

# Bulk Zirca-Sil®

BY BULK CHEMICALS INCORPORATED  
Zirconium, Phosphate Free, Conversion Coating

	<b>Zirca-Sil® 18</b>	<b>Zirca-Sil® 18i</b>	<b>Zirca-Sil® MS-3</b>	<b>Zirca-Sil® SW-1</b>	<b>Zirca-Sil® HD-1</b>
Operation	Spray	Immersion	Spray	Hand-Wand	
Minimum # of Stages Required	4	4	2	NA	1,2 or N/A
Detergent System (Clean & Coat)	✗	✗	✓	✓	✓
Non-Hazardous	✓	✓	✓	✓	✓
Ambient Operation	✓	✓	✓	✓	✓
Virtually No Sludge	✓	✓	✓	✓	✓
Phosphates	✗	✗	✗	✗	✗
Requires Seperate Cleaner	✓	✓	✗	✗	✗
Can Be Dried-In-Place (No Rinse)	✗	✗	✗	✗	✓
Can Be De-Classified	✗	✗	✗	✗	✓

Every Bulk Zirca-Sil® product will coat all metals including iron, aluminum and zinc.

	pH of Bath	Construction of Washer	H <sub>2</sub> O Makeup
<b>Zirca-Sil® 18</b>	4.5 - 5.5	Stainless Steel*	DI/RO*
<b>Zirca-Sil® 18i</b>	4.0 - 5.0	Stainless Steel*	DI/RO*
<b>Zirca-Sil® MS-3</b>	4.5 - 5.5	Mild Steel	City or DI/RO
<b>Zirca-Sil® SW-1</b>	6.0 - 7.0	N/A	City
<b>Zirca-Sil® HD-1</b>	8.5 - 9.5	N/A or Mild Steel	City

preferred  
The typical coating weight of the **Bulk Zirca-Sil®** line of products is between 5 and 25 mg/ft<sup>2</sup>

**Bulk Zirca-Sil®** products out-perform Iron phosphate across the board while both Zirca-Sil® 18 and Zirca-Sil® 18i perform as good as or better than Zinc phosphate as well.

## Operating Costs Comparison

