

Green Technology Chromium-Free, Flux-Cored, Wearfacing Wire

BoroTec 600 Cr-Free



WIRE



- Wearfacing wire with no hazardous chromium by-products
- Excellent single pass properties
- Provides dense, smooth deposits
- Superior wear resistance against standard chromium carbide wires
- 60-65 HRC maximum hardness



DESCRIPTION:

BoroTec 600 is a chromium-free, flux-cored, wearfacing wire specifically designed with boron carbides to combat wear by abrasion and erosion.

BoroTec 600's superior properties and versatile, welder-friendly performance increases productivity and profitability by offering a cost effective solution for parts reclamation and protection without excess exposure to harmful, chromium bearing fumes.

APPLICATIONS:

Wear protective coating for a wide range of steel components subject to severe abrasion or erosion by Mineral particles, Sand, Rocks and Gravel.

- Mixer shafts
- Excavator bucket teeth
- Impellers
- Conveyor chutes
- Buckets, shovels
- Sand pumps
- Transport screws
- Concrete mixers
- Asphalt handling

TECHNICAL DATA:

Operating Conditions:

Current Type: DCEP (+)

Positions: Flat and Horizontal

Stick-Out: 5/8 ± 1/8"

Deposit Efficiency: 90%

Shielding Gas: 1) 90% Argon 10% CO₂
2) 98% Argon 2% O₂
3) 75% Argon 25% CO₂

Gas Flow: 35-40 Scfh

Typical Mechanical Values:

Hardness: 60-65 HRC

ASTM G65 Vol. Loss: 18 mm³ (Average)

PROCEDURE FOR USE:

Preparation:

Remove any previous weld deposits or cracked and contaminated metal and any residues or oxides that remain.

Preheating:

It is very important that the weld deposit not exceed 475°F in order to maintain its high wear resistance. For base materials that require preheating due to their carbon equivalent, it is recommended that the preheat temperature not exceed 250°F in order to avoid temperature excursions of the weldment above 475°F.

Note: Do not apply Borotec 600 directly over 12-14% Mn steels as it will not bond!

Intermediate layer:

On 12-14% manganese steels, an intermediate buffer layer is required using either EnDotec® DO*68S wire or Eutectrode® 680. On hardenable and air-hardening steels, deposit intermediate layers with Xuper® 6868 XHD. To build up missing sections on low-alloy steels, TeroMatec® 2020 is recommended.

DIAMETER	AMPERAGE	VOLTAGE	STICK-OUT
0.045"	100-220	21-39	5/8 ± 1/8"
1/16"	150-350	21-34	5/8 ± 1/8"

WELDING TECHNIQUE:

Maintain a medium arc length with a stick-out distance around 5/8 to 3/4". Longer stick-outs and arcs increase deposition rate but will also often result in more spatter, overheating and an increased chance of defects.

For best results, hold the torch at 70-80° to the workpiece, welding downhand with a "pull" technique and a slight weave. Stringer bead or weaves may be used, however all puddles should be back-whipped and allowed to fill, especially at lower parameter levels, to prevent crater porosity.

YOUR RESOURCE FOR PROTECTION, REPAIR AND JOINING SOLUTIONS



EUTECTIC CORPORATION
N94 W14355 Garwin Mace Drive
Menomonee Falls, WI 53051 USA
Tel.: +1 (800) 558-8524
eutectic.com

EUTECTIC CANADA
428, rue Aimé-Vincent
Vaudreuil-Dorion, Québec
J7V 5V5 Canada
Tel.: +1 (800) 361-9439
eutectic.ca

