

## Black Trivalent Passivate for Zinc & Zinc-Iron Finishes

Dipsol continues to bring innovative surface finishing products to the global marketplace. The ZTB-447 Series of products are OEM approved, and meet the appearance and performance requirements across a wide range of applications. The ZTB-447 black trivalent passivates provide a long solution life and ease of control in day to day production.

The ZTB-447 Series is formulated to impart a consistent black appearance over barrel acid zinc finishes, or alkaline zinc and alkaline zinc-iron barrel and rack applications. Dipsol's ZTB-118X trivalent topcoat provides an enhanced appearance and further improves corrosion performance. A lubricant can be integrated to meet torque and friction requirements.



| ZTB-SERIES    | ACID ZINC | ALKALINE ZINC | ZINC-IRON |
|---------------|-----------|---------------|-----------|
| ZTB-447ASA    | X         |               |           |
| ZTB-447S1S2S3 |           | X             | X         |
| ZTB-447MD     | X         | X             |           |

### Product Advantages

- **Trivalent passivate that is hexavalent, dye, and silver free.**
- **Major OEM approvals.**
- **Long solution life, cost savings with less renewal.**
- **Over 168 hours to 5% white rust.**

### Technical Overview

| ZTB-447 Series       |                        |                 |                 |
|----------------------|------------------------|-----------------|-----------------|
| Operating Conditions | 447ASA                 | 447S1S2S3       | 447MD           |
| Temperature          | 25 - 40°C              | 25 - 35°C       | 25 - 35°C       |
| pH                   | 2.0 - 2.6              | 2.0 - 2.5       | 2.3 - 2.5       |
| Time                 | 20 - 60 seconds        | 30 - 70 seconds | 30 - 50 seconds |
| Agitation            | Moderate to strong air |                 |                 |