm)</td>
<td>0.9 oz 1.1 kg</td>
<td>10 lbs 4.5 kg</td>
<td>PWA 36937 (PWA 271-37 Rev F) GE Manual # 70-49-38 (Alternate to 70-49-10) OMAT#3/229 FP5045 Type XV, Rev AB BF Goodrich Ltr 1623 CFM 70-48-14-340-005 AWS C2.25/C2.25M</td>
<td>• Bond Coat • Aircraft Approved • Oxidation /Abrasion Resistance at High Temperatures</td>
</tr>
<tr>
<td>77T</td>
<td>Alloy C-276 type: Nickel Chrome Molybdenum</td>
<td>1/16” (16 mm)</td>
<td>0.9 oz 1.1 kg</td>
<td>11 lbs 5.0 kg</td>
<td></td>
<td>• Acidic and Hot Gas Corrosion Resistance</td>
</tr>
<tr>
<td>78T</td>
<td>Alloy 718 type: Nickel Chrome Molybdenum</td>
<td>1/16” (16 mm)</td>
<td>0.8 oz 1.0 kg</td>
<td>11 lbs 5.0 kg</td>
<td>GE Manual # 70-49-45 CFM 70-48-17-340-008</td>
<td>• Aircraft Engine Dimensional Restoration • Acidic and Hot Gas Corrosion Resistance</td>
</tr>
<tr>
<td>79B</td>
<td>Nickel 20% Aluminum</td>
<td>1/16” (16 mm)</td>
<td>0.9 oz 1.1 kg</td>
<td>10 lbs 4.5 kg</td>
<td>OMAT#3/90A FP5045 Type II, Rev AB</td>
<td>• High Temperature Oxidation and Abrasion Resistance • Aircraft Approved</td>
</tr>
<tr>
<td>80T</td>
<td>18/8 Stainless Steel</td>
<td>1/16” (16 mm)</td>
<td>0.8 oz 1.0 kg</td>
<td>10 lbs 4.5 kg</td>
<td>AWS C2.25/C2.25M</td>
<td>• Corrosion Protection • Dimensional Restoration • Print Rolls</td>
</tr>
<tr>
<td>85T</td>
<td>316 Stainless Steel</td>
<td>1/16” (16 mm)</td>
<td>0.8 oz 1.0 kg</td>
<td>10 lbs 4.5 kg</td>
<td></td>
<td>• Corrosion Protection • Dimensional Restoration • Print Rolls</td>
</tr>
<tr>
<td>88T</td>
<td>300 Series Stainless</td>
<td>1/16” (16 mm)</td>
<td>0.8 oz 1.0 kg</td>
<td>9.5 lbs 4.3 kg</td>
<td></td>
<td>• Corrosion Protection • Dimensional Restoration • Print Rolls</td>
</tr>
<tr>
<td>204M</td>
<td>Kirksite type</td>
<td>1/16” (16 mm)</td>
<td>0.8 oz 1.0 kg</td>
<td>22 lbs 10 kg</td>
<td>Proprietary Alloy</td>
<td>• Used to Create Metal Faced Tooling</td>
</tr>
</tbody>
</table>
## Cored wires

<table>
<thead>
<tr>
<th>Wire Name</th>
<th>Material</th>
<th>Diameter</th>
<th>Coverage ((/ft^2/0.001&quot;))</th>
<th>Spray Rate ((/h/100 A))</th>
<th>Approved Specs</th>
<th>Application Data</th>
</tr>
</thead>
</table>
| 35 MXC®  | Iron-based High Carbon Alloy | 1/16" (1.6 mm) | 0.8 oz 1.0 kg | 8.5 lbs 3.9 kg | • Traction and Anti-Skid Coatings  
  • Wear Resistance | |
| 37 MXC   | Iron Chrome Carbon | 1/16" (1.6 mm) | 1.0 oz 1.2 kg | 8 lbs 3.6 kg | • High Hardness  
  • Excellent Wear Resistance | |
| 73 MXC   | Nickel Chrome  
  Aluminum | 1/16" (1.6 mm) | 0.8 oz 1.0 kg | 8.5 lbs 3.9 kg | PWA 36947 (PWA 271-47 Rev F)  
  MSSR 950714  
  GE Manual # 70-49-39  
  (Alternate to 70-49-21)  
  FP5045 Type XVIII, Rev AB | • Oxidation and Corrosion Resistance  
  • Aircraft Approved |
| 74 MXC   | Nickel Aluminum  
  Molybdenum | 1/16" (1.6 mm) | 0.8 oz 1.0 kg | 8.5 lbs 3.9 kg | MSSR 950735  
  GE B50TF166 (Chemical Composition)  
  FP5045 Type XVI, Rev AB | • Medium Hardness for Bearing Wear Applications  
  • Particle Erosion Resistance  
  • Aircraft Approved |
| 76 MXC   | Nickel Chrome  
  Aluminum  
  Yttrium | 1/16" (1.6 mm) | 0.8 oz 1.0 kg | 7 lbs 3.2 kg | GE B50TF296 (Chemical Composition) | • Bond Coat to Ceramics  
  • Oxidation and Heat Resistance  
  • Aircraft Approved |
| 90 MXC   | Iron Chrome Nickel | 1/16" (1.6 mm) | 1.0 oz 1.2 kg | 7 lbs 3.2 kg | | • Corrosion and Wear Protection |
| 95 MXC   | Iron Chrome Boron | 1/16" (1.6 mm) | 1.0 oz 1.2 kg | 8 lbs 3.6 kg | | • Corrosion and Wear Protection  
  • ID Fans  
  • Boiler Tubes |
| 96 MXC   | Iron Nickel Chrome | 1/16" (1.6 mm) | 1.0 oz 1.2 kg | 7.5 lbs 3.4 kg | | • High Temperature Corrosion Protection  
  • Abrasion Resistance |
| 97 MXC   | Nickel Chrome  
  Tungsten Carbide Iron | 1/16" (1.6 mm) | 1.0 oz 1.2 kg | 6.5 lbs 3.0 kg | | • Abrasion and Wear Resistance |
| 98 MXC   | Iron Chrome Nickel | 1/16" (1.6 mm) | 1.0 oz 1.2 kg | 8 lbs 3.6 kg | | • Corrosion and Wear Protection |
| 106 MXC  | Cobalt Nickel Chrome  
  Tungsten | 1/16" (1.6 mm) | 0.9 oz 1.1 kg | 6.5 lbs 3.0 kg | | • Abrasion and Fretting Resistance in High Temperature Environments |
| 444 MXC  | Nickel Chrome  
  Aluminum  
  Molybdenum | 1/16" (1.6 mm) | 0.8 oz 1.0 kg | 8.5 lbs 3.9 kg | EMS 56762 | • Wear and Corrosion Resistance  
  • Dimensional Restoration of Bearing Areas |

### Cored wire advantages

Praxair and TAFA is the thermal spray leader in the development and manufacture of cored wires. Advanced materials engineering allows compositions that cannot be drawn as solid wires to be produced by enclosing powders in a metallic sheath.

Application of cored wire technology has resulted in arc spray coatings replacing plasma coatings for many aircraft engine repairs and industrial wear applications.
Praxair and TAFA’s complete family of Arc Spray Systems offers something for everyone. Whether your applications demand high productivity in a controlled work cell or occasional repairs performed by a well-trained operator, our line of push, pull or push/pull twin-wire arc systems has a gun that meets your performance and budget requirements.

**Arc spray equipment options**

**8830**
Is an established, heavy-duty unit using an air motor drive to pull the wire to the gun. The 8830 produces outstanding arc spray coatings with virtually any type of wire: hard, soft, solid or cored.

**8835**
Is a machine-mount version of the 8830, using a D.C. electric drive to pull the wire to the gun. Engineered for repeatability, the 8835 is renowned for reliability and robust performance.

**BP400**
Utilizes pusher technology for easier hand-held operation. The BP-400 features a lightweight gun and is a proven performer, producing consistent coatings every day in shops around the world.

**9000**
Is a push/pull unit designed for automated spraying yet offers the hand spraying option. The 9000 is widely utilized in shops that overhaul gas turbine engines due to its unsurpassed coating quality and repeatability.

**Spare Parts**
Only Praxair and TAFA genuine spare parts should be used in your thermal spray equipment. Designed and manufactured to precise tolerances, Praxair and TAFA spare parts ensure proper system operation providing optimal equipment operation.

**Contact Tips**
Rely on Praxair and TAFA high quality contact tips for your arc spray guns. Standard contact tips and long-life contact tips are available for different sized wires. Praxair and TAFA designs and manufactures contact tips for Models 8830, 8835, 9000, 8850, BP400 and ID extensions.

In today’s competitive marketplace, improved productivity and reduced costs are key business goals. Meeting them requires a total-capabilities resource that can provide customized solutions for gases, equipment and supply options, as well as thermal spray technology and related services.

They require a company like Praxair, North America’s largest industrial gases supplier, with the ability to offer local coverage and international reach.

As your single-source supplier, Praxair can help reduce your total cost of ownership as well as improve productivity, provide competitive pricing and deliver supply reliability.
Coverage values and Spray Rates are estimates and are subject to variation based on operating conditions and system parameters. Thermal spray coatings produced by wire-based processes require the use of a sealer to be effective in corrosive environments.

The information contained herein is offered for use by technically qualified personnel at their discretion and risk without warranty of any kind.

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