

Want it to last?

ARMORGALV® IT!

Arm  rGalv®

Who We are



ArmorGalv® (Aust) are a locally owned Thermal Diffusion Galvanization company based in Newcastle NSW.

ArmorGalv® is the only plant of its kind in Australia

The **ArmorGalv®** process is a cost effective, environmentally friendly corrosion protection.

Who We are



ArmorGalv® is the trade name developed by the **Distek Group** in 1993.

It is a method of applying a uniform, sacrificial, Zn/Fe alloy coating using a ***metallurgical vapor diffusion process***

Characteristics of ArmorGalv® Coating



- It is highly **corrosion and abrasion resistant**
- **Controllable, even and Precise** – from 20μ to 100μ plus
- It is **hard**, non-magnetic, **weldable** and spark free.
- It is **chip proof** and amenable to **crimping, bending and forming** post process.
- **No Hydrogen Embrittlement** (absorption of **hydrogen** atoms or molecules)

Characteristics of ArmorGalv® Coating

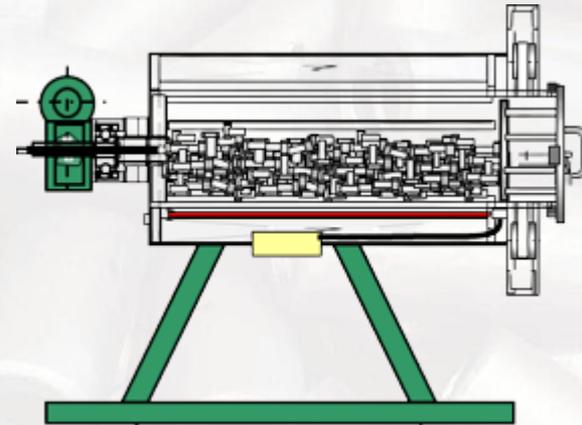


- Highly **heat resistant** (up to 650°C)
- **Excellent substrate** for paint, epoxy, rubber or plastic (no preparation required)
- Excellent anti galling (where 2 surfaces in contact seize up) and low co-efficient friction.
- Is an excellent replacement for **CADMIUM**
- **Totally Heavy Metal free and Non-Toxic (GREEN)**

What We Do



ArmorGalv® is applied by tumbling parts with a patented zinc powder in a cylinder that is very slowly rotated inside an oven. Process temperatures are 350° to 450°

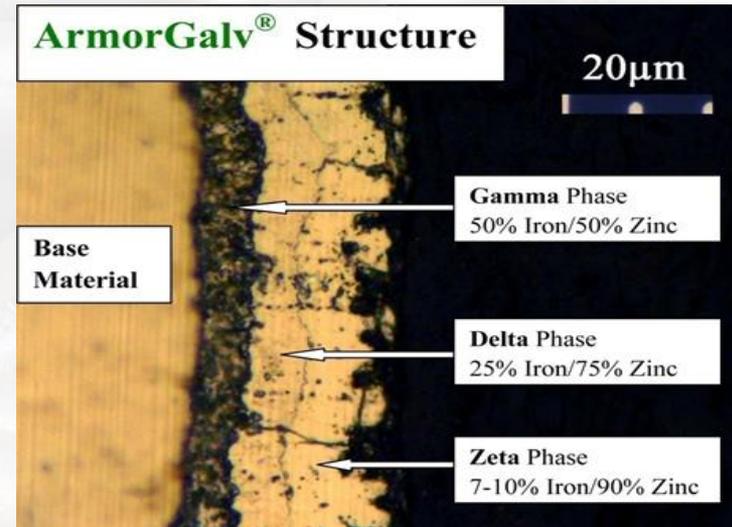


How Can It Be That Good?



ArmorGalv® diffusion occurs when the ArmorGalv® powder sublimates at a low temperature, (320°C) penetrating the steel structure to form a Zn/Fe

ArmorGalv forms multiple layers of Zn/Fe Alloy from the superior corrosion resistant Gamma layer to a compact Delta layer followed by the Zeta layer. Each layer is harder and more corrosion resistant than the previous.



Where Can It Be Applied?



ArmorGalv® can be applied to all **Ferrous** surface types

Powdered Metal



Steel



Stainless Steel



Castings & Forgings



Precision Coating



ArmorGalv® produces an even, uniform coating on threads without pooling.

ArmorGalv® complies with many standards
(including AS1214, ISO 14713, ISO 17668, ASTM 1059A and more...)



ArmorGalv In Corrosive Environments



Estimated corrosion rates of steel & zinc in Australia Developed From AS4312 and AS/NZS 2312.2

Category	Description	Typical Environment	Corrosion Rate for the First Year ($\mu\text{m}/\text{y}$)		
			Mild Steel	Hot Dip Gal - Zinc	ArmorGalv®
C1	Very Low	Dry Indoors	≤ 1.3	≤ 0.1	≤ 0.03
C2	Low	Arid/ Urban Inland	> 1.3 to ≤ 25	> 0.1 to ≤ 0.7	> 0.03 to ≤ 0.23
C3	Medium	Coastal or Industrial	> 25 to ≤ 50	> 0.7 to ≤ 2.1	> 0.23 to ≤ 0.7
C4	High	Calm Seashore	> 50 to ≤ 80	> 2.1 to ≤ 4.2	> 0.7 to ≤ 1.85
C5	Very High	Surf Seashore	> 80 to ≤ 200	> 4.2 to ≤ 8.4	> 1.85 to ≤ 2.8
CX	Extreme	Ocean/ Off-shore	> 200 to ≤ 700	> 8.4 to ≤ 25	> 2.8 to ≤ 8.3

ArmorGalv On Steel Structure



ArmorGalv® Provides an excellent coating to,

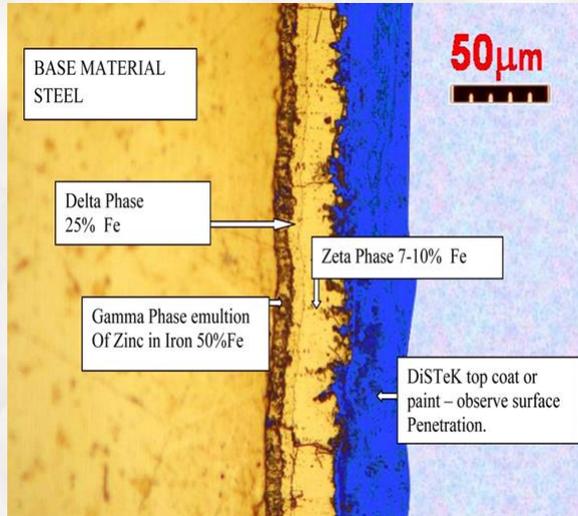
- Steel Beams
- Steel structure fixings.
- Angle and flat bar
- Ground Support Anchors



ArmorGalv Duplex Coatings



- **ArmorPlex®** Thermal Diffusion + Paint



- Above picture shows fastener coated with ArmorGalv® and Xylan after 14,250hrs in B-117 Salt spray

ArmorGalv® Coated Parts



Sample of parts that
have been coated with
ArmorGalv®



ArmorGalv® Testing/ Approvals



Standards

- ISO 17668 – Zinc Diffusion on Ferrous Metals
 - AS1214 Threaded Component
- ISO 14713 General Corrosion Protection Guidelines
 - ASTM A-1059 Thermal Diffusion Standard
 - ASTM A641-98 _ Wire
 - ASTM A-123 – Structural Steel
 - ASTM A-153 - Hardware
 - European Community BS EN 13811:2003
 - Israeli 4271 Road barriers and infrastructure.

Tests

- Dade county PA114 Appendix E Sec. 2 (ASTM G85/A5)
 - ACQ Lumber
 - DIN 50021 and DIN 50018
 - South Africa EDS evaluation
 - Michigan State University- ACQ Test
- US Environmental Protection Agency (US EPA), USA-B117
 - Siemens Laboratories, Germany
 - Dresden Corrosion Institute, Germany
 - Brussels Metallurgical Laboratory, Belgium
 - Russian Machine Building Laboratory
 - Israel Standard Institute
 - Swedish National Institute of Testing
 - National Product Development Centre SA

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