

A Nickel Based Blended Powder for the Plasma Transferred Arc (PTA) Process

EuTroLoy® 16635G



COATING

- Very hard matrix used for a wide variety of industrial applications
- Uniform powder size distribution for trouble free operation
- Excellent welding characteristics
- Available in 3 different carbide types



DESCRIPTION:

EuTroLoy 16635G is a gas atomized nickel based alloy that is blended with 35% (by weight) of tungsten carbide (WC) to form a composite alloy.

EuTroLoy 16635G is available in 3 different carbide types;

1. 16635G-CWC: 35% Cast Tungsten Carbide
2. 16635G-MWC: 35% Macrocrystalline Tungsten Carbide
3. 16635G-SWC: 35% Spherical Tungsten Carbide

The high hardness matrix is designed to increase wear resistance while the WC offers superior abrasion and erosion resistance.

The coatings produced are hard, dense and especially resistant to low stress abrasion and erosion. Careful control of the chemistry and particle size distribution of both powder components assures consistent and reliable performance in standard PTA welding equipment and in the most challenging applications.

The chemistry and particle size of EuTroLoy 16635 is carefully controlled to insure consistent high quality coating properties.

COATING PROPERTIES:

Typical Matrix Hardness: 62 HRC (gas atomized)

Typical Carbide Hardness (VHN300):

CWC: 2200

MWC: 2100

SWC: 3000

Deposit Density: 10.4 g/cm³ (0.376 lb/in³)

Max. Service Temp.: 650°C (1200°F)

Hall Flow Rate: 13.9 sec/50 g

Available Carbide Types:

CWC: W2C-WC (angular)

MWC: WC (angular)

SWC: W2C-WC (spherical)

Nominal Composition: WC 35.0

Carbon

Chromium

Silicon

Boron

Iron

Nickel

PROCEDURE FOR USE:

Remove damaged material. Clean areas to be welded. Match heat input during welding to component dimensions. Follow the prepared welding procedure for the specific base metal chemistry. Keep dilution with base metal low. Allow workpiece to slowly cool upon completion of welding.

It is important that amperage and voltage be kept as low as possible to maintain WC integrity, while maintaining a well bonded overlay.

FINISHING:

Coatings of EuTroLoy 16635G can be finished by grinding.

TYPICAL APPLICATIONS:

The overlay offers excellent resistance to abrasion, erosion, corrosion, galling and gauging on carbon steels, stainless steels, cast iron and nickel alloys. Applications include crushing equipment, track undercarriage, plastic extrusion feedscrews.

16635G-CWC: Most commonly used WC on the market for severe wear from abrasion and/or erosion. Generally used for low stress abrasion in Mining and Mineral Processing environments. Due to its eutectic structure, it is recommended that low welding currents are used to minimize carbide dissolution.

16635G-MWC: A single crystal WC that withstands the intense heat of arc welding better than CWC. Wear performance and applications are similar to CWC.

16635G-SWC: Primarily used where high stress (2-body) abrasion is encountered.

HEALTH & SAFETY:

To ensure a safe work environment observe normal welding practices, provide appropriate eye, hearing, skin and respiratory protection and pay attention to air flow patterns. For general weld practices, refer to ANSI Z49.1:2012 - "Safety in Welding, Cutting, and Allied Processes". Welding is a completely safe process when performed in accordance with proper safety measures. Become familiar with local safety regulations before starting operations. DO NOT operate your equipment or use the material supplied, before you have thoroughly read the equipment instruction manual. Contact Eutectic for Material Safety Data Sheet (MSDS) information. DISREGARDING THESE INSTRUCTIONS MAY BE HAZARDOUS TO YOUR HEALTH.

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