



Black Zinc Nickel: RoHS Compliant Plating

The challenge

The commercial aerospace and defense industries have traditionally relied on Cadmium product finishes because of its superior electrical performance, as well as the protection it provides in harsh environments. But growing concerns about Cadmium's toxicity and carcinogenic effects have prompted industry-wide regulation of its use. The Restriction of Hazardous Substances (RoHS) further restricts the use of specific hazardous materials found in electrical and electronic products, including Cadmium. As a result, both the military and commercial aerospace firms are rapidly transitioning to finishes and plating that meet these new requirements.

The solution

ITT Cannon's Black Zinc Nickel is a RoHS-compliant, cost-effective and sustainable plating alternative to Cadmium. Black Zinc Nickel Plating offers the same level of harsh environment protection, temperature ranges and electrical performance as Cadmium finishes. ITT Cannon's Black Zinc Nickel plating is non-reflective and remains functional up to 500 hours salt spray exposure.

The CANNON Difference:

- Innovative Black Zinc Nickel Plating provides long-lasting corrosion resistance to exposed connector surfaces used on commercial aircraft and military planes, transportation vehicles and marine transports
- It is designed to U.S. military specifications and is fully compliant with the RoHS directive to eliminate the use of environmentally hazardous heavy metal

Features:

- Now available on a wide variety of connectors and accessories including 38999-Style and MKJ products
- Conductive and non-reflective black alloy finish is approved for 500 hours of salt spray endurance
- Quickly emerging as the new Defense Industry standard
- Shell-to-Shell Continuity Less than $<2.5m\Omega$
- Mechanical 500 mating cycles, non-magnetic
- Temperature Range of -65° to $+175^{\circ}C$ in accordance with 38999-Style



Applications



MILITARY VEHICLES



MILITARY AIRCRAFT



COMMERCIAL AIRCRAFT



SURVEILLANCE

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Black Zinc Nickel Plating is used on ITT Cannon's aluminum substrate connectors, which include the following products and key applications:

- **KJB 38999-STYLE CONNECTOR APPLICATIONS**

High performance military aircraft, commercial airlines, communications equipment, armored personnel carriers and tanks, missiles and shipboard

- **KPT/KPSE 26482-STYLE CONNECTOR APPLICATIONS**

Power generators, engines, sensors, motion control, off-road vehicle, earth-moving equipment, ships, mobile equipment, industrial machinery and telecommunications

- **CA 5015 CONNECTOR APPLICATIONS**

Commercial and military aircraft engines, ships, mobile equipment, industrial machinery and telecommunications

- **BKA ARINC 600 CONNECTOR APPLICATIONS**

Commercial and military avionics systems, traffic collision avoidance systems, engine indicator crew alert systems and airborne information management systems

- **MICRO-D 83513-STYLE CONNECTOR APPLICATIONS**

Satellites, robotics, hand held test equipment, missiles, geophysical equipment, commercial avionics and navigation systems



Why ITT

ITT is a focused, multi-industrial company that designs and manufactures highly engineered critical components and customized technology solutions.

ITT Cannon is a leading global manufacturer of connector products serving international customers in the aerospace and defense, industrial and medical end markets. We design and engineer a variety of interconnect solutions that make it possible to transfer data, signal and power in an increasingly connected world.

Connect with your ITT Cannon representative today or visit us at www.ittcannon.com

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