



TRITEN® T-400X

Triten® T-400X is an engineered hardfacing alloy in the form of a tubular (metal-cored) wire. When properly applied, it produces a fine multiphase carbide and boride structure that resists severe abrasion without the stress-relief cracking normally seen in conventional chromium cast irons. It is ideal for hardfacing components subject to abrasive wear or fine-particle erosion where a crack-free deposit is required.

Key Strengths

- Crack-free deposit
- High abrasion resistance, verified by ASTM G65 Procedure A
- Applied with standard GMAW equipment
- Fine multiphase carbide and boride hard-phase distribution rather than a coarse carbide skeleton
- Predictable weldability and bead profile

Metallurgical Structure

The deposit solidifies as a fine, directionally solidified cellular and dendritic weld metal containing a dense population of second-phase constituents. The hard-phase population is consistent with niobium-rich carbides together with iron and chromium borides and complex carboborides within an iron-based matrix.

This fine, closely distributed hard-phase structure is designed to provide resistance to fine-particle abrasion by limiting the spacing between hard constituents and reducing preferential attack of the supporting matrix.

Primary Chemical Constituents

- Cr
- NB
- B
- Mn
- Fe

Welding Parameters

Wire Diameter		Amperage		Voltage		Stick-out		Shielding Gas (if Used)
1.6 mm	1/16"	~ 300	280 - 380	~ 30	28 - 33	~ 19 mm	~ 3/4"	100% Ar

Typical Applications

- Drag conveyor components
- Mixer and pugmill paddles
- Fabricated wear parts
- Chutes, hoppers
- Ash, sand and aggregate handling
- Bulk-material equipment
- TiO₂ Micronizers
- Fan blades and housings
- Screw and auger flights