

# EcoTri® ONE

Fluoride-free passivate for all surfaces



General Metal Finishing

Corrosion resistant coatings

atotech.com



## Universal passivate for zinc and zinc nickel

# ONE

passivate for zinc  
and zinc nickel

### Versatility in perfection

EcoTri® ONE is MKS' Atotech latest fluoride-free, iridescent thickfilm passivate. This all-in-one passivate is equally suitable for zinc or zinc nickel surfaces while giving excellent corrosion protection. With EcoTri® ONE only one passivate tank is necessary in the plating line for zinc and zinc nickel plated parts. Ultimately, this results in a significant reduction of time, space, maintenance and handling costs.

EcoTri® ONE shows an outstanding corrosion protection of up to 168 h against white corrosion on zinc and up to 300 h on zinc nickel. With a lifetime of more than 36 m<sup>2</sup>/l without new make-up, the innovative passivate helps to reduce both internal costs and external environmental impact. The new high performance passivate provides customers with a wide range of color options, combining protection with an attractive appearance - from iridescent to bluish. Adjusting production parameter accordingly, a stainless steel look is achieved without applying a sealer or top coat. Very good color stability is maintained even after hydrogen de-embrittlement baking.

EcoTri® ONE contains less Cr(III) compared to conventional high performance thickfilm passivates available, making wastewater treatment simpler and economical.



Highly suitable for diverse  
fastener applications

# A sustainable alternative to conventional high performance passivates



**Figure 1:**  
Zinni® AL 450 mod +  
EcoTri® ONE  
plated press fit sleeve

**Figure 2-4:**  
Fasteners plated with  
Zinni® AL 450 + EcoTri® ONE +  
Sealer 350 WL8  
after 0 h, 240 h and 1.008 h  
NSST (ISO 9227)

## Immaculate silver finish even after heat treatment

On zinc nickel surfaces, EcoTri® ONE provides a very nice silver appearance similar to stainless steel. This can be achieved by adjusting the passivate at higher pH values (3.6 – 4.0). Even after heat treatment, EcoTri® ONE keeps a very consistent silver appearance. Where conventional thickfilm passivates tend to take on a dark, yellowish color, EcoTri® ONE convinces with an outstanding stainless steel appearance.

## Increased efficiency

Like all members of the EcoTri® family, EcoTri® ONE is also suitable for MKS' Atotech regeneration system Tricotect®. Tricotect® allows for the continuous and selective removal of iron and zinc build-ups from passivate solutions, ensuring constant high plating quality and preventing hazing and discoloration of passivate films.

## Features and benefits

- Versatile passivate for zinc and zinc nickel surfaces
- Reduced bath temperature (30 – 40 °C)
- Wide pH range from 1.8 – 4.4
- Long lifetime
- Fluoride-free
- Reduced chromium and cobalt content
- Easy wastewater treatment
- Wide color range
- Good color stability after hydrogen de-embrittlement baking
- 96 h/168 h protection against WR in barrel/rack on zinc
- 240 h/300 h protection against WR in barrel/rack on zinc nickel

