

SEVERE-SERVICE & INFRASTRUCTURE PROTECTION

Six coating systems for where coatings normally fail.
Formulated and made in South Africa.

SEVERE SERVICE

& INFRASTRUCTURE PROTECTION

CHEMICAL · HEAT · ABRASION · IMMERSION


SPECIALIZED
COATING SYSTEMS



THE COATING IS THE WEAR PART

In a mill, a chute, an acid tank or a buried line, the coating is not a finish. It is the component taking the damage — the layer standing between your steel and whatever is trying to remove it.

That changes the economics entirely. An atmospheric coating that fails gets repainted at the next shutdown. A severe-service lining that fails takes the vessel out of service, and the cost is counted in production hours, not litres of paint.

It also changes what the specification has to survive. Not the average day — the worst one. The upset condition, the acid spill, the oversize rock through the chute, the season the water table rises.

Specialized Coating Systems has manufactured protective coatings in Johannesburg since 1997. We formulate and produce every system in this brochure ourselves — the novolac, the pure polyurea, the ceramic-filled paste, the asphalt mastic. Each is a fully specified system: layer build, film thickness, surface preparation grade and overcoating windows, documented and referenced to ISO 12944

Six systems, four failure modes. Pages 5 to 14 set out the systems. Pages 15 to 17 set out the surface preparation, the colour constraints, the application plant and the technical support that go with them.

1997

FOUNDED IN
JOHANNESBURG

6

SEVERE - SERVICE
SYSTEMS

4

FAMILY
MODES

**SPECIFIED FOR THE WORST DAY
NOT THE AVERAGE ONE.**

WHAT IS DESTROYING YOUR STEEL?

Severe service is not one problem. Work out which of the four is destroying your asset and the choice narrows from six systems to one or two.

01 CHEMICAL ATTACK

The process fluid is the enemy. Mineral acid, caustic, solvent, effluent, or hot water that never cools. Ordinary epoxy softens, blisters and lets go at the steel. What you need is cross-link density — a polymer network tight enough that the chemical cannot get through it — and a film thick enough to have no weak point.

» **CHEMICAL ATTACK · PAGES 5 - 6**

02 ABRASION & EROSION

Something solid is moving against the steel and taking it with it. There are two entirely different answers and choosing the wrong one is expensive. Where the damage is impact and sliding — rock through a chute, ore into a bin — you want a thick elastomer that absorbs the energy. Where it is fluid-borne erosion — slurry through a pump, water across an impeller — you want a hard, slick, ceramic-filled surface that the flow cannot cut, and that can rebuild the metal already lost.

» **ABRASION & EROSION · PAGES 7 - 9**

03 BURIED & IMMERSED

The asset is under soil or under water and you are not going back to it. No inspection, no touch-up, no second coat in five years. The coating has to be a continuous barrier from the day it goes in, applied at a film build that assumes nobody will ever look at it again.

» **BURIED & IMMERSED · PAGES 10 - 11**

04 MAINTENANCE & SAFETY

The steel is already up, already rusted, and the plant is still running. You cannot blast it, you cannot strip it, and you cannot have it down for a week. This is the largest category of coating work in South African industry and the least well served — because most high-performance systems assume a blasted substrate and a shutdown window you do not have.

» **MAINTENANCE & SAFETY · PAGES 12 - 14**

AND HEAT?

Heat is not a fifth family — it is a limit that runs through all four. Three of these six systems carry a stated service temperature: **water immersion to 120 °C**, **thermal stability to 150 °C**, and **wet immersion to 65 °C**. Those numbers sit in the selector matrix overleaf and in each system's At a Glance panel. Tell us the operating temperature and the excursion temperature separately — they are rarely the same number, and it is the excursion that fails the lining.

NOT SURE? TURN THE PAGE

HOW TO READ A COATING SYSTEM

Six terms appear on every system page that follows. This is what they mean — and one honest note about where the standard stops.

ENVIRONMENT - ISO 12944-2:2017

How aggressive the service condition is. It sets the minimum system, and it is the single most important line in any specification. Atmospheric exposure is classified C1 to CX; permanent wet service is classified Im1 to Im3. This book lives almost entirely in the second group.

CLASS	ENVIRONMENT	MINING & INFRASTRUCTURE EXAMPLES
C3	Medium	Inland plant interiors, workshops, covered walkways
C4	High	Mineral processing plant, mill floors, near-coastal steel
C5	Very High	Coastal, permanent condensation, acid fume zones
CX	Extreme	Offshore, tropical, sustained aggressive chemical exposure
Im1	Fresh Water Immersion	Process water, thickeners, raw and potable water tanks
Im2	Sea or Brackish Immersion	Coastal intakes, harbour steel, pilings
Im3	Soil - Buried	Buried pipelines, underground tanks, foundation steel

EXPECTED DURABILITY

ISO 12944 classifies corrosivity. It does not classify abrasion, impact, erosion or chemical concentration — there is no "A5 abrasion" category to specify against. So for three of the six systems in this book the corrosivity class tells you only part of the story, and the rest has to be specified in plain engineering terms: what is moving, how fast, how big, at what temperature, and how often. Bring us those five numbers and the specification writes itself.

TOTAL SYSTEM DFT

Dry Film Thickness in microns (μm) — the combined thickness of the coating once cured. A business card is roughly 300 μm . The systems in this book run from **155 μm to 1,575 μm** , a tenfold spread, and that spread is the whole argument: film build is what buys you abrasion life and barrier integrity. More microns always means more product, more time and more money. The right answer is the specified answer, not the highest one.

EXPECTED DURABILITY

Per ISO 12944-1:2017, the expected **time to first major maintenance** — not a warranty, and not the point at which the coating fails. Low is up to 7 years, Medium 7–15, High 15–25, Very High beyond 25.

SURFACE PREPARATION GRADE

What has to happen to the steel before the first coat. Get this wrong and nothing above it matters.

GRADE	WHAT IT MEANS
SSPC-SP1	Solvent or detergent degrease. The first step on every system in this brochure.
Sa 2½ / SSPC-SP10	Abrasive blast to very-near-white metal. The grade every system in this brochure is specified to.
Surface profile	The peak-to-valley roughness the blast leaves behind, in microns. Thin films want a fine profile, heavy films want a coarse one.

VOLUME SOLIDS & THEORETICAL YIELD

Volume Solids is the percentage of the wet product that stays on the steel once solvent has left. Four of these six are 100% or 90% volume solids — at those figures wet film and dry film are effectively the same number, which is exactly why they can be built thick in one pass. Theoretical Yield (m^2/L) is Volume Solids $\times 10 \div \text{DFT}$. Real yield is always lower; allow for overspray, profile, geometry and wastage. Every yield figure here is theoretical.

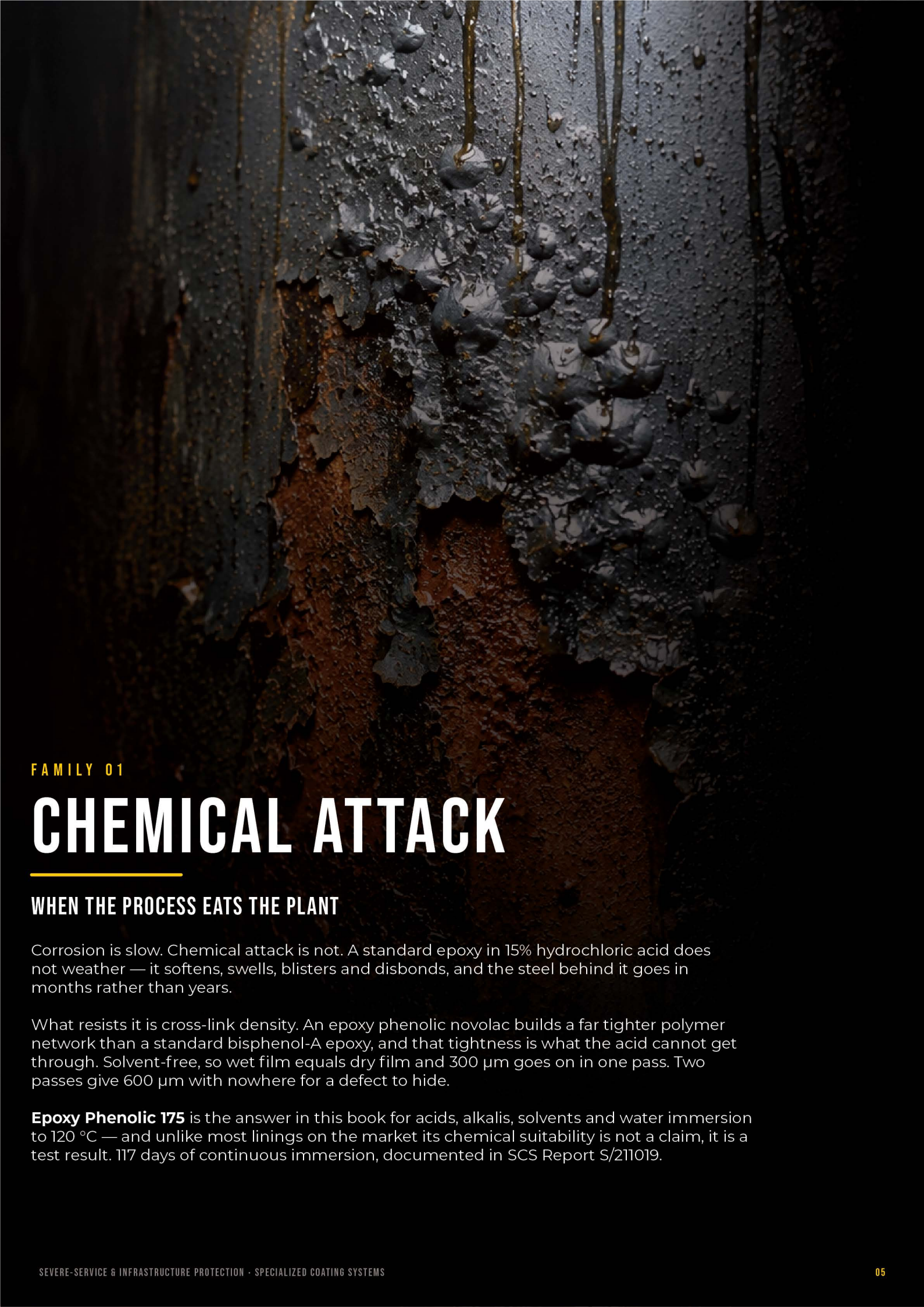
In every case, the product Technical Data Sheet governs. Ask us for the TDS pack, or scan the QR code on the back cover.

CHOOSE YOUR SYSTEM

	EPOXY PHENOLIC 175	EPOXY MULTI PRIME + ARMOURCOAT® POLYUREA PURE HS	EPOXY CERAMIC PASTE	EPOXY ASPHALT MASTIC	EPOXY SURTOL ALUMINIUM HS	EPOXY MULTI PRIME + PU DTM FLEXI HB + BEADS
SYSTEM CODE	IPC-PTCR-2L-01-SS	IPC-ME-AR-2L-01-SS	IPC-PT-IC-2L-02-SS	IPC-PT-IC-2L-03-SS	IPC-ST-CC-2L-02-SS	IPC-FD-CC-2L-01-SS
FAMILY	Chemical Attack	Abrasion & erosion	Abrasion & erosion	Buried & immersed	Maintenance & safety	Maintenance & safety
COATS	2	2	2	2	2	2
TOTAL DFT	600µm	1 575µm	500 - 10 000µm	350µm	250µm	155µm
ENVIRONMENT	Im1 · chemical immersion · C5 splash & fume	C5 · CX-capable barrier* · Im1-Im3	Im1	Im1 · Im2 · Im3	C4-C5	C3-C4
SERVICE TEMPERATURE	Water immersion to 120 °C	Thermally stable to 150 °C	Wet immersion to 65 °C	Ambient buried / immersed	Ambient atmospheric	Ambient atmospheric
CHEMISTRY	Epoxy phenolic novolac, solvent free	Epoxy primer + pure aromatic polyurea elastomer	Ceramic-filled epoxy, solvent free	Asphalt-modified epoxy mastic, coaltar free	Aluminium-flake epoxy mastic, 90% VS	Epoxy primer + aliphatic PU + glass beads
SEPARATE PRIMER	No — two coats of one product	Yes — Epoxy Multi Prime	No — self-priming	No — self-priming	No — self-priming primer/finish	Yes — Epoxy Multi Prime
SURFACE PREPARATION	SSPC-SP1 & Sa 2.5	SSPC-SP1 & Sa 2.5	SSPC-SP1 & Sa 2.5	SSPC-SP1 & Sa 2.5	SSPC-SP1 & Sa 2.5 or Mechanically Abrade	SSPC-SP1 & Sa 2.5
OVERCOAT FROM	8 h @ 25 °C · max 48 h	4 min @ 20 °C · max 4 h	3 h @ 20 °C · max 36 h @ 30 °C	24 h @ 20 °C · max 4 days	16 h @ 25 °C · max 72 h	Primer 8 h @ 20 °C · topcoat 3 h @ 25 °C
EXPECTED DURABILITY	High · 15-25 yrs	Very high · >25 yrs	High · 15-25 yrs	High · 15-25 yrs	C4 High · C5 Medium	C3 High · C4 Medium
BEST FOR	Acid, alkali and solvent immersion	Sliding abrasion and heavy impact	Erosion-corrosion, and rebuilding metal already lost	Buried pipe and permanently submerged steel	Rusted steel you are not allowed to blast	Trafficked demarcation and safety marking

* C5 is the stated class. CX-capability and Im1-Im3 service are a Specialized Coating Systems technical assessment of the polyurea barrier, not a tested classification.

Still deciding? Bring us what is moving, how fast, how big, at what temperature and how often. We will specify it — see page 15.



FAMILY 01

CHEMICAL ATTACK

WHEN THE PROCESS EATS THE PLANT

Corrosion is slow. Chemical attack is not. A standard epoxy in 15% hydrochloric acid does not weather — it softens, swells, blisters and disbonds, and the steel behind it goes in months rather than years.

What resists it is cross-link density. An epoxy phenolic novolac builds a far tighter polymer network than a standard bisphenol-A epoxy, and that tightness is what the acid cannot get through. Solvent-free, so wet film equals dry film and 300 μm goes on in one pass. Two passes give 600 μm with nowhere for a defect to hide.

Epoxy Phenolic 175 is the answer in this book for acids, alkalis, solvents and water immersion to 120 °C — and unlike most linings on the market its chemical suitability is not a claim, it is a test result. 117 days of continuous immersion, documented in SCS Report S/211019.

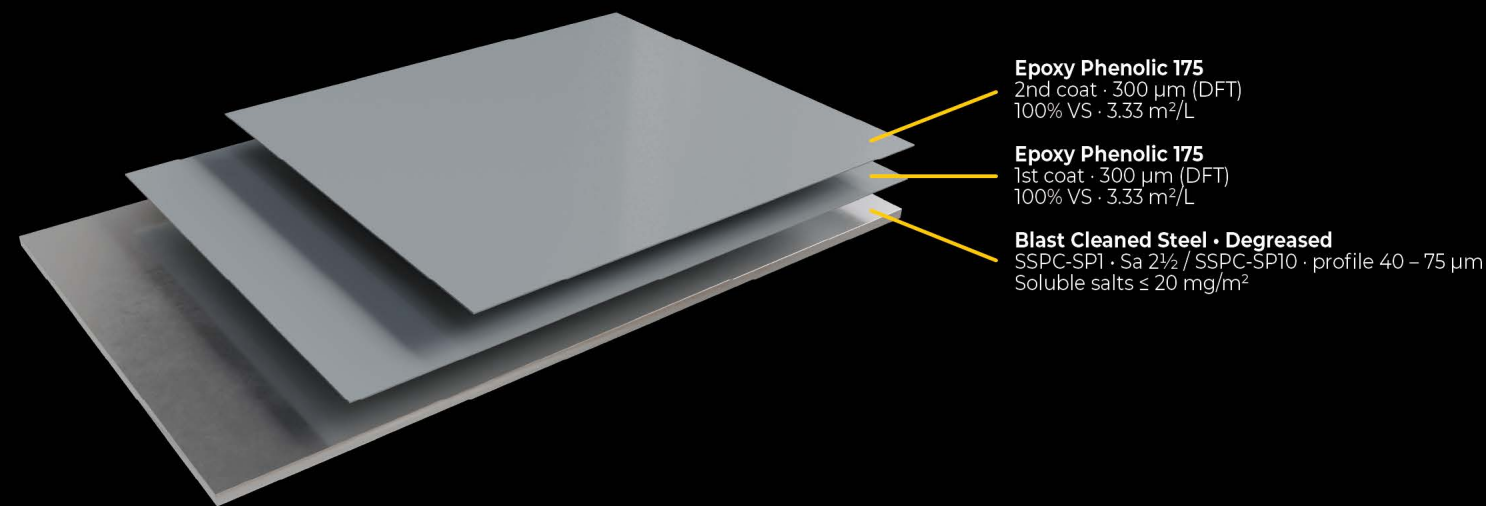
EPOXY PHENOLIC 175

IPC-PT-CR-2L-01-SS · PROCESSING - CHEMICAL-RESISTANT NOVOLAC LINING SYSTEM

DESCRIPTION

Epoxy Phenolic 175 is a two-component, solvent-free epoxy phenolic novolac (EPN) coating cured with a modified cycloaliphatic amine, applied in two coats as a lining for severe chemical service. The multifunctional novolac polymer develops a very high cross-link density, giving outstanding resistance to mineral acids, alkalis and solvents, and water immersion resistance up to 120 °C. Chemical suitability is verified by 117-day immersion testing (SCS Report S/211019): continuous immersion in 15% hydrochloric acid, 20% sodium hydroxide, 20% ammonium hydroxide and de-ionised water, and splash/spill service for 20% sulphuric and nitric acids.

SYSTEM BUILD



Nominal Thickness 600µm (DFT)

SOLVENT FREE · 100% VS

117-DAY IMMERSION TESTED

IMMERSION TO 120°C

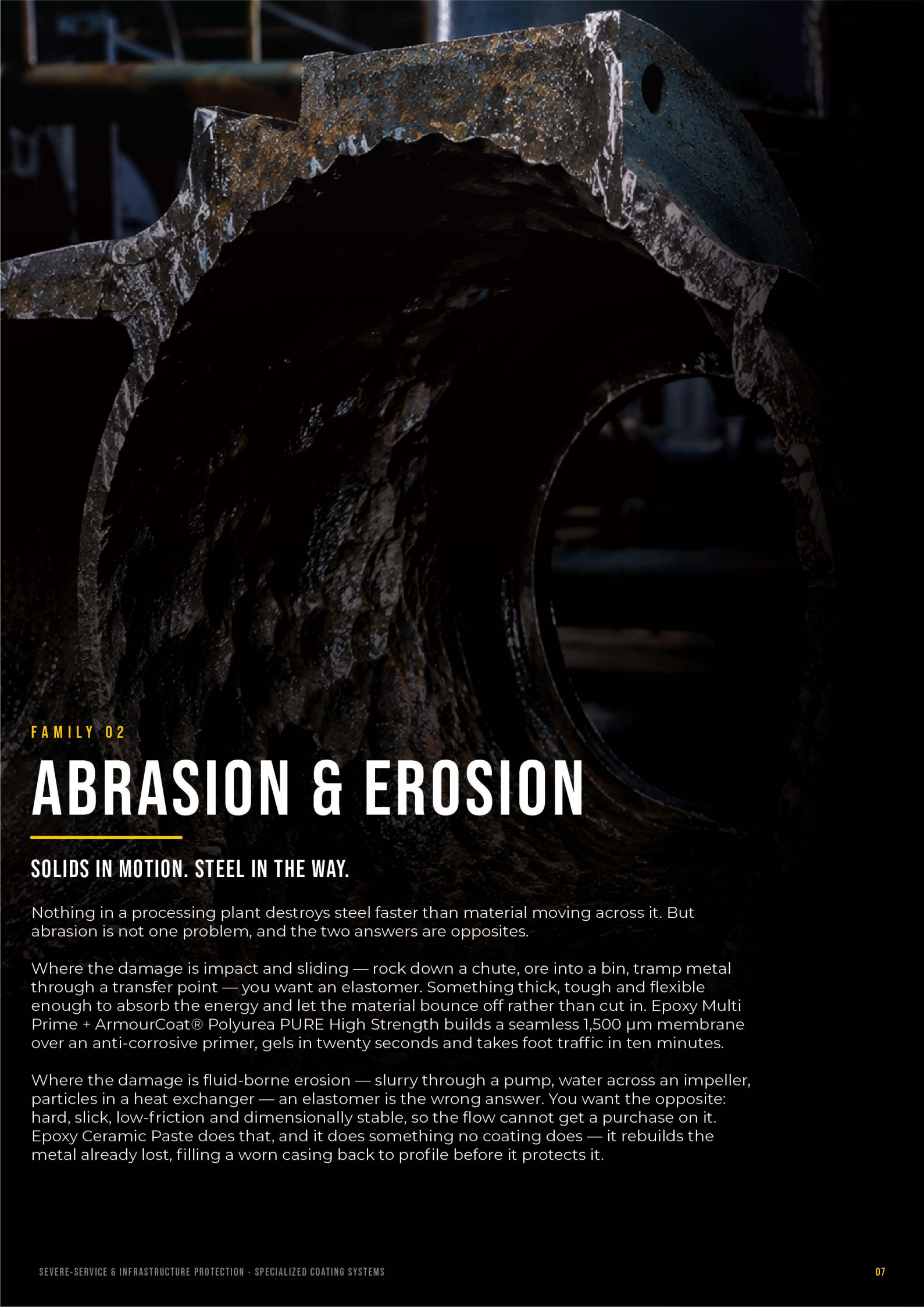
600µm IN TWO COATS

INTENDED USES

- Lining of steel and concrete tanks, bund walls, culverts and pipe interiors
- Floors, walls and equipment exposed to chemical splash and fumes
- Immersion in aqueous slurries — excellent erosion and abrasion resistance
- Acid plants, chemical processing, effluent and wastewater service

AT A GLANCE

System code	IPC-PT-CR-2L-01-SS
Volume Solids	100% - solvent free
Blast Profile	40 - 75µm
Soluble salts - immersion	≤ 20 mg/m²
Splash & fume service	C5
What immersion to	120°C
Overcoat from	8 h @ 25°C • max 48 h
Full chemical cure	7 days @ ≥ 20°C



FAMILY 02

ABRASION & EROSION

SOLIDS IN MOTION. STEEL IN THE WAY.

Nothing in a processing plant destroys steel faster than material moving across it. But abrasion is not one problem, and the two answers are opposites.

Where the damage is impact and sliding — rock down a chute, ore into a bin, tramp metal through a transfer point — you want an elastomer. Something thick, tough and flexible enough to absorb the energy and let the material bounce off rather than cut in. Epoxy Multi Prime + ArmourCoat® Polyurea PURE High Strength builds a seamless 1,500 µm membrane over an anti-corrosive primer, gels in twenty seconds and takes foot traffic in ten minutes.

Where the damage is fluid-borne erosion — slurry through a pump, water across an impeller, particles in a heat exchanger — an elastomer is the wrong answer. You want the opposite: hard, slick, low-friction and dimensionally stable, so the flow cannot get a purchase on it. Epoxy Ceramic Paste does that, and it does something no coating does — it rebuilds the metal already lost, filling a worn casing back to profile before it protects it.

EPOXY MULTI PRIME + ARMOURCOAT® POLYUREA PURE HIGH STRENGTH

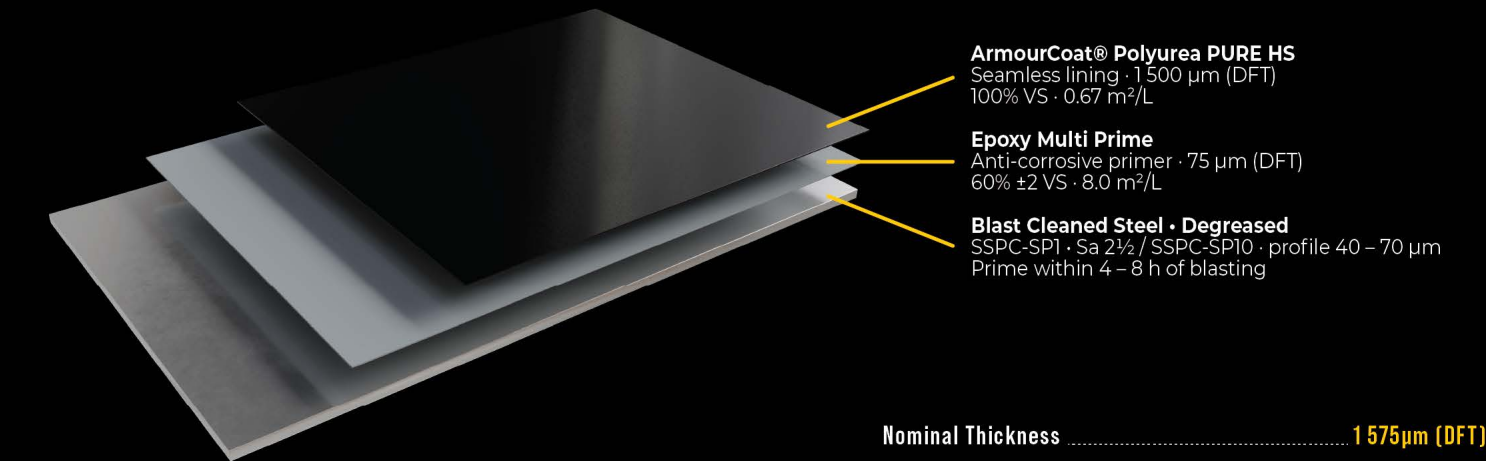
IPC-ME-AR-2L-01-SS · PROCESSING - SEVERE ABRASION & IMPACT ELASTOMERIC LINING SYSTEM

DESCRIPTION

An anti-corrosive epoxy primer overcoated with a high-strength pure polyurea elastomer, spray-applied as a seamless monolithic membrane. Cures in seconds for rapid return to service and builds from 0.5 mm to unlimited thickness for extreme abrasion, impact and moisture service.

Epoxy Multi Prime — two component, high build, zinc phosphate pigmented epoxy primer providing the anti-corrosive base and adhesion layer for the polyurea. **ArmourCoat® Polyurea PURE High Strength** — high-strength thermoset plural-component pure aromatic polyurea; 100% solids, zero VOC. Gel time 20 s; walk-on in 10 minutes at 1.5 mm. Thermally stable to 150 °C; Shore A 92 / Shore D 45.

SYSTEM BUILD



GEL TIME 20 SECONDS

WALK-ON IN 10 MINUTES

SEAMLESS · 1 500µm

SHORE A 92 / D 45

INTENDED USES

- Chutes, hoppers, bins and materials-handling plant — severe sliding abrasion and impact
- Secondary containment, tank and pipe linings, interior and exterior
- Truck bed liners, industrial flooring, water barrier membranes
- Aromatic chemistry — overcoat with an aliphatic PU where colour stability is required

AT A GLANCE

System code	IPC-ME-AR-2L-01-SS
Build range	1 500 - 3 000µm
Immersion capability	1m1 - 1m3
Blast profile	40 - 70µm
Prime within	4 - 8 h of blasting
Gel time	20 seconds
Walk-on	10 minutes @ 1.5mm
Thermal stability	150°C
Hardness	Shore A 92 / Shore D 45
Application	Plural-component heated spray

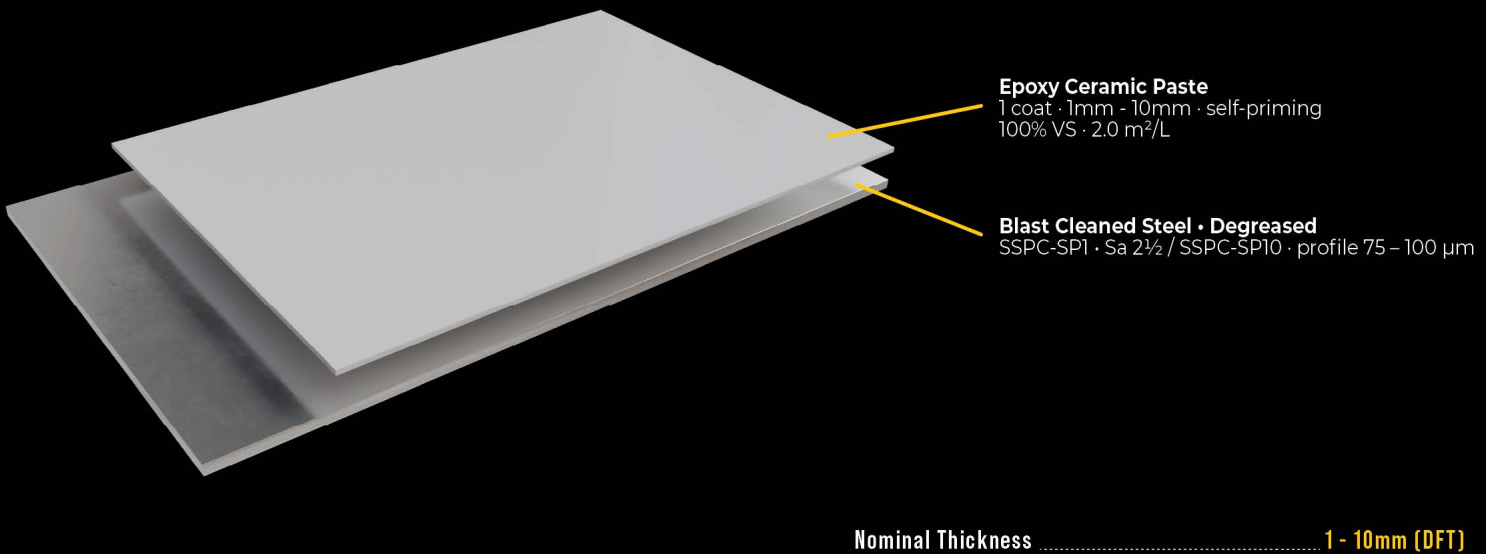
EPOXY CERAMIC PASTE

IPC-PT-IC-2L-02-SS · PROCESSING - CERAMIC-FILLED EROSION & CORROSION REBUILD SYSTEM

DESCRIPTION

Epoxy Ceramic Paste is a two-component, solvent-free, surface-tolerant amine-cured epoxy filled with ceramic particles and supplied as a paste, applied in two coats by brush or putty knife. It goes directly onto steel, concrete and fibreglass for long-term erosion-corrosion protection of fluid-handling equipment in immersion service, producing a hard, slick, low-friction surface and rebuilding worn metal seamlessly. Manufactured in accordance with SANS 1217 Type 1B (potable water); touch dry in 2–3 hours.

SYSTEM BUILD



REBUILDS WORN METAL

SANS 1217 TYPE 1B

BRUSH OR PUTTY KNIFE

HARD · SLICK · LOW FRICTION

INTENDED USES

- Pump casings, impeller blades, gate valves, water boxes and fan blades
- Rebuilding heat exchangers, tube sheets and circulating water equipment
- Seamless repair of rigid polyurethane and epoxy lining systems
- Immersion service on steel and concrete — wet immersion to 65 °C

AT A GLANCE

System code	IPC-PT-IC-2L-02-SS
Build range	1 - 10mm
Standard	SANS 1217 Type 1B
Blast profile	75 - 100µm
Volume solids	100% - solvent free
Touch dry	2 - 3 hours
Overcoat from	3 h @ 20°C · max 36 h @ 30°C
Wet immersion to	65°C
Application	Brush or putty knife



FAMILY 03

BURIED & IMMERSED

COATED ONCE. GONE FOR THIRTY YEARS.

Atmospheric coatings get to dry out, and they get to be inspected. A buried or permanently submerged coating gets neither. It goes into the trench or under the water line on the day it is applied and nobody sees it again until something goes wrong — by which time the repair is an excavation, not a repaint.

That is why buried and immersed work is specified differently. Film build is not a performance target, it is an insurance policy. Holiday detection matters more than gloss. And the coating has to survive backfill, soil stress, cathodic disbondment and a water table that moves.

Epoxy Asphalt Mastic is the modern replacement for coal tar epoxy, and it replaces it on every count that matters — toxicity, film embrittlement and application properties. Self-priming, surface tolerant, and rated across the full immersion range: fresh water, salt water and soil. For buried line pipe it sits alongside ISO 21809; for reservoirs and basins it holds at pH 4 to 10.

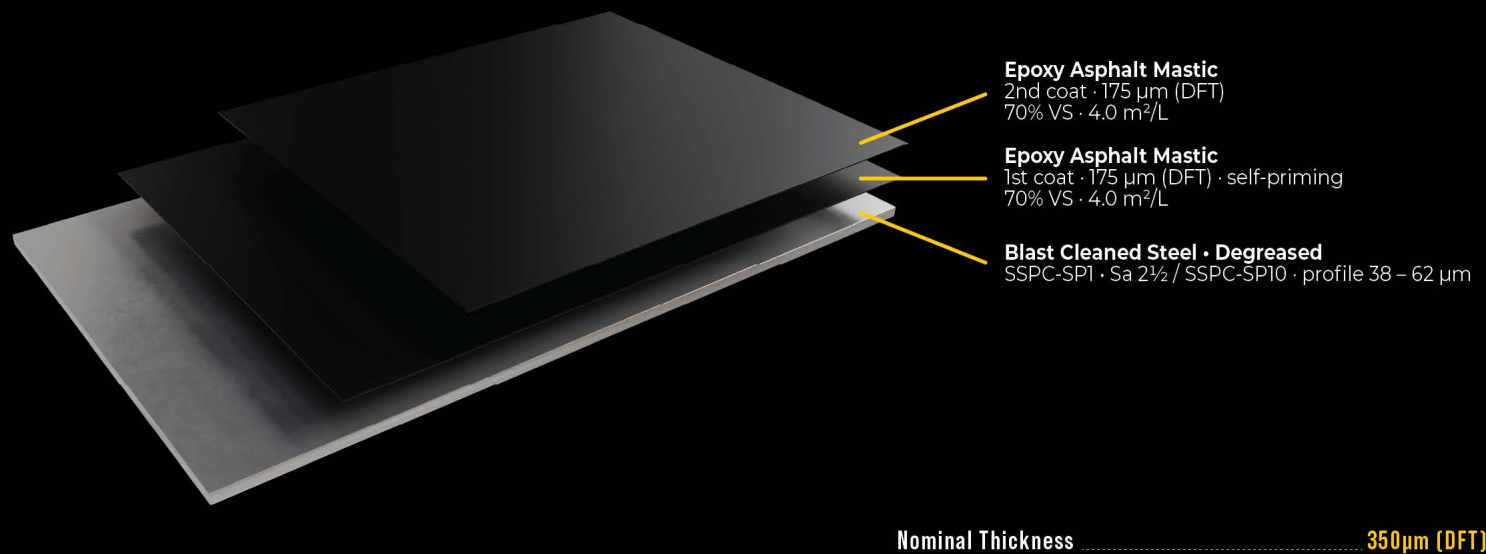
EPOXY ASPHALT MASTIC

IPC-PT-IC-2L-03-SS · PROCESSING - BURIED & IMMERSED STEEL BARRIER SYSTEM (COAL-TAR FREE)

DESCRIPTION

Epoxy Asphalt Mastic is a two-component, chemically cured, asphalt-modified epoxy mastic, applied in two coats as a heavy-duty, high-build, coal-tar-free barrier for buried and immersed steel and concrete. It is surface tolerant and self-priming, with excellent resistance to alkalis, dilute acids, sewage, salt brine, liquid fertilizers and crude oil, and excellent fresh and salt water immersion resistance. It is the modern replacement for coal tar epoxy, outperforming it on toxicity, film embrittlement and application properties.

SYSTEM BUILD



COAL-TAR FREE

IM1 · IM2 · IM3

SELF-PRIMING

SALT BRINE & SEWAGE

INTENDED USES

- Underground steel storage tanks and buried steel piping
- Sewage and wastewater treatment plants, refineries, chemical and fertilizer plants
- Fresh and salt water immersion — bridges, pilings, basins and pits
- Concrete tank and reservoir linings subject to pH 4 – 10

AT A GLANCE

System code	IPC-PT-IC-2L-03-SS
Immersion build coat	300 - 400µm
Buried line pipe	Additionally per ISO 21809
Blast profile - immersion	38 - 62µm
Atmospheric grade	SSPC-SP1 · Sa 2½ / SSPC-SP10
Volume solids	70%
Overcoat from	24 h @ 20°C · max 4 days
Concrete linings	pH 4 - 10



FAMILY 04

MAINTENANCE & SAFETY

WHEN YOU CANNOT SHUT IT DOWN.

Most coating specifications assume a clean sheet: new steel, a blast booth, and as long as it takes. Most coating work is the opposite — structure that is twenty years old, rusted, painted three times already, and holding up a plant that is not stopping for you.

Epoxy Surtol Aluminium HS goes onto hand-prepared rusted steel and intact aged coatings where blasting is impractical or simply not permitted. Ultra-high solids at 90%, aluminium flake for dense barrier protection, self-priming as both primer and finish — 250 µm in two coats, rated C4 to C5, with the plant still running underneath it.

Epoxy Multi Prime + PU DTM Flexi HB Gloss with Reflective Glass Beads is the layer everyone forgets until an audit. Demarcation, walkways and safety markings that have to survive forklifts and stay visible in low light, with airport-grade glass beads broadcast into the wet topcoat — on a UV-stable aliphatic polyurethane that does not chalk out in a South African summer.

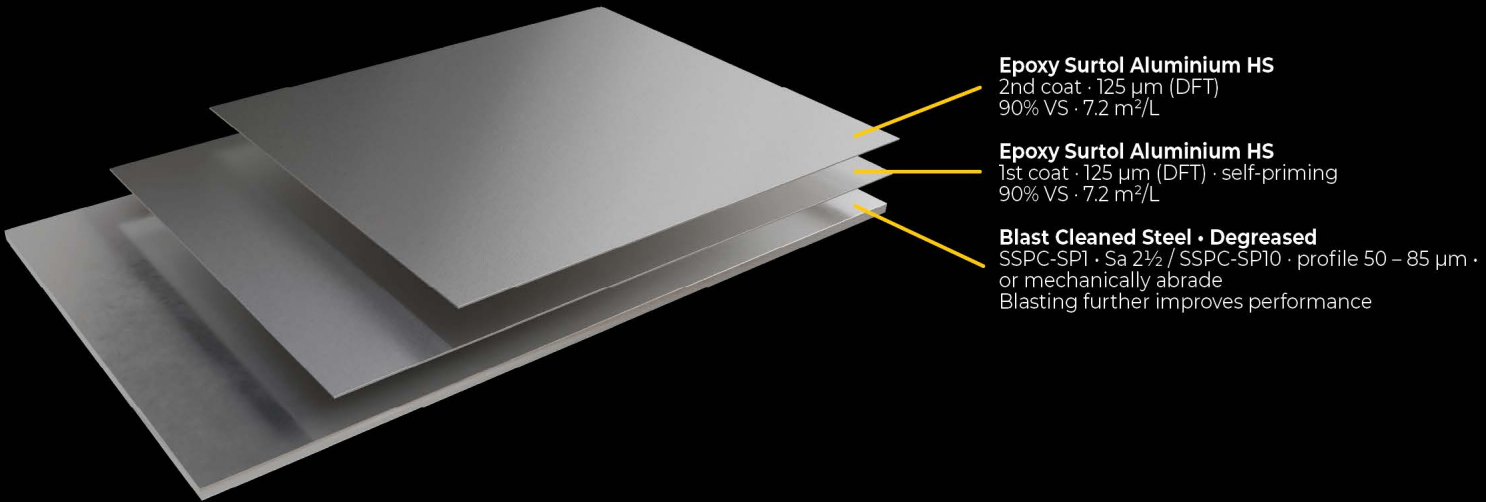
EPOXY SURTOL ALUMINIUM HS

IPC-ST-CC-2L-02-SS • PROCESSING - SURFACE-TOLERANT MAINTENANCE SYSTEM (HAND-PREPARED STEEL)

DESCRIPTION

Epoxy Surtol Aluminium HS is a two-component, ultra-high solids (90%) modified epoxy mastic pigmented with aluminium flake and corrosion inhibitors, applied in two coats as a self-priming primer and finish. The flake and inhibitor package builds a dense barrier film that adheres to hand-prepared rusty steel, hydro-blasted steel and a wide range of intact aged coatings where blasting is impractical. Resistant to humidity, saltwater immersion and exterior exposure.

SYSTEM BUILD



Nominal Thickness 250µm (DFT)

90% VOLUME SOLIDS

SURFACE TOLERANT

ALUMINIUM FLAKE BARRIER

PRIMER & FINISH IN ONE

INTENDED USES

- Maintenance of industrial and coastal structures, bridges, offshore steel
- Pulp & paper plants — atmospheric exposure and immersion service
- Single-product primer/finish — one or two coats, minimal downtime
- Overcoatable with epoxies, polyurethanes, alkyds and acrylics if colour is required

AT A GLANCE

System code	IPC-ST-CC-2L-02-SS
Volume solids	90% - ultra high solids
Expected durability	C4 High • C5 Medium
Preparation	SSPC-SP1 • Sa ½ / SSPC-SP10 or mechanically abrade
Blast cleaning	Further improves performance
Overcoat from	16 h @ 25°C • max 72 h
Overcoatable with	Epoxy • PU • alkyd • acrylic

EPOXY MULTI PRIME + PU DTM FLEXI HB GLOSS

WITH AIRPORT REFLECTIVE GLASS BEADS

IPC-FD-CC-2L-01-SS · PROCESSING - REFLECTIVE DEMARCATION & SAFETY SURFACE SYSTEM

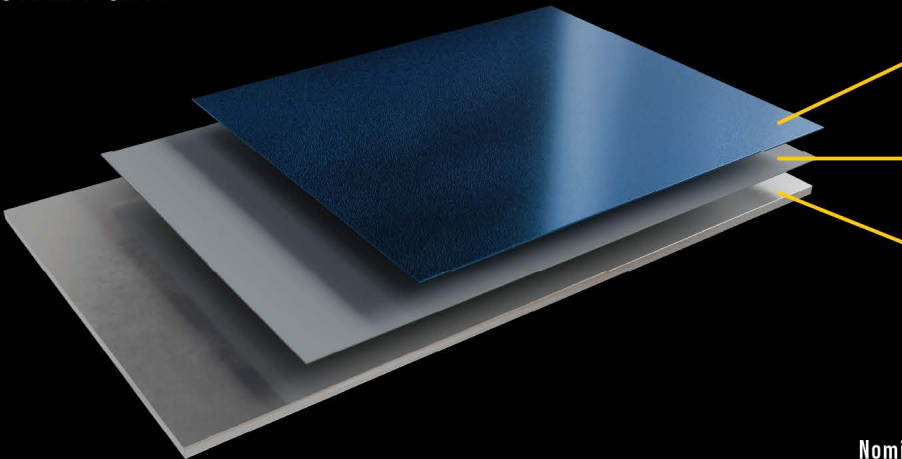
DESCRIPTION

A two-coat epoxy / flexible polyurethane system finished with airport-grade reflective glass beads broadcast into the wet topcoat for retro-reflective visibility. Combines anti-corrosive priming with a tough, flexible, UV-stable wearing surface suitable for demarcation and trafficked areas.

Epoxy Multi Prime — two component, high build, polyamide cured, zinc phosphate pigmented epoxy primer with enhanced adhesion package; high build single-coat application up to 150 µm on vertical surfaces.

PU DTM Flexi HB Gloss + Reflective Glass Beads — flexible polyester-modified aliphatic polyurethane finish with airport reflective glass beads broadcast into the wet film; high toughness, suitable for forklift and heavy pedestrian traffic.

SYSTEM BUILD



PU DTM Flexi HB Gloss + reflective beads
Aliphatic PU topcoat · 80 µm (DFT) ·
airport-grade beads broadcast into the wet film
70% VS · 8.75 m²/L · yield excludes beads

Epoxy Multi Prime
Anti-corrosive primer · 75 µm (DFT)
60% ±2 VS · 8.0 m²/L

Blast Cleaned Steel • Degreased
SSPC-SP1 · Sa 2½ / SSPC-SP10 · profile 40 – 70 µm
Soluble Salts ≤ 50 mg/m²

Nominal Thickness 155µm (DFT)



AIRPORT-GRADE GLASS BEADS



RETRO-REFLECTIVE AT NIGHT



FORKLIFT-RATED TOUGHNESS



NON-CHALKING ALIPHATIC PU

INTENDED USES

- Line demarcation, walkways and safety markings on steel and concrete
- Aprons, hangars, warehouses — retro-reflective visibility at night and in low light
- Floors subject to forklift and heavy pedestrian traffic
- Exterior steel where weathering, toughness and UV stability are required

AT A GLANCE

System code	IPC-FD-CC-2L-01-SS
Expected durability · C4.....	Medium · 7 - 15 years
Blast profile.....	40 - 70µm
Soluble salts.....	≤ 50 mg/m ² (ISO 8502-6)
Bead broadcast.....	Into the wet film
Primer overcoat from.....	8 h @ 20°C
Topcoat overcoat from.....	3 h @ 25°C
Colour range.....	RAL Classic, tintable

IT STARTS WITH THE STEEL

In 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 TDS and SDS packs for every product in the system. Batch certification, salt spray and certification records where the product carries them.

03 • ON-SITE AND ON-LINE SUPPORT

A technical representative on your floor for first application, applicator training, and DFT and adhesion verification.

04 • FORMULATION TO YOUR LINE

If none of the six systems fits, we adjust one. Custom batch sizes, adjusted dry times, modified gloss levels and bespoke colour — this is a manufacturing capability, not a favour.

SPECIFY THE FINISH

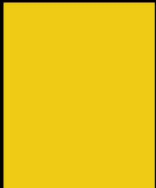
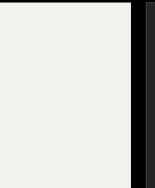
COLOUR COMES LAST

In OEM and machinery coating, colour is a batch instruction. In severe service it is a constraint. Filler loading, chemical resistance and immersion conformance all set limits on what a lining can be tinted to.

SYSTEM	FINISH AND COLOUR	WHY
Epoxy Phenolic 175	White / RAL 7040 Window Grey	Chemical resistance depends on the cured film, and tinting changes it.
ArmourCoat® Polyurea PURE HS	Black / Grey	Aromatic chemistry — it will discolour under UV. Appearance only, not barrier performance. Where colour stability matters, overcoat with an aliphatic PU such as PU DTM Flexi HB.
Epoxy Ceramic Paste	White	Ceramic filler load governs the finish; the surface is deliberately hard and slick, not decorative.
Epoxy Asphalt Mastic	Black	Asphalt-modified. Chalking on exterior exposure is normal and is not detrimental to overcoating.
Epoxy Surtol Aluminium HS	Aluminium metallic	Aluminium flake is the barrier mechanism, so the metallic finish is the coating working.
PU DTM Flexi HB Gloss	RAL Classic, tintable	Pick any colour in the RAL Classic range. Aliphatic, non-chalking and non-yellowing — so it still looks like that colour years later, in full sun.

SAFETY COLOUR - THE DEMARCATION SYSTEM

The reflective demarcation system is the exception that proves the rule: colour is the specification.

								
RAL 1023 TRAFFIC YELLOW	RAL 2009 TRAFFIC ORANGE	RAL 3020 TRAFFIC RED	RAL 5017 TRAFFIC BLUE	RAL 6024 TRAFFIC GREEN	RAL 7042 TRAFFIC GREY A	RAL 7043 TRAFFIC GREY B	RAL 9016 TRAFFIC WHITE	RAL 9017 TRAFFIC BLACK

*Please note these swatches are for illustrative purposes only.



THE COATING AND THE KIT TO APPLY IT

THREE THINGS THAT ARE NOT OPTIONAL

01 · THE PROFILE IS PART OF THE SPECIFICATION

A 40 µm profile under a 1,000 µm ceramic paste is not a minor deviation — it is the reason the lining will delaminate under erosion load. Match the abrasive to the profile the system calls for.

02 · THE CLOCK STARTS AT THE BLAST

Blasted steel flash-rusts. The polyurea system requires priming within 4 – 8 hours; the phenolic requires re-blasting of any oxidation before application. Programme the blast and the first coat as one operation, not two.

03 · SALTS ARE INVISIBLE

Soluble chloride limits are specified for two of these systems — $\leq 20 \text{ mg/m}^2$ for chemical immersion, $\leq 50 \text{ mg/m}^2$ for the demarcation system. A visually clean Sa 2½ surface can still be over the limit. Test it.

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SPRAY APPLICATION

Airless, air-assisted and plural-component spray equipment for high-build industrial coatings. The right pump, tip and hose configuration for the system you have specified — not a guess at it.

CLEMCO®

ABRASIVE BLASTING

Blast machines, nozzles, remote controls and operator safety equipment for reaching and holding a Sa 2½ profile. Sa 2½ leaves steel near-white and uniformly profiled — clean metal with a key for the coating to bite into. This is how you get there.

GMA ABRASIVE MEDIA

BLAST MEDIA

Abrasive media matched to the surface profile your specification calls for — from 38–62 µm on fast-track structural work, to 40–75 µm on production lines, to a sharp angular 75–100 µm for immersion linings.

Ask about a line audit.

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

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