

# GALVANIZING VS. PAINT SYSTEMS

REQUIREMENTS / CHARACTERISTICS	HOT-DIP GALVANIZED STEEL	INORGANIC ZINC-RICH PAINT
Special Handling	No	Paper interleave, cloth slings, wood separators
Field Touch-Up	No	Required
Application	Factory	Field or factory
Weather Dependent	No	Yes
Temperature Range	-75F to 392F	<200F
Corrosion Protection	Cathodic & barrier	Barrier
Hardness/Abrasion Resistance	179 to 250 DPN	Varies by type

## SERVICE LIFE/DURABILITY

REQUIREMENTS / CHARACTERISTICS	HOT-DIP GALVANIZED STEEL	INORGANIC ZINC-RICH PAINT
Rural	>100 years	27 years
Urban	90 years	17 years
Industrial	70 years	12 years
Marine	50 years	12 years



**EDMONTON PLANT**  
9390 48 Street  
Edmonton, AB T6B 2R3

**SASKATOON PLANT**  
874 57 Street East  
Saskatoon, SK S7K 5Z1

**CALGARY DEPOT**  
433 Exploration Avenue SE  
Calgary, AB T3S 0B6

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**LIFELONG PROTECTION**

## COATING

REQUIREMENTS / CHARACTERISTICS	HOT-DIP GALVANIZED STEEL	INORGANIC ZINC-RICH PAINT
Thickness	Exceeds ASTM A 123 minimum (> 3.9 mils for 1/4" thick steel)	Variable - may not meet required minimum due to appropriate skill
Coverage	Exterior & Interior	Exterior surfaces only
Consistency	Edge & Corner thickness $\geq$ flat	Edge & Corner thickness < flat
Cathodic Protection	Zinc metal is anodic to steel	Maybe - Zinc % may be too low for conductivity/Binding materials may not be conductive, minimizing cathodic protection
2000 Hour Immersion Test	No base steel corrosion	Paint absorbed water & underfilm corrosion of the substrate steel occurred
Ultraviolet Ray Exposure	No effect on performance	No severe degradation
Abrasion Resistance	Alloy layers are harder than base steel (DPN hardness ranging from 179 - 250)	Moderate; DPN hardness approximately 33% less than HDG
Performance Range Testing	-100 C to 350 C	Deterioration at 250 C

## APPLICATION

REQUIREMENTS / CHARACTERISTICS	HOT-DIP GALVANIZED STEEL	INORGANIC ZINC-RICH PAINT
Surface Preparation	Documented, timed, scientific sequence	Function of human expertise, intolerant of improper cleaning/ profiling
Procedure	Observable completion of metallurgical reaction	Constant agitation of mixture, regulation thickness & drying time per pass
Application	24/7/365 - all weather	Requires specific temperature conditions
Bond Strength to Steel	~ 3600 psi	~ 600 psi
Size Range of Products	90' - 120' long by 6' - 8' wide/deep	Unlimited



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