

ZinKlad® 1000 B-EXP



Powered by aesthetics

ZinKlad 1000 B-EXP the high performance black coating for automotive applications. Hexavalent chromium-free, with a deposit hardness above 400 HVN offering extended corrosion protection when compared to other sacrificial coatings.

ZinKlad 1000 B-EXP gives a uniform glossy black coating exceeding 1000 hours to base metal corrosion in neutral salt spray.

ZinKlad 1000 B-EXP has been approved by FCA and GM in the following standards: PS.50031:2015-06 PS-12182:2016:08, for tapping screws and machine threaded fasteners and GMW16730:2012-10 , primarily for bulk processed, small steel parts.

ZinKlad 1000 B-EXP provides exceptional corrosion resistance and a consistent coefficient of friction. When it comes to providing outstanding coating aesthetics and corrosion protection that automotive engineers rely on, **ZinKlad 1000 B-EXP** delivers.

Features

- Low coating thicknesses
- Glossy, uniform black finish
- Exceptional corrosion protection
- Predictable coefficient of friction

Already on it.



ZinKlad 1000 B-EXP

Hexavalent chromium-free black coatings

Performance Data

ZinKlad 1000 B-EXP combines a homogenous metallic zinc-nickel (12 – 17% nickel) deposit of 10 microns minimum thickness. This hard-metallic coating is further protected against the formation of white corrosion products by the application of **TriPass ELV 5100** trivalent chromium passivates to impart a black color.

Torque 'N' Tension 12 provides both increased corrosion resistance and modifies the surface properties to ensure uniform torque and clamping characteristics. Combined these ensure that **ZinKlad 1000 B-EXP** consistently meets minimum performance demands for corrosion resistance and torque-tension requirements.

Finish requirements:

Appearance: Uniform glossy black finish

Thickness: Minimum 10 microns

Nickel content: 12-17%

NSS: 240 hours, no change in appearance, 1000 hours, no red rust

Coefficient of Friction: 0.10 – 0.16

Corrosion Performance (ASTM B-117 / ISO-9227)

	First white corrosion	First red corrosion
ZinKlad 1000 B-EXP	240 h	1000 h

Recommended processes used to create ZinKlad 1000 B-EXP coatings

1. Zinc-Nickel	Provides the sacrificial protection
Enviralloy Ni 12-15	Alkaline, particularly recommended for plating fasteners
2. Trivalent Passivates	Protects the zinc deposit from white rust
TriPass ELV 5100	Good black appearance with excellent corrosion resistance
3. Passivate seal	
TriDip	Seals passivate coating and provides lustre
4. Dry	
5. Torque modifier	Improves corrosion resistance and modifies friction properties
Torque 'N' Tension 12	Average CoF 0.13, range 0.10 – 0.16 for fasteners
6. Bake	Adjust gloss level
250 °F (120 °C), 20 min	



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