

INDUSTRIAL & PROTECTIVE COATINGS

Eleven zinc systems for the repair, protection and specification of steel.
Formulated and made in South Africa.

ZINC PROTECTION COATINGS

GALVANIC · BARRIER · SACRIFICIAL · SPECIFIED


SPECIALIZED
COATING SYSTEMS



WE STARTED WITH ZINC

Specialized Coating Systems was founded in Johannesburg in 1997 to solve one problem: what to do about the galvanizing that gets cut, drilled, welded or damaged after the steel leaves the galvanizer's bath.

That problem has not gone away. Hot-dip galvanizing is an excellent corrosion protection system, and it stops working the moment someone puts a hole through it. The bath is in Boksburg. The steel is on site. Re-dipping is not an option.

ZINCFIX® was built for that gap — zinc-rich coatings that carry the same protective mechanisms as hot-dip galvanizing, applied cold, by brush, spray or aerosol, on site. The original repair pack is **approved by the Hot Dip Galvanizers Association of South Africa**, and it is still in the range today.

That range has grown well past repair. It now runs from a 13-micron weldable shop primer that survives fabrication, through cold galvanizing films and zinc-rich epoxy primers specified to ISO 12944 corrosivity classes, to an inorganic zinc flake coating for fasteners and wire.

We formulate and manufacture every product in this brochure ourselves, in Boksburg — the zinc-rich coatings, the finishes that go over them and the preparation products that go underneath. None of it is imported and relabelled.



HDGASA
APPROVED



UP TO 96%
ZINC IN DRY FILM



ELEVEN
ZINC SYSTEMS



MADE IN
BOKSBURG
SINCE 1997



THE PROBLEM

STEEL IS REVERTING BACK TO ORE

Corrosion is not damage. It is steel returning to the state it was mined in — and it will take your structure with it.

Iron ore is stable. Steel is not. Refining ore into steel pushes energy into the metal, and that energy wants out. Add water and oxygen, and the metal begins converting itself back — first to surface rust, then deeper, until the section is no longer carrying what it was designed to carry.

The mechanism is electrochemical, not weathering. Tiny anodes and cathodes form across the steel surface, current flows between them through any film of moisture, and the anodic areas dissolve. It needs almost nothing to start: humidity, a fingerprint of salt, condensation in a roof void.

This matters for two reasons. First, it explains why a coating that merely covers steel buys time rather than protection — break the film anywhere and the process starts underneath, spreading beneath the paint where nobody can see it. Second, it explains why zinc works: **if the current has somewhere else to go, the steel does not dissolve.**



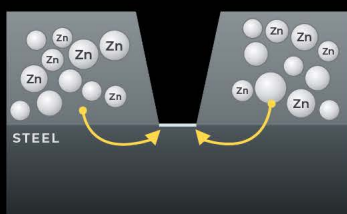
WHAT CORROSION ACTUALLY COSTS

- Unplanned shutdowns and the replacement of equipment that was not due for replacement
- Loss of efficiency as corrosion products foul heat transfer surfaces and restrict flow
- Product loss from vessels and pipework that corroded through
- Safety: sudden failure, collapse, escape of contained product
- Contamination of product by the corrosion products themselves
- Appearance — the first thing a client notices and the last thing anyone budgets for

ZINC DOES THREE JOBS AT ONCE

Hot-dip galvanizing has held its position for a century because it protects in three different ways at once. Our range is built around those same three mechanisms — and between them, the coatings in this brochure deliver all three. Which of them a given product brings is shown on its own page.

01 ACTIVE / GALVANIC

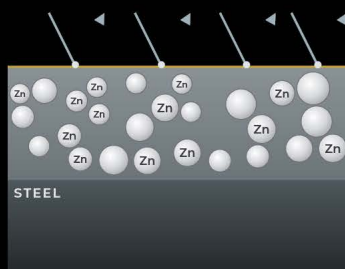


CURRENT FLOWS TO THE BARE STEEL

Put two dissimilar metals in contact with moisture between them and you have made a battery. The less noble metal corrodes in favour of the more noble one. Zinc is less noble than steel, so the zinc gives itself up and the steel does not corrode.

Protection continues across a scratch. Damage a barrier coating and the steel underneath starts corroding. Damage a zinc-rich coating and the surrounding zinc keeps protecting the exposed metal.

02 PASSIVE / BARRIER

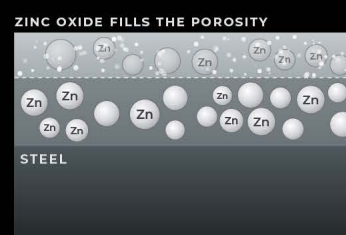


MOISTURE AND SALTS ARE TURNED AWAY

The film itself keeps moisture and corrosive agents off the steel. This is what every conventional paint does, and it works exactly as long as the film is intact.

In a zinc-rich coating you get it twice over: once from the binder holding the zinc, and again from the layer of zinc oxide and zinc salts that forms as the coating weathers.

03 SACRIFICIAL



THE SACRIFICIAL RATE SLOWS AS IT AGES

Zinc is naturally porous. As it oxidises, zinc oxide and zinc salts form and fill that porosity, building a dense, moisture-impervious layer.

This dramatically slows the rate at which the zinc consumes itself — the coating gets better at protecting itself as it ages.

AND THEN THERE IS A FOURTH THING - YOU CAN RECHARGE IT

A galvanized structure that has spent its zinc has one route back: strip it and re-dip it. A ZINCFIX® structure has another. Because the coating is single-pack and solvent-borne, a new coat chemically bonds with the layer already on the steel and forms one homogeneous film — a rejuvenated layer of active cathodic protection.

You are not painting over the old system. You are topping up the zinc that is doing the work. On a structure that cannot come out of service, that is the whole argument.

**"A BARRIER COATING PROTECTS UNTIL YOU BREAK IT.
A ZINC COATING PROTECTS BECAUSE YOU BROKE IT."**

THE COMPARISON

WHAT ZINC DOES THAT PAINT CANNOT

Three ways to protect steel, side by side. The column that matters is the one in the middle — and what a cold-applied zinc coating does is put most of that column into a tin.

	ZINCFIX® COLD GALV PRODUCTS	HOT-DIP GALVANIZING	CONVENTIONAL PAINT
Active / cathodic / galvanic protection	Yes	Yes	No
Passive / barrier protection	Yes	Yes	Yes
Inhibition / sacrificial protection	Yes	Yes	No
Protects across damage	Yes	Yes	No
Applied on site	Yes — brush, spray or aerosol	No — factory bath	Yes
Weldable	Yes, at 30–40 µm	No	Product dependent
Active corrosion inhibitor	Zinc — up to 96% of the dry film	Zinc	None
Pot life	Unlimited on the single-pack products	Not applicable	Product dependent
Shelf life	Unlimited at 25 °C on the single-pack products	Not applicable	Product dependent
Overcoatable	Yes — infinitely, each coat bonds to the last	Preparation dependent	Yes
Re-loadable in service	Yes — recharge with more ZINCFIX®	Only by re-dipping	Not applicable
BEST USED FOR	New work, repair and maintenance	New steel, factory applied	Appearance and barrier duty

Hot-dip galvanizing and conventional paint columns are general industry characteristics and vary by product and specification. The comparison is of protective mechanism, not of service life. Each product page states the mechanisms that coating brings.

WHAT THIS TABLE DOES NOT SAY

It does not say a liquid zinc coating replaces hot-dip galvanizing on new steel. Galvanizing puts down an iron-zinc alloy layer in a 450 °C bath and nothing in a tin reproduces that metallurgy. What a zinc-rich coating does is carry the same mechanisms to the places the bath cannot reach — site welds, cut ends, drill holes, erection damage, and steel too large, too fixed or too late to dip.

HOW TO READ A COATING SYSTEM

Five terms appear on every product page that follows. This is what they mean.

CLASS	ENVIRONMENT	SOUTH AFRICAN EXAMPLE
C2	Low	Dry inland sheds, heated warehouses
C3	Medium	Urban and light industrial, inland yards
C4	High	Industrial plant, chemical, near-coastal
C5-I	Very high, industrial	High humidity, aggressive atmosphere
C5-M	Very high, marine	Coastal Durban and Cape Town, salt air
Im2	Immersion	Salt water
Im3	Buried	Subterranean

Environment classification per **ISO 12944-2:2017**. It sets the minimum system, and it is the single most important number in any specification.

EXPECTED DURABILITY

Expected durability per **ISO 12944-1:2017** — the expected **time to first major maintenance**. It is not a warranty, and it is not the point at which the coating fails.

Low · up to 7 years	High · 15–25 years
Medium · 7–15 years	Very High · beyond 25 years

THEORETICAL COVERAGE

Volume Solids × 10 ÷ DFT (µm). Every coverage figure in this brochure is theoretical. Real coverage is always lower — allow for overspray, surface profile, geometry and wastage.

TOTAL SYSTEM DFT

Dry Film Thickness in microns (µm), the combined thickness once cured. A business card is roughly 300 µm. More microns generally means more protection, and always means more product, more time and more money. The right answer is the specified answer, not the highest one.

ZINC CONTENT IN THE DRY FILM

The percentage of the cured film that is metallic zinc. It drives how much galvanic protection the coating can deliver and for how long — and it is the number to ask any supplier for first, because it is the one that separates a coating that defends steel electrically from one that merely covers it.

The coatings here run from 96% down to none at all, and they do not all do the same job. **Every product page states its zinc content and the mechanisms it brings.**

SURFACE PREPARATION

GRADE	WHAT IT MEANS
SSPC-SP1	Solvent or detergent degrease. The first step on every system in this brochure.
Sa 2 / SSPC-SP6	Commercial blast. Most mill scale, rust and coatings removed.
Sa 2½ / SSPC-SP10	Abrasive blast to very-near-white metal. The grade specified for best performance throughout.
St 2 / St 3	Hand or power tool cleaning. St 3 leaves a visibly bright metallic sheen.
Surface profile	Peak-to-valley roughness the blast leaves behind. Thin films want a fine profile.

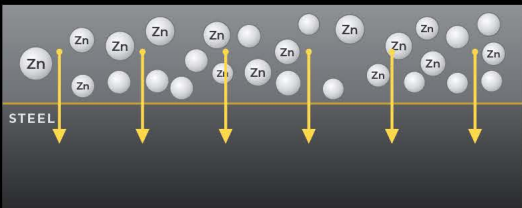
Ask us for the full data pack.

Technical and safety data sheets for every product here are available on request, or scan the QR code on the back cover.

THE ZINC MUST TOUCH THE METAL

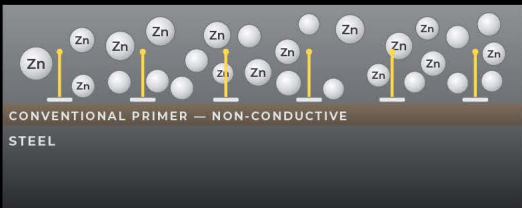
This is the one rule that separates a zinc coating from a paint, and the one most often broken on site — usually with the best intentions.

CORRECT — ZINC DIRECT TO METAL



CURRENT FLOWS. THE STEEL IS PROTECTED.

WRONG — ZINC OVER A PRIMER



THE CIRCUIT IS BROKEN. IT IS NOW A BARRIER PAINT.

Galvanic protection is an electrical circuit. Zinc protects steel because current can flow between them. Put anything non-conductive in between — a conventional primer, a holding coat, a layer of mill scale, an old paint film — and the circuit is broken. The zinc can no longer protect the steel. You have paid for a zinc-rich coating and installed an expensive grey barrier paint.

THREE SURFACES ALL COUNT AS METAL

The rule is not "bare steel only". These coatings go direct to **blast-cleaned steel**, direct to **hot-dip galvanizing**, and direct onto an **existing zinc-rich coating**. All three conduct, so the circuit stays intact in every case.

That last one is why a ZINCFIX® film can be topped up years later. A fresh coat bonds to the old one and restores the protection rather than merely covering it — so a structure that cannot come out of service can still be recharged in place.

PREPARATION — WHAT EACH GRADE BUYS YOU

GRADE	WHEN IT IS USED ON THIS RANGE
SSPC-SP1 solvent clean	Every system, every time. Contamination left on the surface is the most common cause of early failure
Sa 2½ / SSPC-SP10 near-white blast	The grade for best atmospheric performance on every product here. Profiles: 25–40 µm weldable shop primer, 30–50 µm flake coatings, 40–75 µm dust and epoxy primers
St 2 / SSPC-SP2 hand or power tool	Minimum acceptable on the ZINCFIX® one-pack range where blasting is impractical
St 3 / SSPC-SP3 power tool to bright	Weld seams and damaged areas ahead of the zinc-rich epoxies. Avoid polishing the surface
Mechanical abrasion	Galvanizing repair: 25 mm minimum radius around the defect, 180 grit or finer, using water as a lubricant

Sa 2½ is equivalent to SSPC-SP10. Sa 2 is equivalent to SSPC-SP6. The degreasers, cleaners and rust removers that go with these grades are on page 23.

CHOOSE YOUR COATING

Almost every zinc decision comes down to three questions. What are you protecting — new steel, damaged galvanizing, or a specified structure? Does it have to be welded afterwards? And does the specification name a corrosivity class?

	ZINC ® FIX® ORIGINAL EPOXY	ZINC ® FIX® ZINC DUST 90	ZINC ® FIX® ZINC DUST PAINT	ZINC ® FIX® ZINC-ALU AIR DRY	ZINC ® FIX® ZINC-ALU 60	ZINC ® FIX® ALUMINIUM FLAKE	EPOXY MULTI ZINC	EPOXY ZINC 6580	INORGANIC ZINC PRIMER	INORGANIC ZINC WELDABLE PRIMER	ZINC ® FIX® ZINCFLAKE 10
	FAMILY 01 · REPAIR & COLD GALVANIZING						FAMILY 02 · SPECIFIED STRUCTURAL		FAMILY 03 · SHOP & NEW CONSTRUCTION		
BINDER	2-pack solvent-free epoxy	1-pack organic	1-pack organic	1-pack organic	1-pack organic	1-pack organic	2-pack polyamide epoxy	2-pack polyamide epoxy	2-pack ethyl silicate	2-pack ethyl silicate	Inorganic silicate
ZINC IN DRY FILM	82%	96%	96%	>50% lamellar zinc & aluminium	>60% zinc / aluminium	None — aluminium flake	>84%	>70%	Zinc-rich silicate	67%	68.20%
PROTECTION	Barrier · sacrificial	Galvanic · barrier · sacrificial	Galvanic · barrier · sacrificial	Galvanic · barrier	Barrier · sacrificial	Barrier	Galvanic · barrier	Galvanic · barrier	Galvanic · barrier · sacrificial	Galvanic · barrier	Galvanic · barrier
VOLUME SOLIDS	100%	66%	57%	50%	45%	24%	70% ±2%	63% ±2%	60% ±2%	23% ±2%	60%
TYPICAL DFT PER COAT	100 µm	60-90 µm	50 µm	50 µm	50 µm	25 µm	60-150 µm	75-100 µm	60-100 µm	15-20 µm	8-15 µm
COVERAGE¹	10.0 m²/L @ 100 µm	11.0 m²/L @ 60 µm 7.33 m²/L @ 90 µm	11.40 m²/L @ 50 µm	10.0 m²/L @ 50 µm	9.0 m²/L @ 50 µm	9.6 m²/L @ 25 µm	7.0 m²/L @ 100 µm	8.40 m²/L @ 75 µm	6.0 m²/L @ 100 µm	11.3 m²/L @ 20 µm	4.0 m²/L @ 15 µm
TEMPERATURE	20 °C	150 °C cont. 200 °C intermittent	—	150 °C	65 °C	65 °C	120 °C	82 °C	400 °C un-topcoated	399 °C cont. 427 °C non-cont.	300 °C
APPROVALS	HDGASA approved 1000 h salt spray	SSPC-Paint 20 Type 2 Level 1	—	1000 h salt spray over an inorganic zinc primer	—	—	SSPC-Paint 20 Type II Level 2. ISO 12944-5 1440 h salt spray	—	—	—	SSPC-Paint 20 Type I Level 3 1000+ h ASTM B117
AEROSOL	—	AEROCOAT® Zinc 90	—	AEROCOAT® Zinc Flake	AEROCOAT® Zinc-Alu Galv	AEROCOAT® Aluminium Flake	—	—	—	—	400 ml aerosol
PACK SIZES	100 g squish pack	1, 2, 10, 30 kg · 400 ml	15 kg, 30 kg	1 L, 5 L · 400 ml	1 L, 5 L · 400 ml	1 L, 5 L · 400 ml	5 L, 20 L kits	5 L, 20 L	10 L	10 L	1, 5, 20 L · 400 ml
BEST FOR	Certified galvanizing repair, small areas	Repair and cold galvanizing, stand-alone or duplex	Production dipping and spraying of components	Thin-film protection with a bright metallic finish	Anti-corrosive finish that matches new galvanizing	Bright galvanizing appearance over a repair	Specified C4-C5 structural systems	Zinc priming under high-performance topcoats	New construction with very high heat resistance	Shop priming that survives welding	Fasteners, wire and small components

¹ Coverage figures are theoretical — allow for surface profile, overspray, geometry and wastage. Where a figure is not shown, ask our technical team. ZINC®FIX® Aluminium Flake contains no zinc and is a finishing topcoat; it goes over galvanizing or a zinc-rich repair, never direct to bare steel.



FAMILY 01

REPAIR & COLD GALVANIZING

01

WHERE THE GALVANIZING STOPS

Galvanized steel is only as good as its weakest link — and the weakest link is always the part that was cut, drilled or welded after the dip. Leave it, and the surrounding zinc starts consuming itself to protect the bare patch, spending coating life you already paid for.

Six products put the zinc back and finish the job. Four of them restore protection; two of them make the repair disappear. Between them they cover everything from a 100 g pack for a handful of bolt holes to a production line dipping components by the pallet.

6 PRODUCTS

UP TO 96% ZINC

HDGASA APPROVED OPTION

FOUR AVAILABLE IN AEROSOL

ZINCFIX® ORIGINAL EPOXY

SOLVENT-FREE ZINC-RICH EPOXY REPAIR PACK · 82% ZINC IN THE DRY FILM

 GALVANIC

 BARRIER

 SACRIFICIAL


HDGASA
APPROVED


1000 H SALT SPRAY
& HUMIDITY


100 G PACK
NO WASTE, NO MIXING ERROR


CURES
DOWN TO 0 °C

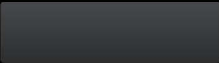
DESCRIPTION

The original ZINCFIX® repair coating, and still the one specifiers ask for by name. A two-pack, solvent-free, amine-cured zinc-rich epoxy carrying 82% zinc in the dry film, supplied in a 100 g squish pack — the two components are separated by a rubber strip inside the packet, so you mix the exact quantity by hand, use it, and throw the packet away. No decanting, no measuring error, no half-used tin going off in the back of the bakkie.

It is **approved by the Hot Dip Galvanizers Association of South Africa**, and it holds 1000 hours of salt spray and 1000 hours of humidity testing. At 100% volume solids every millilitre you mix ends up on the steel. It is highly surface tolerant, bonds hard to galvanizing and mild steel, resists white rust because the zinc is locked in an epoxy binder, and cures down to 0 °C — so a cold morning on site does not stop the job.

SYSTEM BUILD


ZINCFIX® Original Epoxy
100 µm · 100% volume solids · 10.0 m²/L


PREPARED STEEL OR GALVANIZING
SSPC-SP1 · Sa 2½ / SSPC-SP10, profile 40–50 µm, or mechanically abraded

TOTAL NOMINAL DRY FILM
100 µm

FOR COMPLETE BUILD-UPS SEE **FIVE SYSTEMS, BUILT AND SPECIFIED** ON PAGES 21–22

INTENDED USES

- Repair of hot-dip galvanizing that has been cut, welded, drilled or damaged
- Site touch-up of bolt holes, weld runs and erection damage
- Anti-corrosive primer on steel — rust prevention and repair of corroded sections
- Small, high-value repairs where a certified product is specified
- Can be left as a single coat, or overcoated with any conventional painting system

AT A GLANCE

Colour	Medium grey metallic
Volume solids	100%
Density	3.59 kg/L mixed
Drying at 25 °C	Touch 2 h · hard 6 h · full cure 7 days

HDGASA APPROVED

100% VOLUME SOLIDS

POT LIFE 15 MIN

Mixed material must be used within 15 minutes at 25 °C. This coating chalks on prolonged exterior exposure — where appearance matters, finish with ZINCFIX® Aluminium Flake or Zinc-Alu 60 on page 14.

ZINCFIX® ZINC DUST 90

ZINC-RICH COLD GALVANIZING COATING · 96% ZINC IN THE DRY FILM

-  GALVANIC
-  BARRIER
-  SACRIFICIAL
-  AEROSOL · AEROCOAT® ZINC 90



96% ZINC
IN THE DRY FILM



WELDABLE
SHOP PRIMER AT 30–40 µm



INFINITELY
RE-LOADABLE



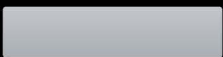
UNLIMITED
POT & SHELF LIFE

DESCRIPTION

The workhorse of the range. A one-pack, zinc-rich, organic-bound cold galvanizing coating carrying 96% zinc in the dry film — applied to clean steel or hot-dip galvanizing, it forms an adherent cold galvanic film that protects actively, as a barrier, and sacrificially. All three mechanisms of hot-dip galvanizing, out of a tin, with a brush.

Because it is single-pack there is nothing to mix and nothing to waste: pot life and shelf life are both unlimited, so an opened tin is still good next season. Each new coat chemically bonds with the layer beneath to form one homogeneous film, which means a structure can be recharged in service rather than stripped. It takes a wide range of topcoats, conforms to SSPC-Paint 20 Type 2 Level 1, and its zinc pigment meets ISO 3549 and ASTM D520. At 30–40 µm it doubles as a weldable shop primer — steel can be welded, then coated on site without re-blasting.

SYSTEM BUILD



ZINCFIX® ZincDust 90 — 2nd coat
60–90 µm · 66% volume solids



ZINCFIX® ZincDust 90 — 1st coat
60–90 µm · 11.0 m²/L at 60 µm



BLAST CLEANED STEEL OR GALVANIZING
SSPC-SP1 · Sa 2½ / SSPC-SP10, profile 40–75 µm

TOTAL NOMINAL DRY FILM

120–180 µm

STAND-ALONE, DUPLEX AND REPAIR BUILD-UPS FOR C4 AND C5 ARE SET OUT IN **FIVE SYSTEMS, BUILT AND SPECIFIED** ON PAGES 21–22

INTENDED USES

- Repair of cut, welded, drilled or damaged hot-dip galvanized steel
- Cold galvanizing of carbon steel, stand-alone or under a topcoat
- Weldable shop primer at 30–40 µm — no re-blasting before site coats
- Protective film on reinforcing bar, preventing corrosion and concrete spalling
- Recharging galvanized structures that cannot be taken out of service
- Touch-up primer over inorganic zinc primers

AT A GLANCE

Colour	Medium grey metallic
Volume solids	66%
Density	2.50 kg/L
Drying at 25 °C	Touch 20 min · hard 4 h · full cure 24 h
SSPC-PAINT 20 TYPE 2 LEVEL 1	
ISO 3549	
ASTM D520	

Service temperature 150 °C continuous, 200 °C intermittent. Thinner: Solvent XL. Packs: 1, 2, 10 and 30 kg, plus the 400 ml AEROCOAT® Zinc 90 aerosol for site repair.

ZINCFIX® ZINC DUST PAINT

MICRONIZED ZINC-RICH COATING FOR PRODUCTION LINES · 96% ZINC IN THE DRY FILM

 GALVANIC

 BARRIER

 SACRIFICIAL



96% ZINC
IN THE DRY FILM



DIP OR SPRAY
BUILT FOR VOLUME



11.40 M²/L
AT 50 MM



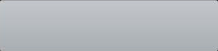
UNLIMITED
POT & SHELF LIFE

DESCRIPTION

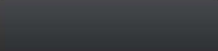
The production-line version of the cold galvanizing film. Same 96% zinc in the dry film, same three protective mechanisms — but formulated with micronized zinc so it sprays and dips cleanly through a line rather than being brushed onto a repair. Supplied in 15 kg and 30 kg packs sized for a dipping tank or a pressure pot instead of a toolbox.

It suits high throughput: touch dry in 20 minutes, hard dry in four hours and fully cured in a day, so components can be handled the same shift and stacked the next. The cured film is tough — good impact resistance, good flexibility and high adhesion on mild steel and cast iron — and finishes as a smooth, dull grey zinc surface. Being single-pack, there is no mixing station, no pot life to watch and no wasted material at the end of a run.

SYSTEM BUILD



ZINCFIX® Zinc Dust Paint
50 µm · 57% volume solids · 11.40 m²/L



PREPARED MILD STEEL OR CAST IRON
SSPC-SP1 · Sa 2½ / SSPC-SP10, profile 40–75 µm

TOTAL NOMINAL DRY FILM

50 µM PER COAT

FOR COMPLETE BUILD-UPS SEE **FIVE SYSTEMS, BUILT AND SPECIFIED** ON PAGES 21–22

INTENDED USES

- Production coating of components, castings and fabricated items by dip or spray
- Mild steel and cast iron
- In-house priming lines where throughput matters more than pack size
- Batch work that has to be handled the same shift
- Anywhere a cold galvanic film is wanted at volume

AT A GLANCE

Colour	Medium grey metallic
Volume solids	57%
Density	3.10 kg/L
Drying at 25 °C	Touch 20 min · hard 4 h · full cure 24 h

96% ZINC

3.67 M²/KG AT 50 MM

15 & 30 KG PACKS

Applied by airless or air-atomizing spray, or by dipping. Thinner: ZincFix Thinner. For brush-applied site repair on the same chemistry, use ZINCFIX® ZincDust 90 on page 11.

ZINCFIX® ZINCFLAKE ZINC-ALU AIR DRY

LAMELLAR ZINC & ALUMINIUM CATHODIC PRIMER · MORE THAN 50% ZINC & ALUMINIUM

 GALVANIC

 BARRIER

 AEROSOL · AEROCOAT® ZINC FLAKE


LAMELLAR ZINC
& ALUMINIUM FLAKE


FULL PROTECTION
AT ONLY 50 µM


1000 H
SALT SPRAY SYSTEM

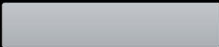

SPOT WELDABLE
& HYDROPHOBIC

DESCRIPTION

Where the other cold galvanizing coatings use spherical zinc dust, this one uses flakes. Plate-shaped zinc and aluminium particles present a far greater surface area and overlap like roof tiles as the film dries — so a lower zinc loading and a much thinner film deliver protection equivalent to far heavier conventional coatings. One coat at 50 µm does the work.

You get cathodic protection from the metal-to-metal contact and an exceptional barrier from the overlapping flakes, in a bright metallic film that stays flexible. It is hydrophobic and weather resistant, resists mild chemicals and solvents including petrol and brake fluid, has low porosity and permeability, and is spot weldable. It bonds well to abraded steel and galvanizing, takes acrylic, epoxy, polyurethane and vinyl topcoats, and can even be applied over rusty surfaces where blasting is not possible.

SYSTEM BUILD


ZINCFIX® ZincFlake Zinc-Alu Air Dry
50 µm · 50% volume solids · 10.0 m²/L


PREPARED STEEL OR GALVANIZING
SSPC-SP1 · Sa 2½ / SSPC-SP10, profile 30–50 µm

TOTAL NOMINAL DRY FILM **50 µM**

FOR COMPLETE BUILD-UPS SEE **FIVE SYSTEMS, BUILT AND SPECIFIED** ON PAGES 21–22

INTENDED USES

- Repair of damaged galvanizing where a thin, bright film is wanted
- Structural steel, machinery, equipment and weld seams
- Heavy-duty repair work, offshore and marine environments
- Touch-up primer over inorganic zinc primers
- Surfaces that cannot be fully blast cleaned — it will go over sound rust

AT A GLANCE

Colour	Zinc, brilliant
Volume solids	50%
Density	1.1 kg/L
Drying at 25 °C	Touch 20 min · hard 4 h · full cure 24 h

1000 H SALT SPRAY — SYSTEM

150 °C

SPOT WELDABLE

The 1000-hour salt spray result is for the flake coating applied over an inorganic zinc primer — it belongs to that system rather than to the flake coating on its own.

ZINCFIX® ZINC-ALU 60

ZINC & ALUMINIUM RICH PRIMER / TOPCOAT · MORE THAN 60% ZINC & ALUMINIUM

-  GALVANIC
-  BARRIER
-  SACRIFICIAL
-  AEROSOL · AEROCOAT® ZINC-ALU GALV



BLEND
S WITH
NEW GALVANIZING



UV & WEATHER
RESISTANT



TOUCH DRY
10 MINUTES

A one-pack zinc and aluminium rich primer and topcoat carrying more than 60% zinc and aluminium in the dry film. Its bright grey metallic colour blends with newly galvanized steel, which makes it the product to reach for when the repair has to vanish — touching in blemishes, finishing a ZINCFIX® repair, or coating galvanized work where appearance forms part of the specification. It is weather resistant and UV stable, bonds well to abraded steel and galvanizing, and stops rust creeping out from areas of damage.

Colour	Bright grey metallic
Volume solids	45%
Density	1.25 kg/L
Drying at 25 °C	Touch 10 min · hard 2 h · cure 24 h





ZINCFIX® Zinc-Alu 60

50 µm · 9.0 m²/L · 1-2 coats

STEEL OR GALVANIZING

profile 30-50 µm

TOTAL DRY FILM 50 µM

- Anti-corrosive primer on galvanized steel before a topcoat
- Anti-corrosive topcoat direct over galvanizing
- Gates, trailers, farm implements, light structural work

ZINCFIX® ALUMINIUM FLAKE

ALUMINIUM FLAKE BARRIER TOPCOAT · BRIGHT GALVANIZED FINISH

-  GALVANIC
-  BARRIER
-  SACRIFICIAL
-  AEROSOL · AEROCOAT® ALUMINIUM FLAKE



MATCHES BRIGHT
NEW GALVANIZING



UV & WEATHER
RESISTANT



TOUCH DRY
10 MINUTES

The finishing coat. A one-pack aluminium flake barrier coating with a high aluminium loading, giving a shiny, bright metallic finish that matches new galvanizing more closely than any zinc film can. It is what you put over a ZINCFIX® repair when the client is going to look at it — and it adds a further barrier layer while it is there. UV and weather resistant, it also finishes grills, exhausts, machinery and ducting.

Colour	Shiny bright grey metallic
Volume solids	24%
Density	0.93 kg/L
Drying at 25 °C	Touch 10 min · hard 2 h · cure 24 h







ZINCFIX® Aluminium Flake

25 µm · 9.6 m²/L · two coats

GALVANIZING OR ZINC-RICH REPAIR

Original Epoxy · ZincDust 90 · ZincFlake

STEEL

TOPCOAT DRY FILM 25 µM

A FINISH, NOT A PRIMER

Aluminium Flake contains **no zinc**. It protects by barrier action only and must go over galvanizing, a zinc-rich repair or a primer — **never direct to bare steel**. Where cathodic protection is required, the zinc coat goes on first.

FAMILY 02

SPECIFIED STRUCTURAL PROTECTION

02

WHEN THE ORDER NAMES A CLASS

Once a specification names a corrosivity class and a durability period, the coating stops being a finish and becomes a deliverable. Film build is measured. Zinc content is checked. Surface preparation is inspected and signed for. The paperwork matters as much as the paint.

Both products here are two-pack, polyamide-cured, zinc-rich epoxy primers. The zinc sits at the steel and does the electrochemical work; the epoxy binder holds it there through impact, abrasion and a long truck ride to site.

2 PRODUCTS

C4 + C5

SSPC-PAINT 20 TYPE II

1,440 H SALT SPRAY

EPOXY MULTI ZINC

TWO-PACK ZINC-RICH EPOXY PRIMER · MORE THAN 84% ZINC IN THE DRY FILM

 GALVANIC

 BARRIER

 SACRIFICIAL

 MORE THAN 84% ZINC IN THE DRY FILM

 SSPC-PAINT 20 TYPE II LEVEL 2

 1,440 HOURS SALT SPRAY

 3-MONTH OVERCOATING WINDOW

DESCRIPTION

The primer to reach for when the specification is contractual. A two-component, high-build, polyamide-cured zinc-rich epoxy carrying more than 84% zinc in the dry film, built for aggressive service — offshore structures, petrochemical plant, pulp and paper, bridges and power stations. It complies with SSPC-Paint 20 Type II Level 2 and ISO 12944-5, and as part of an approved system it holds 1,440 hours of salt spray, 720 hours of controlled condensation and 1,000 hours of accelerated weathering.

What makes it practical as well as compliant is the handling. It dries fast, takes knocks, and tolerates a three-month gap before the next coat — so steel can be primed in the shop, trucked, erected and finished on site without re-blasting. It bonds to steel, cast iron, galvanizing, aluminium, stainless and GRP, and sits happily under high-solids epoxies and polyurethanes.

SYSTEM BUILD



Epoxy Multi Zinc
60–150 µm · 70% ±2% volume solids · 7.0 m²/L at 100 µm



BLAST CLEANED STEEL · DEGREASED
SSPC-SP1 · Sa 2½ / SSPC-SP10, profile 40–75 µm

PRIMER DRY FILM

60–150 µm

THIS PRIMER CARRIES THE THREE-COAT C4–C5 BUILD — SEE SYSTEM **ZN-04** ON PAGE 22

INTENDED USES

- Offshore structures, petrochemical facilities, pulp and paper plants
- Bridges, power plants and coastal infrastructure
- New construction and industrial maintenance priming
- Factory priming with site completion — fast handling, long overcoat window
- Under high-solids epoxy and polyurethane systems
- Steel that has to survive transport before it is finished

AT A GLANCE

Colour	Greenish grey, matt
Volume solids	70% ±2%
Density	2.82 kg/L mixed
Drying at 20 °C	Touch 2.5 h · hard 3 h · full cure 7 days

SSPC-PAINT 20 TYPE II LEVEL 2

ISO 12944-5

1,440 H SALT SPRAY

1,000 H QUV

Mixed 4 : 1 by volume with Epoxy Activator Multi Zinc. Pot life 5 h at 25 °C. Overcoat from 4 h at 20 °C, maximum three months provided the surface is clean and free of zinc salts. Kits of 5 L and 20 L.

EPOXY ZINC 6580

TWO-PACK ZINC-RICH EPOXY PRIMER · MORE THAN 70% ZINC IN THE DRY FILM

 GALVANIC

 BARRIER

 SACRIFICIAL



MORE THAN 70%
ZINC IN THE DRY FILM



OVERCOAT
FROM 6 HOURS



BRUSH, ROLLER
OR SPRAY



BRIDGES INORGANIC
ZINC TO THE TOPCOAT

DESCRIPTION

A two-component, solvent-based zinc-rich polyamide-epoxy primer with more than 70% zinc in the dry film, made for structural steel in salt and weathering environments. It is easy to apply by brush, roller or spray, cures to a hard, tough film, and is ready to overcoat in six hours — which keeps a multi-coat programme moving instead of waiting overnight between layers.

It has a second job worth knowing about. It is an excellent intermediate coat and touch-up primer over inorganic zinc silicate primers, including Inorganic Zinc Primer on page 19 — so it is the bridge between a shop-primed structure and its finished system, and the product that repairs the shop primer where welding or handling has taken it off. Widely used in pulp, paper, chemical and petrochemical plant.

SYSTEM BUILD



Epoxy Zinc 6580
75–100 µm · 63% ±2% volume solids · 8.40 m²/L at 75 µm



BLAST CLEANED STEEL · DEGREASED
SSPC-SP1 · Sa 2½ / SSPC-SP10, profile 40–75 µm

PRIMER DRY FILM

75–100 µm

USED AS THE SHOP-PRIMER REPAIR COAT IN SYSTEM **ZN-05** ON PAGE 22

INTENDED USES

- Structural steel in salt and weathering environments
- Pulp, paper, chemical and petrochemical plant
- Intermediate coat over inorganic zinc silicate primers
- Touch-up of shop primer damaged by welding or handling
- Under a wide range of high-performance topcoats

AT A GLANCE

Colour	Pink, matt
Volume solids	63% ±2%
Density	2.12 kg/L mixed
Drying at 20 °C	Touch 30 min · hard 16 h · full cure 7 days

GOOD TO KNOW

The cured surface turns mildly alkaline with age, so it is not a base for alkyd or oil-based topcoats. Keep it within pH 6–8 service, and speak to us before specifying it underwater.

>70% ZINC

OVERCOAT FROM 6 H

5 & 20 L

Mixed 4 : 1 by volume with Epoxy Activator Zinc 6580. Pot life 6 h at 25 °C. Minimum 40 µm dry film for anti-corrosive performance. Service temperature 82 °C.



FAMILY 03

SHOP & NEW CONSTRUCTION

03

PROTECTION THAT SURVIVES FABRICATION

Steel spends months between the blast booth and its final coat — welded, handled, stacked outside, trucked across the country. These three inorganic zinc silicates are built for that period. They cure by reaction with atmospheric moisture into a hard silicate-zinc matrix that protects the way galvanizing does, tolerates temperatures no organic coating survives, and is hard enough that handling scratches keep being protected by the zinc around them.

3 PRODUCTS

UP TO 400 °C

WELDABLE OPTION

TOUCH DRY IN 4 MINUTES

INORGANIC ZINC PRIMER

ETHYL SILICATE ZINC-RICH PRECONSTRUCTION PRIMER

-  GALVANIC
-  BARRIER
-  SACRIFICIAL


400 °C
UN-TOPCOATED


TOUCH DRY
15 MINUTES


SCRATCHES STAY
PROTECTED

A two-component ethyl silicate zinc-rich preconstruction primer that cures by reaction with atmospheric moisture into a dense silicate-zinc matrix — protecting steel in much the same way galvanizing does. Built for offshore and onshore high-performance systems: production platforms, refineries, bridges, tanks, pipework and structural steelwork. It is the heat specialist of this brochure, holding 400 °C continuously when left un-topcoated, and its impact and abrasion resistance means handling damage keeps being protected by the zinc around it.

Colour	Greenish grey, matt
Volume solids	60% ±2% mixed
Density	2.30 kg/L
Drying at 25 °C	Touch 15 min · hard 1 h




Inorganic Zinc Primer
60–100 µm · 6.0 m²/L at 100 µm · one coat
BLAST CLEANED STEEL
Sa 2½ / SSPC-SP10, profile 40–75 µm

PRIMER DRY FILM
60–100 µm

- Long-term protection of steel before field topcoating
- Refineries, platforms, bridges, tanks and pipework
- High-temperature service where organic coatings cannot go

Maximum 125 µm dry film — heavier builds mud-crack. Restrict to 50 µm for high-temperature service. Not for acid, alkaline or immersion service un-topcoated.

INORGANIC ZINC WELDABLE PRIMER

ETHYL SILICATE WELDABLE SHOP PRIMER · 67% ZINC IN THE DRY FILM

-  GALVANIC
-  BARRIER
-  SACRIFICIAL

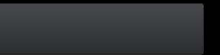

WELDABLE
LOW FUME RELEASE


TOUCH DRY
4 MINUTES


399 °C
CONTINUOUS

A thin-film preconstruction primer for steel that is going to be welded. Applied at just 13–20 µm, it carries 67% zinc in the dry film and is touch dry in four minutes at 25 °C — so a plate can be primed and moved almost immediately, and a fabrication shop can prime a day's steel without creating a bottleneck. It welds with low fume release, resists impact and abrasion through handling, and is compatible with many primers and topcoats without a second blast.

Colour	Pink, matt
Volume solids	23% ±2% mixed
Density	1.55 kg/L
Drying at 25 °C	Touch 4 min · hard 7 min

Inorganic Zinc Weldable Primer
13–20 µm · 11.3 m²/L at 20 µm
BLAST CLEANED STEEL
Sa 2½ / SSPC-SP10, sharp angular profile 25–40 µm

SHOP PRIMER DRY FILM
13–20 µm

- Marine vessels and offshore structures during construction
- Steel that must be welded after priming
- Immersion service as part of an approved system

SEE SYSTEM **ZN-05** ON PAGE 22 FOR THE SHOP-PRIMER-TO-FINISHED-SYSTEM ROUTE

ZINCFIX® ZINCFLAKE IG COATING

INORGANIC ZINC FLAKE COATING FOR FASTENERS, COMPONENTS & WIRE · 68.20% ZINC

 GALVANIC

 BARRIER

 SACRIFICIAL

 AEROSOL · 400 ML



NO HYDROGEN
EMBRIITLEMENT



1000+ HOURS
ASTM B117



300 °C
CONTINUOUS



EVEN COVER ON
THREADS & COMPLEX SHAPES

DESCRIPTION

A high-performance inorganic zinc flake coating for steel fasteners, components and wire — zinc and aluminium flakes suspended in an inorganic silicate binder. Because it is applied non-electrolytically there is **no hydrogen embrittlement risk**, which is precisely why it exists: high-strength bolts can be protected without the danger that electroplating brings.

It goes on at 8–15 µm per coat and covers threads and complex geometry evenly, so bolts still turn and still torque correctly. It holds more than 1000 hours of salt spray to ASTM B117, conducts electricity at 10–50 milli-ohms contact resistance, withstands 300 °C continuously, and is chromium-free and RoHS compliant. It can be dipped, dip-spun, sprayed or aerosol applied, and cured at ambient or force cured in minutes for fast throughput.

SYSTEM BUILD



ZINCFIX® ZincFlake IG — 2nd coat
8–15 µm · 40 m²/L at 15 µm

ZINCFIX® ZincFlake IG — 1st coat
8–15 µm · 60% volume solids

DEGREASED FASTENER OR COMPONENT
Fine glass-bead blast, profile 15–25 µm, or zinc phosphate conversion

MAXIMUM DRY FILM

30 µM

FASTENER AND COMPONENT FINISHING — FOR STRUCTURAL SYSTEMS SEE PAGES 21–22

INTENDED USES

- High-strength fasteners where electroplating is not acceptable
- Structural bolts, anchors and connection hardware
- Automotive and aerospace fasteners, chassis and brake hardware
- Grounding hardware and EMI shielding, where conductivity is required
- Electrical conductors and pre-galvanized wire
- Fasteners for chemical processing, marine and offshore service

AT A GLANCE

Colour	Zinc, brilliant
Volume solids	60%
Density	1.92 kg/L
Drying at 25 °C	Touch 20 min · hard 4 h · full cure 24 h

SSPC-PAINT 20 TYPE I LEVEL 3

1000+ H ASTM B117

CHROMIUM-FREE · ROHS

Cure options: ambient 24 h at 25 °C, accelerated 20–40 min at 60–80 °C, or full force cure 20–30 min at 150 °C — each after a 15–30 minute flash-off at ambient temperature.

FIVE SYSTEMS, BUILT AND SPECIFIED

Five builds that cover most of what zinc is asked to do. Bring us anything these do not cover and we will write the specification for you.

ZN-01 GALVANIZING REPAIR

Cut ends, drill holes, site welds and erection damage on hot-dip galvanized steel

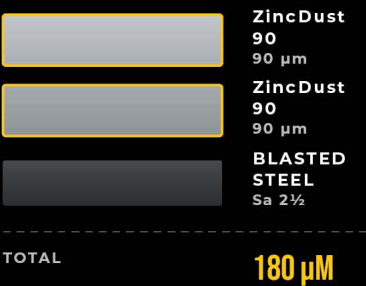
Preparation	SSPC-SP1 · abrade 25 mm minimum radius around the defect, 180 grit or finer, wet
C4-High · C5-M/I-Medium	ZINCFIX® ZincDust 90, 2 × 60 µm
C5-M/I-High	ZINCFIX® ZincDust 90, 2 × 90 µm
Small repairs	ZINCFIX® Original Epoxy, 1 × 100 µm — HDGASA approved
Finish, optional	ZINCFIX® Aluminium Flake or Zinc-Alu 60 to match new galvanizing
TOTAL DFT	120 µm or 180 µm



ZN-02 COLD GALVANIZING, STAND-ALONE

Carbon steel that cannot be dipped — too large, too fixed, or already erected

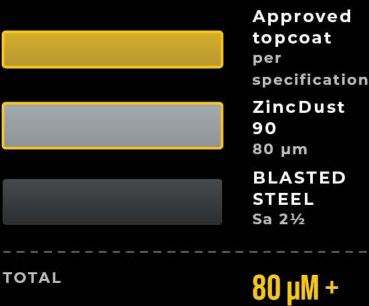
Preparation	SSPC-SP1 · Sa 2½ / SSPC-SP10, blast profile 40–75 µm
C4-High · C5-M/I-Medium	2 × 60 µm
C5-M/I-High	2 × 90 µm
In service	Re-loadable — a further coat bonds chemically and restores active protection
TOTAL DFT	120–180 µm



ZN-03 DUPLEX — ZINC PLUS TOPCOAT

Where colour, UV stability or chemical exposure is also required

Preparation	SSPC-SP1 · Sa 2½ / SSPC-SP10, blast profile 40–75 µm
Coat 1	ZINCFIX® ZincDust 90, 1 × 80 µm, preferably sprayed
Coat 2	Approved duplex topcoat
Overcoating	From 4 h at 25 °C with ZINCFIX®; 24 h before other topcoats, then light abrasion
TOTAL DFT	80 µm + topcoat



ZN-04 SPECIFIED THREE-COAT STRUCTURAL SYSTEM

Coastal and heavy industrial structures where the order names C4 or C5

Substrate	SSPC-SP1 · Sa 2½ / SSPC-SP10, profile 40–75 µm
1 · Epoxy Multi Zinc	Zinc-rich primer · 75 µm · 70% ±2% volume solids
2 · Epoxy Multi MIO HB	Micaceous iron oxide intermediate · 125 µm
3 · PU 55 HB Topcoat	Aliphatic polyurethane · 50 µm
Environment · durability	C4–C5 · C4 High, 15–25 years · C5 Medium–High
TOTAL NOMINAL DRY FILM	250 µm



PU 55 HB
Topcoat
50 µm



Epoxy Multi
MIO HB
125 µm



Epoxy Multi
Zinc
75 µm



BLASTED
STEEL
Sa 2½ · 40–
75 µm

TOTAL NOMINAL DRY
FILM

250 µm

ZN-05 SHOP PRIMER TO FINISHED SYSTEM

New fabrication that has to be welded after priming

Preparation	SSPC-SP1 · Sa 2½ / SSPC-SP10, sharp angular profile 25–40 µm. Apply before oxidation occurs
Shop coat	Inorganic Zinc Weldable Primer, 13–20 µm — weldable, low fume release
Fabrication	Weld, handle and transport. Recoat within 7 days, or abrade before recoating
Weld seams and damage	Blast to Sa 2½ / SSPC-SP10 and touch up with Epoxy Zinc 6580 or ZINCFIX® ZincDust 90
Site system	Epoxy Multi Zinc or Epoxy Zinc 6580, then the specified intermediate and topcoat



Site system
per
specification



IZ
Weldable
Primer
13–20 µm



BLASTED
STEEL
Sa 2½ · 25–
40 µm

TOTAL

PER SPEC

WHAT WE NEED FROM YOU TO SPECIFY IT

- The substrate — bare steel, galvanized, previously coated
 - The service environment, or the ISO 12944 class if the client has named one
 - Whether it will be welded after coating
- The required durability period
 - Any client or consultant specification already issued
 - Line speed and handling constraints, if it is production work

Corrosivity classes and expected durability per ISO 12944. Durability is the expected time to first major maintenance — not a warranty, and not the point at which the coating fails.

IT STARTS WITH THE STEEL

Coating performance starts below the coating. We formulate and manufacture the preparation products too — degreasers, cleaners, rust removers and holding primers — so what goes on the steel and what goes under it come from the same factory.

HYDROSOLVE DEGREASER

Water-based degreaser that lifts oil, grease, cutting fluid and release agent off steel before any preparation begins. Contamination left on the surface is the most common cause of early coating failure — this is the step that removes it.

GALVANIZED IRON CLEANER

Purpose-made cleaner for new and weathered galvanizing. Strips zinc salts, white rust and mill passivation oils, leaving a clean, lightly keyed surface that coatings can grip.

RUST REMOVER GEL

Thickened gel that clings to vertical and overhead steel instead of running off. Removes light surface rust and flash rust where blasting is impractical — inside cabinets, around fittings, on assembled equipment.

PH NEUTRALIZER

Follows any acid cleaning or rust removal step. Neutralises residual acid and rinses clean, so nothing is left under the coating to attack the film from below.

EPOXY HOLDING PRIMER

Thin epoxy applied straight off the blast to hold the profile through fabrication, storage and transport. Keeps blasted steel workable for weeks instead of hours, and takes the specified system over the top without re-blasting.

SPECIFIED, SUPPORTED, SIGNED OFF

Choosing the system is the beginning. Everything below is included — there is no consulting fee.

01 • SYSTEM SPECIFICATION

Bring us the substrate, the service environment, the throughput target and any client specification. We return a written coating specification referenced to ISO 12944 — surface preparation grade, layer build, DFT, overcoating windows and durability class, on SCS letterhead, suitable for submission to your customer's engineer.

02 • TECHNICAL DATA & DOCUMENTATION

Full technical and safety data packs for every product in the system. Batch certification, salt spray and certification records where the product carries them.

03 • ON-SITE AND ONLINE SUPPORT

A technical representative on your floor for first application, applicator training, and film thickness and adhesion verification. Zinc coatings are unforgiving of thin films and contaminated steel — the first day is the one that matters.

04 • MANUFACTURED, NOT IMPORTED

Every coating in this brochure is formulated and produced in our own factory in Boksburg, alongside the degreasers, cleaners and holding primers that prepare the steel for it. Consistent batches, local stock, and technical people who can answer for what is in the tin.

Ask about a site or line audit.

We will look at your blast setup, your pump and your throughput before recommending a system — the best coating on the wrong equipment is still a rework.



INDUSTRIAL & PROTECTIVE COATINGS

ZINC PROTECTION COATINGS

GALVANIC · BARRIER · SACRIFICIAL · SPECIFIED



SCAN FOR MORE
INFORMATION

GET IN TOUCH

NATIONAL CALL CENTRE
086 137 2468

INTERNATIONAL TO SOUTH AFRICA
+27 11 552 0300

EMAIL
enquiries@speccoats.co.za

WEBSITE
www.speccoats.co.za

DIVERSITY

Twelve product categories.

SIMPLICITY

Straightforward systems.

MOBILITY

Custom batches, fast turnaround.


SPECIALIZED
COATING SYSTEMS

SPECIALIZED COATING SYSTEMS (PTY) LTD ·
PROUDLY MANUFACTURED IN SOUTH AFRICA

ISO 9001 · ISO 14001

NOTICE: The information in this document has been drawn up in good faith with the intention of providing information based on current knowledge, and may be subject to change without notice. The purchaser should verify the use of the products or services and is responsible for contacting our technical staff who can provide guidelines for specific or special applications not presented in this document. Specialized Coating Systems (Pty) Ltd assumes no obligation or liability for the information in this document.

All products shall be applied according to the instructions and within the application parameters given on the Speccoats™ Technical Data Sheet for each product — the Technical Data Sheet governs in any conflict. Expected durability is the time to first major maintenance per ISO 12944-1:2017 and is not a guarantee. Consult the current Safety Data Sheet for each product before handling, mixing or application.