Premium Open Arc Wire for Joining and Build-Up on Low Carbon and Low Alloy Steels

TeroMatec® OA 2020

- High deposition rate reduces time needed to complete jobs
- Does not require costly shielding gas
- Deposits are high in strength and ductility
- Excellent for single and multi-pass applications
DESCRIPTION:
TeroMatec OA 2020 is formulated to be the ultimate joining and build-up wire for low carbon and low alloy steels. It is for both single and multi-pass welding applications. The smooth arc provides good sound deposits high in strength and ductility. An excellent choice when fit-up is poor.

TECHNICAL DATA:
Typical Tensile Strength: 88,000 psi
Elongation (1=5d): min - 25%
Power Source Type: Constant voltage and Integrated Wire Drive
Current & Polarity: DC (-) electrode positive under 3/32”
DC (+) electrode positive over 3/32”

APPLICATIONS:
APPLICATIONS | INDUSTRY
--- | ---
Excavators - Bulldozers | Quarries, Construction
Earthmoving Equipment | Sand, Stone, Mining
Farm Equipment | Agriculture
Buckets | Quarries, Mining
Ship Decking | Shipping
Debarker Drums | Pulp & Paper

PROCEDURE FOR USE:
Caution: Although a 2-roll wire drive assembly will work the optimum for maintaining arc voltage stability and consistent and smooth wire feeding is a serrated 4-roll drive assembly. Smooth drive rolls are not recommended!

Step 1: Remove all “old” cracked or spalled weld metal down to a sound base.

Step 2: TeroMatec OA 2020 is unlimited build-up on low and mild alloy steels.

Step 3: Preheat the part to be hardfaced depending on its air hardenability potential and/or carbon level. For most constructional steels a nominal preheat of 150°F is suggested and for medium alloy steels, approximately 250°F.

Step 4: After checking that the welding conditions are optimal by testing on scrap metal, position the gun head at a 70-80° angle and use a “push” technique for downhand welding. For fully automated welding such as hardfacing cement crusher rolls, the wire should exit at about a 10° lagging angle from top dead center. Using this technique will assure a smooth and regular weld deposit profile with the optimum level of fusion.

Note: If welding is interrupted and the part being welded cools to room temperature, make sure to reheat to the original preheat temperature. For hardenable steels slow cooling is advised using silicone blankets, vermiculite, or other environmentally suitable heat-retardant material.

Step 5: For most applications, other than a superficial grind, finishing is not required. If some level of profiling is needed, grinding or machining can be used for more precise shaping.

OPEN ARC PARAMETERS:
<table>
<thead>
<tr>
<th>Diameter (in)</th>
<th>CURRENT RANGE (A)</th>
<th>VOLTAGE RANGE (V)</th>
<th>WIRE EXTENSION (CONTACT TIP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spray Arc</td>
<td>Short Arc</td>
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</tr>
<tr>
<td>1/16” (1.6)</td>
<td>160-210</td>
<td>140-175</td>
<td>24-27</td>
</tr>
<tr>
<td>3/32” (2.4)</td>
<td>260-350</td>
<td>200-275</td>
<td>26-30</td>
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<td></td>
<td></td>
<td></td>
<td>9/16” ± 1/8”</td>
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<td></td>
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<td></td>
<td>2.25” ± ¼”</td>
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</tbody>
</table>

Note: Parameter adjustments will be needed depending on the size, weight, and shape of the part to be welded. For optimum wear resistance keep to the low end of the amperage & voltage ranges.

YOUR RESOURCE FOR PROTECTION, REPAIR AND JOINING SOLUTIONS

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