CERALOY TiC 3:0.15 (9.5 MM DIA. COIL)

THE PRODUCT :

CERALOY TiC-3:0.15 (9.5 MM DIA. COIL) is a Boron free grain refiner for EC grade, 5000 and 7000 series Aluminium Alloys. Controlled addition of Ceraloy Titanium Carbon Aluminium grain refiner to molten aluminium releases nucleant particles that promote equiaxed, fine grain structure throughout the cast alloy, thus avoiding formation of columnar crystals. Casting speed can also be increased.

PURPOSE:

Aluminum and its alloys typically solidify in a heterogeneous manner, resulting in a coarse dendritic structure. This coarse grain structure can lead to several issues, including poor mechanical properties, inadequate feeding characteristics, and a diminished response to surface and heat treatments

To address these challenges, we recommend CERALOY TiC-3:0.15. As a metallic grain refiner, CERALOY TiC-3:0.15 dissolves easily in aluminum alloys, providing more consistent results compared to salt-based alternatives. Its superior fade resistance ensures that the refinement effect lasts longer. Furthermore, CERALOY TiC-3:0.15 is a more environmentally friendly option than conventional salt-based refiners

ADVANTAGES IN COMPARISON WITH AlTiB GRAIN REFINER:

1. The working environment is cleaner because no chemical reactions are involved in the use/production of CERALOY TiC-3:0.15.
2. The product is free from Salt inclusion.
3. It offers specific advantages in boron-free casting production.
4. A smaller quantity of hard particles is introduced into the melt, which avoids potential adverse effects, particularly significant in the production of PS plates (pre-sensitized plate used in offset printing) or light gauge foil.
5. It improves melt fluidity and castability, especially in 5000 series alloys.
6. It provides a shiny surface finish.
7. It offers resistance to Zirconium & Chromium poisoning in high-strength alloys.
8. It exhibits very low particle agglomeration and segregation.
9. The use of CERALOY TiC-3:0.15 enhances as-cast mechanical properties, including tensile strength and hardness.
10. The refined metallurgical structure of the Alpha Phase improves machinability.

INSTRUCTIONS FOR USE:

Prepare the desired alloy composition. Follow the normal molten metal cleaning process add CERALOY TiC-3:0.15 through continuous rod feeder machine in to molten metal flow as per desired addition rate.

APPLICATION RATE: 0.1-0.2%

APPLICATION TEMPERATURE: 680 – 720°C

SPECIFICATIONS:

Alloy	Colour Code	Ti	C	Si	Fe	B	V	Others Each	Other Total	Balance
AlTiC-3:0.15		2.6- 3.4%	0.08-0.22%	0.30% Max.	0.30% Max	0.004% Max.	0.3% Max.	0.030% Max.	0.10% Max.	Aluminium

Mean Particle Size of TiAl3: Below 50 Micron
Mean Particle Size of TiC: < 1 Micron

SHAPE: 9.7±0.3mm Dia. Rod Coil

WEIGHT: 200 ±20 Kg.(Standard size)

COLOUR CODE: Red and Purple colour Strip mark.

LABEL: Continuous Product Label on coil after interval of 1 meter.

PACKING: 3 coils, strapped tightly with Steel/ PET strips to hold and wrapped with water proof cover and placed on pallet. Package properly labelled with Product Name, Batch/ Heat No., Manufacturing date and supplier name.

STORAGE : Store in cool & dry place, away from direct heat.

Note: Addition level can vary depending on the casting process, alloy composition, section thickness and solidification rate of the casting.

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