

ArmourCoat® Polyurethane High Strength SB Colour

Two-Component Tintable Aliphatic Polyaspartic-Modified Solvent-Based Polyurethane Protective Coating

Description:

ArmourCoat® Polyurethane High Strength SB Colour is a two-component, tintable, solvent-based polyurethane coating modified with polyaspartic technology, engineered for high-performance protective and decorative applications across industrial, automotive, marine, and commercial vehicle sectors. The product is formulated for outstanding UV and weathering resistance with long-term colour and gloss retention — making it suitable for colour-critical exterior applications where appearance & durability is specified.

Once cured, the film is dense, hard, and abrasion-resistant — delivering Shore D hardness 45 (Shore A 95) for long-term mechanical durability in service.

The product is tintable to RAL Classic colours and can be matched to specific colour requirements on request. Suitable for application by airless spray, brush, roller, or stonechip / underbody spray gun.

Intended Uses:

ArmourCoat® Polyurethane High Strength SB Colour is applied as a protective and decorative finish coat in systems requiring UV stability, colour retention, and mechanical durability. Suitable for:

- Truck bed liners, trailer beds, and pickup truck load areas requiring hard-wearing, impact-resistant colour finishes
- Automotive and commercial vehicle protective coatings: truck cab bodies, bus bodies, van panels, and exposed metalwork
- Recreational vehicle protection: ATVs, motorcycles, quad bikes, and off-road equipment
- Marine topside protection: above-waterline hull topsides, deck fittings, superstructure, and gunwales requiring UV-stable colour retention. Not formulated for below-waterline (immersed) hull surfaces or antifouling applications.
- Agricultural machinery protection: tractors, implements, sprayers, and farm equipment exposed to weathering and chemical contact
- Construction and mining equipment coatings where colour identification and mechanical durability are required
- Industrial equipment and machinery housings requiring a professional-grade colour finish with chemical resistance
- Workshop and contract coating of components where UV-stable, tintable colour retention in outdoor service is specified
- Maintenance overcoating of previously coated surfaces in compatible systems

ArmourCoat® Polyurethane High Strength SB Colour is a topcoat system. Apply over a compatible primer or anti-corrosion primer appropriate to the substrate. Refer to the recommended coating system section.

Features & Benefits:

- **Superior gloss and colour retention:** Engineered non-yellowing technology resists chalking and yellowing caused by UV exposure — maintaining gloss and colour depth over the long-term service life of the coating.
- **Tintable to any colour:** Tintable to RAL Classic colours, with custom colour matching available on request. Allows project-specific colour identification for fleet, production, and contract work.
- **High Shore hardness:** Shore D 45 (Shore A 95) hardness at full cure delivers abrasion, scuff, and impact resistance suited to truck beds, vehicle bodies, and high-contact industrial surfaces.
- **Good impact resistance:** The crosslinked polyurethane film absorbs and distributes impact energy, resisting chipping and cracking from stone strike, mechanical handling, and light impact in service.
- **Excellent chemical resistance:** Resists fuels, oils, dilute acids and alkalis, hydraulic fluids, and industrial cleaning agents at full cure — suited to agricultural, automotive, and industrial service environments.
- **Professional finish quality:** Produces a smooth, hard, high-gloss film with good flow and levelling. Suitable for OEM-quality finishes applied by spray or brush/roller for contract coating and fleet maintenance.

- **Solvent-based formulation:** High penetration and wetting of the primer substrate. Suitable for ambient conditions where waterborne systems are affected by temperature or humidity.

Technical Data:

Product Type	Two-component, tintable, solvent-based polyaspartic-modified polyurethane topcoat.	
Technology	Polyaspartic-modified, UV-stable polyurethane technology — engineered for outdoor exposure with long-term colour and gloss retention. Non-yellowing chemistry.	
Colour	RAL 1019 Grey Beige RAL 3020 Traffic Red RAL 5013 Cobalt Blue RAL 6003 Olive Green	RAL 7016 Anthracite Grey RAL 9003 Signal White RAL 9004 Signal Black RAL 9006 White Aluminium
	Tintable to RAL Classic colours. Custom colour matching available on request. Standard colours available ex-stock.	
Finish	Semi-gloss to gloss (dependent on colour and application method). Hard, smooth film.	
Mixing Ratio (Volume)	Comp. A : Comp. B = 3:1 (three parts base to one part hardener by volume)	
Gel Time @ 25°C	Approximately 25 minutes. Reduce batch size in hot conditions (>30°C).	
Shore Hardness (Full Cure)	Shore D 45 Shore A 95	
Volume Solids	Approx. 60–70% (mixed, colour-dependent).	
Density (Mixed)	Approx. 1.05–1.15 kg/Lt (colour-dependent)	
Theoretical Coverage	Approx. 4.0–4.5 m²/Lt @ 150 µm DFT Approx. 6.0–7.0 m²/Lt @ 100 µm DFT. Allow for substrate profile, application method losses, and overspray.	
Film Thickness (DFT)	Recommended: 100–150 µm DFT per coat Minimum 2 coats over primer	
Film Thickness (WFT)	Approx. 150–250 µm WFT per coat	
Number of Coats	Minimum 2 coats (standard). 3 coats recommended for aggressive environments.	
Pack Sizes	<u>3.6 Litre Kit: (Black & White)</u> • Comp. A (Base): 4 x 675ml • Comp. B (Hardener): 1 x 900ml <u>3.6 Litre Kit: (Colours)</u> • Comp. A (Base): 4 x 630ml • Comp. B (Hardener): 1 x 900ml • Colourant: 4 x 45ml	<u>4 Litre Bulk Kit: (Colours)</u> • Comp. A (Base): 3 Lt • Comp. B (Hardener): 1 Lt
Flash Point	Solvent-based — flammable. Comp. A: typically >23°C. Refer to SDS for flash point data by component.	

Application Temperature	Substrate and ambient: 10°C – 40°C Substrate temp must be ≥3°C above dew point Do not apply at RH >85%
Service Temperature	–20°C to +90°C continuous. Short-term to +120°C.
Shelf Life	12 months from manufacture in original sealed containers at ≤30°C, away from direct sunlight.

Drying & Curing Information:

Condition	10°C	25°C *	Notes
Touch Dry (no pickup)	2–3 h	1–2 h	Temperature-dependent; slower at low temp
Hard Dry (light traffic)	12–16 h	6–8 h	Allow hard dry before recoating
Min. Overcoat Interval	12–16 h	6–8 h	No maximum interval if surface is clean and dry
Full Cure (max hardness & chem. resistance)	14–21 days	7 days	Do not expose to aggressive chemical contact before full cure

* Reference conditions: 150 µm DFT, 55% RH. All other values are indicative. Do not apply if precipitation is forecast within 24 hours.

Surface Preparation:

Correct surface preparation is critical to adhesion and coating performance. All surfaces must be structurally sound, clean, dry, and free from oil, grease, wax, silicone, and loose or failing coatings.

Steel & Metal Substrates

- Blast clean to Sa 2.5 (ISO 8501-1) for new or heavily corroded steel. Surface profile: Rz 40–70 µm. Apply primer immediately after blasting.
- Power tool clean to St 3 (ISO 8501-1) minimum for maintenance work. Remove all loose rust and failing coating. Degrease prior to mechanical preparation.
- Apply a compatible anti-corrosion or epoxy primer. ArmourCoat® Polyurethane High Strength SB Colour is a topcoat — it does not replace the primer in the corrosion protection system.
- Allow primer to reach hard dry. Confirm primer compatibility before application.

Previously Coated Surfaces

- Confirm compatibility with existing coating system by solvent rub test or contact the SCS technical team.
- Abrade the surface to a uniform key. Remove all gloss, loose material, and chalking.
- Degrease with a suitable solvent cleaner. Allow to fully evaporate before topcoating.

Concrete & Masonry Substrates

- Mechanically prepare by grinding or scarifying. Remove laitance, dust, and contamination.
- Apply a compatible epoxy or polyurethane primer. Ensure substrate moisture content is within primer specification.

General Requirements

- Substrate temperature: 10°C – 40°C. At least 3°C above the dew point at all times during application and initial cure.
- Do not apply in rain, fog, condensing conditions, or when precipitation is forecast within 24 hours.
- Do not apply over oil, silicone, or incompatible coatings without site-specific testing.

Application:

Mixing Procedure

Step	Instruction
1	Ensure both components are at or above 15°C. Cold components increase viscosity and reduce flow.
2	Shake or stir Comp. A (pigmented base) to re-disperse any settled pigment before measuring. Stir Comp. B (hardener) gently.
3	Measure Comp. A and Comp. B at 3:1 by volume. Pour Comp. B into Comp. A. Mix thoroughly with a mechanical stirrer for 3–5 minutes. Scrape sides and base of container.
4	Allow an induction time of 5–10 minutes after mixing before application (improves flow and wetting).
5	Apply within the gel time (approx. 25 minutes at 25°C). Reduce batch size at temperatures above 30°C. Once gelled, do not attempt to thin or re-use.

Application Parameters

Parameter	Specification	Notes
Mix Ratio (Volume)	Comp. A : Comp. B = 3:1	Measure accurately — ratio deviation affects hardness and cure
Thinner	PU thinner or equivalent 2K polyurethane thinner only. Do NOT use water.	Max 10% by volume. Over-thinning reduces DFT and chemical resistance.
Gel Time @ 25°C	Approx. 25 minutes	Reduce batch size >30°C

Application Methods

Application Method	Parameters
Airless Spray	Pressure: 150–200 bar Tip: 17–21 thou (0.43–0.53 mm) Maintain wet edge — do not rework
Brush / Roller	Short-nap solvent-resistant synthetic roller (6–10 mm). Quality solvent-resistant brush. Avoid heavy brush strokes — maintain a wet edge.
Stonechip / Underbody Spray Gun	Standard stonechip / Schutz / underbody coating gun. Suitable for truck beds, wheel arches, sills, chassis, and textured-finish applications. Operating pressure: ~3.5 bar (50 psi). Adjust nozzle for required texture. Thin up to 10% if required for gun atomisation.
Equipment Cleaning	Flush immediately after use with PU thinner or suitable 2K polyurethane solvent. Cured material requires mechanical removal.

Recommended Coating System:

Steel & Metal — General Industrial / Commercial Vehicle

Coat	Product	DFT	Notes	Coats
Surface Prep	Sa 2.5 blast (new steel) or St 3 power tool (maintenance)	—	ISO 8501-1. Remove all contamination.	—

Primer	Compatible 2K epoxy anti-corrosion primer (zinc phosphate, zinc-rich, or moisture-tolerant epoxy)	Min. 60 µm	Hard dry before topcoating	1–2
Topcoat 1	ArmourCoat® Polyurethane High Strength SB Colour	100–150 µm	Min. 6–8 h @ 25°C before recoating	1
Topcoat 2	ArmourCoat® Polyurethane High Strength SB Colour	100–150 µm	Allow full cure (7 days @ 25°C) before service	1
Topcoat 3 (aggressive env.)	ArmourCoat® Polyurethane High Strength SB Colour	100–150 µm	Recommended for marine, coastal, chemical environments	1

Minimum system DFT (primer + 2 topcoats): approx. 260–360 µm. Aggressive service environments: 3 topcoats. Confirm primer compatibility before application.

Chemical Resistance (Full Cure — 7 Days @ 25°C):

Reagent	Rating	Notes
Petrol / Diesel fuel	Good	Spot spillage resistance; wipe clean promptly
Motor oil / lubricants	Good	Wipe clean within 24 hours
Hydraulic fluid	Good	Prolonged immersion not recommended
Alkalies (dilute)	Good	Resistant to alkaline cleaning agents
Acids (dilute)	Fair	Limit exposure time; wipe clean immediately
Seawater / salt spray	Excellent	UV-stable formulation — suitable for coastal and marine topside exposure
Industrial cleaning agents (neutral)	Excellent	Film surface resists penetration
Continuous immersion (water / aqueous)	Not recommended	Product not formulated for immersion service

Limitations:

- Not a self-priming system. Always apply over a compatible anti-corrosion or adhesion primer appropriate to the substrate and service environment.
- Do not apply at substrate or ambient temperatures below 10°C or above 40°C, when RH exceeds 85%, or when substrate temperature is less than 3°C above the dew point.
- Solvent-based — flammable. Do not apply near open flames, hot surfaces, or ignition sources. Ensure adequate ventilation during application and curing.
- Do not thin with water. Use only PU thinner or equivalent 2K polyurethane solvent.
- Comp. B (crosslinker) is moisture-sensitive. Reseal immediately after use. Do not allow ingress of moisture into the Comp. B container.
- Slight colour variation will occur between production batches — this is inherent to tinted coating manufacture. To avoid visible colour mismatch, complete each project using material from a single production batch. Where multiple batches are unavoidable, blend batches in a clean container before application, or apply different batches to clearly demarcated panels (never mid-panel).
- Do not apply over coal tar, bitumen, or chlorinated rubber coatings without site-specific compatibility testing.
- Avoid direct application to bare metal without a primer. The topcoat is not designed to provide primary corrosion protection.
- Verify VOC compliance against applicable local authority or project specifications prior to supply.

INDUSTRIAL & PROTECTIVE COATINGS

Whilst we endeavour to ensure that all advice we give about the product is correct, the information given in this data sheet is not intended to be exhaustive and any person using the product for any purpose other than that specifically recommended in this sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so entirely at his own risk. As conditions of use, method of application and suitability of the substrate prior to painting are beyond our control, no guarantee is implied by the recommendations contained herein. We therefore do not accept any liability whatsoever or howsoever arising from the performance of this product or for any loss or damage arising out of the use of this product. The information contained in this sheet is liable to modification from time to time in the light of experience and ongoing product development programmes. It is the user's responsibility to ensure that this sheet is current prior to using the product

Storage & Shelf Life:

Comp. A (Polyol Base)	12 months from manufacture in original sealed containers at $\leq 30^{\circ}\text{C}$.
Comp. B (Hardener)	12 months from manufacture in original sealed containers at $\leq 30^{\circ}\text{C}$. Moisture-sensitive — reseal immediately after use.
Storage Temperature	$5^{\circ}\text{C} - 30^{\circ}\text{C}$. Protect from frost and direct sunlight.
Storage Conditions	Store in original, tightly sealed containers away from heat, ignition sources, and moisture. Partially used Comp. B must be sealed immediately and used promptly.

Health & Safety:

Refer to the Safety Data Sheet (SDS) for each component prior to use. Solvent-based product — flammable. Use appropriate PPE: chemical-resistant gloves (nitrile recommended), safety glasses or goggles, and a suitable organic vapour respirator during application. Do not apply in confined or poorly ventilated spaces without forced ventilation and appropriate respiratory protection.

The hardener (Comp. B) is an isocyanate-cured system — potential respiratory sensitiser. Avoid inhalation of spray mist. Ensure adequate ventilation. Workers with a history of respiratory sensitisation to isocyanates must not apply this product. Refer to SDS for full hazard data.

Avoid skin and eye contact with both components. Wash immediately with water if contact occurs. Do not eat, drink, or smoke when handling this product.

Waste disposal: Uncured liquid must not enter watercourses, drains, or soil. Dispose in accordance with applicable local environmental regulations. Cured film: dispose as general industrial waste.

SDS available on request from Specialized Coating Systems (Pty) Ltd. | INDUSTRIAL & PROTECTIVE: COATINGS