

ENSEAL 4 BRK

Anti-corrosion coatings



High performance, sealer for cast iron brake calipers

ENSEAL 4 BRK is a clear, inorganic sealer for use on electroplated, zinc and zinc-nickel electroplate. On make-up the solution is completely chromium-free. It gives exceptional corrosion resistance when applied over MacDermid Enthone TriPass ELV and PERMAPASS trivalent chromium passivates.

A feature of **ENSEAL 4 BRK** sealer is that the final deposit is completely free from droplets or 'tears'.

The final result... a thin colorless film which increases corrosion resistance and preserves the initial bright appearance of the coated surface.



Key Features

- Stain and tear free deposit
- Compatible with brake fluid
- Chromium-free on make-up
- Excellent corrosion resistance
- Meets 'End of Life Vehicle' directive



MacDermid Enthone
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ENSEAL 4 BRK is a high performance water based inorganic sealer especially designed for protecting zinc-nickel and zinc plated cast iron brake components. It meets even the most stringent corrosion demands specified by the major brake Tier1s.

ENSEAL 4 BRK exceeds the exacting DIN 50979 specification. It is production proven and meets the requirements of all major brake system Tier1s including CBI, Nissin and TRW.

This is demonstrated by surpassing all these industry test conditions:

Test criteria	Feature of ENSEAL 4 BRK
Brake fluid compatibility	Water based inorganic sealer
Chemical resistance	Passes acetone solvent test
Heat resistance	Retains corrosion protection even after 72 hours at 150°C
No cracks or needles	The sealer film is free from powder like particles
Resistant to contamination	Stable performance
Surface pH	Dried film is pH neutral
Very low residues / drip marks	Low solid content of <13% w/v, last drop spreads over larger area

Recommended products used prior to the ENSEAL 4 BRK sealer

Zinc-nickel and zinc deposits which give sacrificial protection to the cast iron substrate

ZINCROLYTE KCL-Ni IV	Production proven acid zinc-nickel process for the brake Industry
ENTHOBRITE CLZ-941	Acid zinc process with fast initiation and coverage providing best LCD performance also at elevated bath temperature
ENTHOBRITE CLZ-970	TRW approved extensively proven acid zinc process
Kenlevel BF2	Boric acid-free acid zinc process, fastest plating at high current densities

Trivalent chromium passivates which give protection from formation of white rust

PERMA PASS Ultra IV Plus	Cobalt-free zinc-nickel passivate, well established process without cobalt
PERMA PASS 3300	Cobalt-free zinc passivate, used in conjunction with sealant
TriPass ELV1500 LT	Low temperature, thick film passivate, low application temperature (35°C)



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