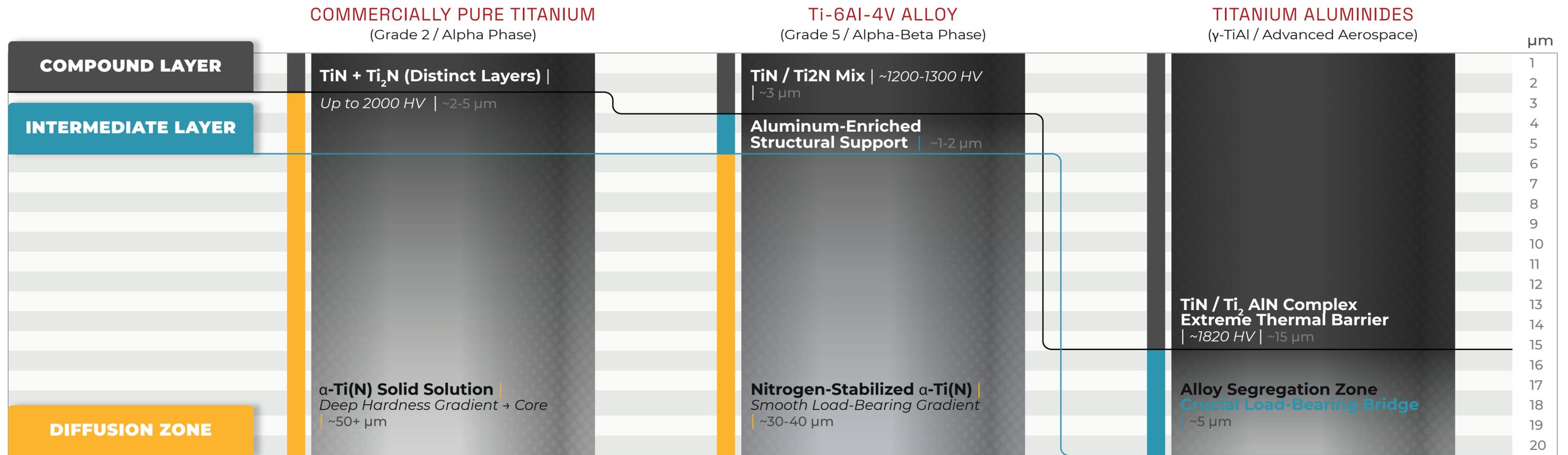


[Titanium]

Anatomy of the **Titanium Compound Layer**: Engineering the Golden Shield

Discover how advanced plasma nitriding adapts to the specific microstructure of each titanium grade, building atomic-level armors that eradicate galling without the need for external coatings.



The Pure Anti-Galling Shield

In pure titanium, plasma builds two perfectly defined, impurity-free ceramic layers. Expect extreme surface hardness and total elimination of adhesive wear, while preserving 100% of the material's native biocompatibility. Ideal for medical implants and chemical processing.

The Heavy-Duty Armor

The aerospace and motorsport standard: Aluminum is insoluble in titanium nitrides, the advancing nitrogen physically 'pushes' the aluminum inwards. This creates a sub-layer that acts as a massive structural foundation, supporting extreme contact pressures without collapsing.

The High-Temperature Barrier

Used for next-generation engine components. Here, plasma nitriding forces the creation of a specialized ternary nitride layer (Ti₂AlN). Expect unmatched thermal stability and wear resistance at elevated temperatures, enabling massive weight savings by replacing heavy superalloys.