

Strata

Ultimate protection for floors





World-leading coatings solutions

Hempel was founded in 1915 and is today one of the world's leading manufacturers and suppliers of coating solutions. Our advanced protective and decorative coatings can be found on millions of surfaces around the globe.

From the world's longest bridges and tallest skyscrapers to airports, sports stadia and civil structures our coatings protect your assets against corrosion in many different and challenging environments.

Our history is rooted in protective coatings for the extreme conditions experienced in the Marine, Decorative and Protective industries, so you can be assured that we offer trusted technology, expert technical service and reliability.

With our vast expertise and knowledge, you know that by choosing Hempel, you are choosing a brand you can trust.



Strata

Ultimate protection for floors



Strata provides ultimate protection for concrete floors. Offering best-in-class abrasion resistance and mechanical strength, it has been developed to reduce the need for cyclical maintenance whilst offering high standards in sustainability.

Strata products are ideal for demanding applications and total solutions.



Strata Epoxy LT



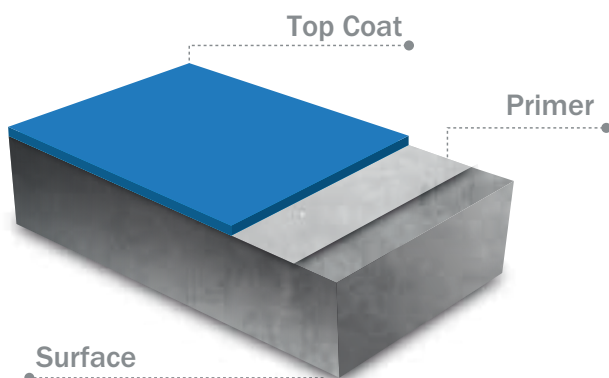
Strata Epoxy LT is a two-component solvent-borne epoxy paint for light traffic purpose.

Special features

- Good abrasion & chemical resistance.
- Convenient long pot-life.
- Available in a wide range of colours.
- Optimum economical protection.

Areas of use

Designed to protect concrete floors and walls in residential and public areas exposed to light traffic such as malls, offices, hotels, restaurants, villas and small building garages. Ideal for light duty floors where protection from mild spillages, abrasion and other mild impacts are specified.



Certificates/approvals:

Property	Standard	Result
Adhesion strength	ASTM D4541-09	2.3 N/mm ²
Abrasion resistance	ASTM D4060-10	106 mg/1000 cycles
Impact resistance	ASTM D2794	0.8 kg-m
Shore D hardness	ASTM D2240-05	D/37/1

Chemical resistance	Method	Result
Distilled water (cold) Distilled water (hot) Ethyl Alcohol (50% vol) Vinegar (3% acetic acid) Alkali solution (5%) Soap solution Detergent solution	ASTM D1308	No discolouration, change in gloss, blistering, softening, swelling, loss of adhesion or special phenomena was observed.

Strata Epoxy MT



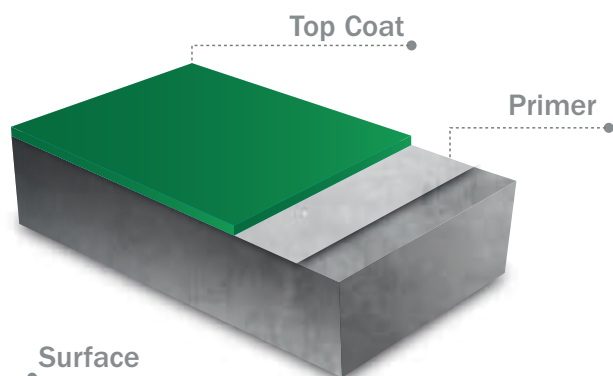
Strata Epoxy MT is a two-component solvent-borne epoxy paint for use in areas of medium traffic.

Special features

- High abrasion & chemical resistance.
- High solid content.
- Available in a wide range of colours.
- Durable, low maintenance cost.

Areas of use

Designed to protect concrete floors in areas exposed to medium traffic such as car parks, warehouses, factories and sports stadiums. Ideal for medium duty floors where protection from spillages and medium abrasion is specified.



Certificates/approvals:

Property	Standard	Result
Adhesion strength	ASTM D4541-09	2.3 N/mm ²
Tensile strength	ASTM C307-03	3 N/mm ²
Flexural strength	ASTM C580-02	6 N/mm ²
Compressive strength	ASTM C579-01	63 N/mm ²
Abrasion resistance	ASTM D4060-10	67 mg/1000 cycles
Impact resistance	ASTM D2794	0.35 kg-m
Shore D hardness	ASTM D2240-05	D/74/1

Chemical resistance	Method	Result
Distilled water (cold) Distilled water (hot) Ethyl Alcohol (50% vol) Vinegar (3% acetic acid) Alkali solution (5%) Soap solution Detergent solution	ASTM D1308	No discolouration, change in gloss, blistering, softening, swelling, loss of adhesion or special phenomena was observed.



Strata Epoxy HT



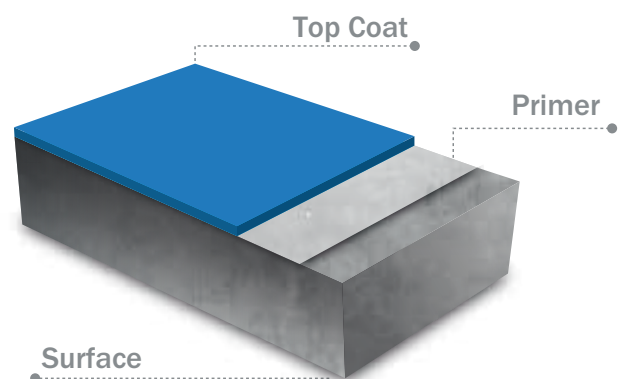
Strata Epoxy HT is a high-build, two-component epoxy paint for heavy traffic areas.

Special features

- Outstanding mechanical properties.
- Exceptional chemical resistance.
- Odour-free.
- Non-toxic.

Areas of use

Designed to protect concrete substrates in heavy-duty areas such as factories, manufacturing, warehousing, airfield workshops, food production, medical laboratories and car parks with heavy traffic. It is suitable for areas like ramps, turning circles, parking lots, and areas with heavy forklift traffic in particular.





Certificates/approvals:

Property	Standard	Result	Chemical resistance	Method	Result
Adhesion strength	ASTM D4541-09	4.7 N/mm ²	Destillated water (cold) Destillated water (hot) Ethyl Alcohol (50% vol) Vinegar (3% acetic acid) Alkali solution (5%) Soap solution Detergent solution	ASTM D1308	No discoloration, change in gloss, blistering, softening, swelling, loss of adhesion or special phenomena was observed.
Tensile strength	ASTM C307-03	20 N/mm ²			
Flexural strength	ASTM C580-02	39 N/mm ²			
Compressive strength	ASTM C579-01 (2012)	89 N/mm ²			
Abrasion resistance	ASTM D4060-10	60 mg/1000 cycles			
Impact resistance	ASTM D2794	0.3 kg-m			
Shore D hardness	ASTM D2240-05	D/79/1			



Strata Epoxy SL2000



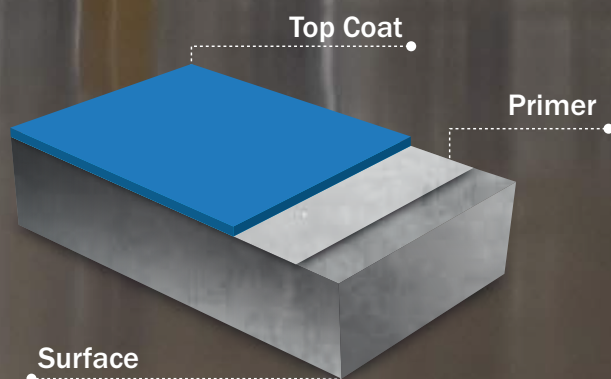
Strata Epoxy SL 2000 is a self-smoothing, solvent-free, three-component epoxy paint system suitable for a wide range of purposes.

Special features

- Self-smoothing and high-build.
- Seamless flooring surface.
- Suitable for DFT from 1-2mm and could be applied up to 3mm.
- Excellent chemical, abrasion and impact resistance.

Areas of use

Designed to protect concrete substrates where a seamless flooring surface combined with excellent mechanical properties is essential. It is ideal for areas where hygiene is vital such as hospitals. It can be applied up to 3mm DFT depending on the specification.



Certificates/approvals:

Property	Standard	Result
Adhesion strength	ASTM D4541-09	4.8 N/mm ²
Tensile strength	ASTM C307-03	19 N/mm ²
Flexural strength	ASTM C580-02	42 N/mm ²
Compressive strength	ASTM C579-01 (2012)	84 N/mm ²
Abrasion resistance	ASTM D4060-10	59 mg/1000 cycles
Impact resistance	ASTM D2794	0.4 kg-m
Shore D hardness	ASTM D2240-05	D/83/1

Chemical resistance	Method	Result
Destillated water (cold) Destillated water (hot) Ethyl Alcohol (50% vol) Alkali solution (5%) Soap solution Detergent solution	ASTM D1308	No discoloration, change in gloss, blistering, softening, swelling, loss of adhesion or special phenomena was observed.

Strata Screed S



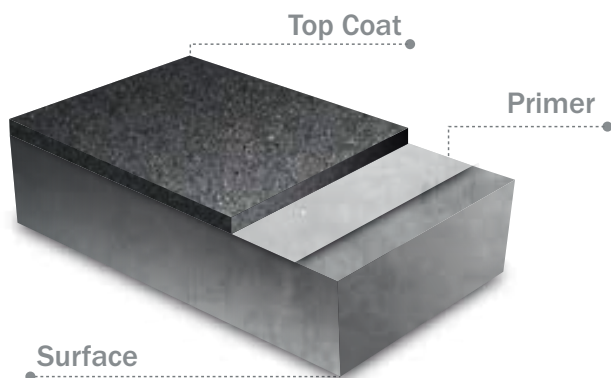
Strata Screed S is a three-component, solvent-free epoxy screed for refurbishment of concrete, tiled and other floor surfaces. Available in standard colours.

Special features

- Outstanding mechanical properties.
- Heavy duty dense surface.
- Excellent adhesion.
- From 5 - 15 mm DFT.
- Trusted durability.

Areas of use

Designed to protect floors exposed to extreme and frequent heavy duty traffic, such as forklift areas in industrial workshops. For maximum performance use the full system with Strata Primer SF.

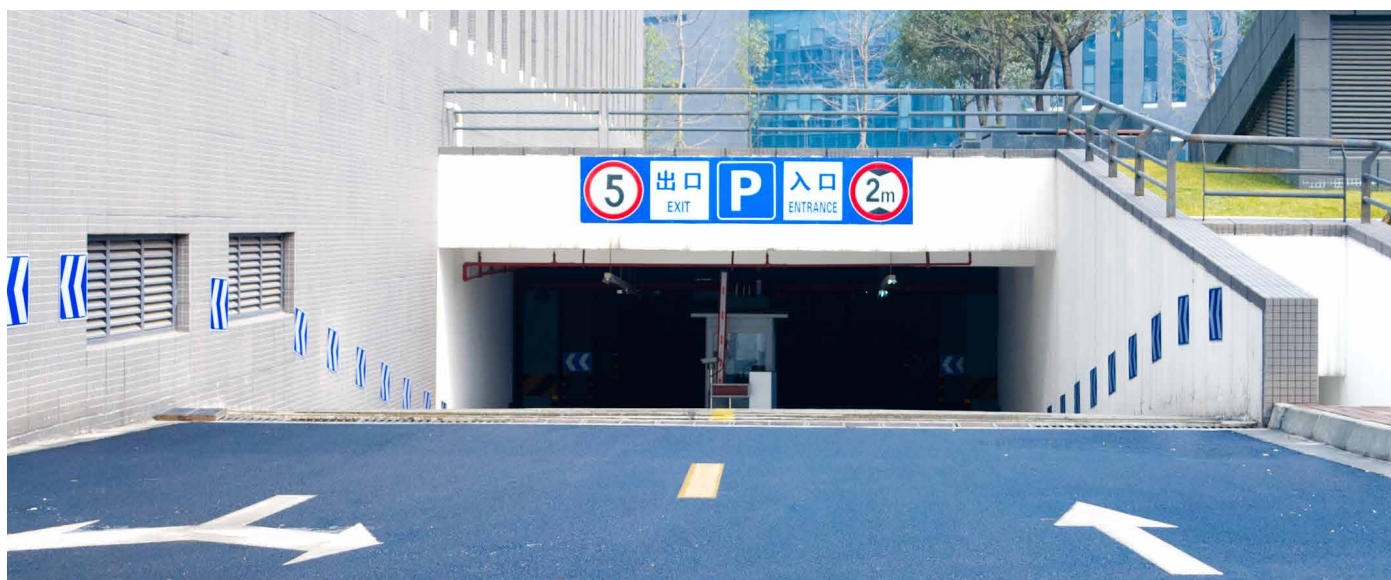


Certificates/approvals:

Property	Standard	Result
Adhesion strength	ASTM D4541-09	3 N/mm ²
Tensile strength	ASTM C307-03	16 N/mm ²
Flexural strength	ASTM C580-02	33 N/mm ²
Compressive strength	ASTM C579-01	88 N/mm ²
Abrasion resistance	ASTM D4060-10	77 mg/1000 cycles
Impact resistance	ASTM D2794	1.5 kg-m
Shore D hardness	ASTM D2240-05	D/83/1

Chemical resistance	Method	Result
Distilled water (cold)	ASTM D1308	No discolouration, change in gloss, blistering, softening, swelling, loss of adhesion or special phenomena was observed.
Distilled water (hot)		
Ethyl Alcohol (50% vol)		
Vinegar (3% acetic acid)		
Alkali solution (5%)		
Acid solution (5%)		
Soap solution		
Detergent solution		

Strata PU Top



Strata PU Top is a two-component, UV-resistant, polyurethane paint based on aliphatic isocyanate with non-yellowing properties.

Special features

- Outstanding UV-resistance, colour & gloss retention.
- Flexible coating.
- Exceptional resistance to oil, dirt pick up and grease.
- Excellent abrasion and chemical resistance.
- Available in a wide range of colours.

Areas of use

Designed to protect concrete substrates inside and out, particularly in areas exposed to heavy abrasion, such as car parks, garages and warehouses. The flexible coating surface can withstand the stresses that rubber tyres make on the flooring system. Also for use as UV-protective topcoat on Strata epoxy-based paints to improve gloss retention.

Certificates/approvals:

Property	Standard	Result
Adhesion strength	ASTM D4541-09	3.9 N/mm ²
Elongation	ASTM D 412-06a	34%
Water absorption	ASTM D570-98	0.74%
Abrasion resistance	ASTM D4060-10	97 mg/1000 cycles
Impact resistance	ASTM D2794	0.45 kg-m
Shore A hardness	ASTM D2240-05	A/83/1

Chemical resistance	Method	Result
Distilled water (cold) Distilled water (hot) Ethyl Alcohol (50% vol) Vinegar (3% acetic acid) Alkali solution (5%) Acid solution (5%) Soap solution Detergent solution	ASTM D1308	No discolouration, change in gloss, blistering, softening, swelling, loss of adhesion or special phenomena was observed.





Strata Sealer

Strata Sealer is a transparent two-component, solvent-based epoxy primer with excellent sealing properties.

Special features

- Excellent penetration properties.
- Sealing absorbent concrete substrates.
- Convenient long pot-life.

Areas of use

Designed to seal and saturate well-cleaned and porous concrete surfaces before applying the topcoats in the Strata range. This will ensure adhesion between Strata topcoats and the substrate.



Strata Primer SF

Strata Primer SF is a two-component, solvent-free high-build epoxy primer.

Special features

- Good penetration properties.
- Odour-free.
- Easy to use and can be applied by a brush or a roller.

Areas of use

Designed to be used as a primer for all porous concrete surfaces before applying the topcoats in the Strata range. This will ensure adhesion between Strata topcoats and the substrate. It is specifically developed to ensure maximum adhesion in the Strata system, especially in the screed system.



Strata Epoxy Floor Filler

Strata Epoxy Floor Filler is a high-build, multi-component, solvent-free epoxy putty for filling holes and leveling the surface.

Special features

- High strength and non-shrinking.
- Can be applied up to 5mm thickness in one go.
- Excellent chemical resistance.
- Easy to apply.

Areas of use

Designed to fill imperfections and irregularities in concrete floors prior to over coating with topcoats from the Strata range.



Strata Anti-slint 900

Strata Anti-Slint 900 is an appropriate grade of dry silica sand to be applied in combination with Strata topcoats for a non-slippery surface.

Special features



- Easy to use.
- Flexible in dosage.
- 900 micron average particle size.
- Flame dried for optimal purity.

Areas of use

On non-slip ramps, wet areas, food production plants, dairies and areas where a non-slippery floor finish is specified.



Technical details

Strata	Gloss	Pot-life (20°C)	Recommended DFT	Theoretical spreading rate per coat*	Recoat interval min. (20°C)	Recoat interval max. (20°C)	Application tools
Epoxy floor Filler	Matt	60 minutes	Max. 5mm	2 kg/m ² /mm DFT	24 hours	72 hours	
Sealer	Glossy	8 hours	1 x 40 micron	7.3 m ² /litre	24 hours	72 hours	
Primer SF	Glossy	45 minutes	1 x 100 micron	10.0 m ² /litre	24 hours	72 hours	
Epoxy LT	Glossy	6 hours	2 x 60 micron	9.0 m ² /litre	24 hours	72 hours	
Epoxy MT	Glossy	70 minutes	2 x 75 micron	10.6 m ² /litre	24 hours	72 hours	
Epoxy HT	High gloss	50 minutes	2 x 150 micron 2 x 250 micron	6.6 m ² /litre 4.0 m ² /litre	24 hours	72 hours	
Epoxy SL2000	High gloss	50 minutes	1 x 1000 - 2000 micron	3 kg/m ² / 2mm DFT	24 hours	72 hours	
Screed S	Semi gloss	70 minutes	1 x 5000 - 15000 micron	11 kg/m ² / 5mm DFT	24 hours	72 hours	
PU Top	Glossy	3 hours	2 x 75mm	6.8 m ² /litre	24 hours	72 hours	

* The theoretical spreading rate has been calculated for the volume solid stated in PDS and for the recommended DFT.

A practical spreading rate will depend on the actual DFT, the nature and the porosity of the substrate and the relevant consumption factor.

For other technical details, please refer to PDS.



Strata colours

Strata is Hempel's complete floor coating systems solution. Its highly technological and innovative formulas are designed to maximize your floor protection. The following are the standard recommended colours, but it can be tinted in other colours on request.

Strata Epoxy SL/HT

Strata Screed, Strata Epoxy LT/MT, Strata PU Top



1Y793



1Y803



10320/Screen
1Y833



55200/Screen
5Y821



1Y813



2Y073



17450/Screen
1Y843



35240/Screen
3Y321



6Y111



6Y112



3Y301



3Y311

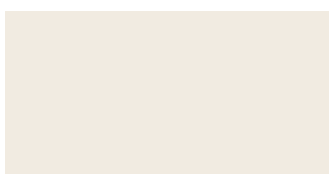


4Y004



4Y014/Screen
4Y024

Strata Epoxy LT/MT Strata PU Top



15420



13430



20770



12750



47240



12170

Although we have used the latest in printing and depositing technology, the actual colours may vary in reality depending on the product and when compared across the products. Deviation in colour can also occur due to different gloss levels and to the addition of Silica, as in Screed Systems. For critical colour matches, we recommend testing on a small area before full application. Different batches should be blended before use to avoid colour variation.



Prepared for great results

All flooring systems, including Strata, require an adequate surface preparation before applying it. Even Strata products cannot compensate for poor surface preparation.

Strata has been designed to comply with the most demanding requirements, especially when it comes to durability, mechanical properties and chemical resistance. However, Strata's ultimate performance depends to a great extent on the correct conditioning of the surface to be treated.

This guide to surface preparation serves as a tool to select the method for preparing the concrete surface before applying Strata in order to secure the ultimate high-performance result.



Most common conditions:

Laitance

Laitance is the weak, milky layer of cement and sand that rise to the concrete surface as a result of premature finish or trowelling. If a coating is applied directly to the laitance layer, the floor traffic will cause disbanding of the coat.

Contaminations

Old concrete floors can be contaminated by oil, grease, chemicals etc. Check the surface for dark patches that indicate contamination. Spray water on it to see if it absorbs the water. If water stays on the surface, then it indicates contamination, and must be removed by concrete cleaner or degreaser.

Porous concrete

The common procedure is to sand and apply a primer that penetrates the substrate well. In cases where a high performance is needed, it is possible to shot-blast or scarify.

Polished concrete and non-porous construction materials

It is essential to apply proper primers. For high-performance systems such as those applied in hygienic areas, shot blasting, scarifying or grinding is necessary. It can be applied up to 3mm DFT depending on the specification.

Well-attached old paint

Should be sanded in order to ensure good adhesion.

Badly-attached old paint

Remains of badly-attached, old materials must be removed as these can cause detachment.

Damp

Surfaces that have problems with dampness require water-borne systems that permit vapour permeability. If they don't comply with these requirements, there will be an increased risk that the flooring will blister or detach. For a coating to bond properly, the concrete surface must be sound, clean and free from surface defects and dryness. The surface should be properly roughened to establish a good mechanical bond.

Concrete surface profile (CSP)

Recommended surface preparation should follow the guidelines of the International Concrete Repair Institute (ICRI). Key to the guidelines is ICRI's Concrete Surface Profile (CSP) classifications, a system of ten distinct textures ranging from CSP1 (nearly flat) to CSP10 (extremely rough).

Surface preparation

Methods for creation of different CSP

Acid etching

Profile achieved:
CSP1

Method and machinery:
Diluted hydrochloric acid (%10 solution) is applied liberally onto the floor by a watering can or an acid-proof manual spray pump.

Note:
It does not remove surface contaminants such as oil and grease, which must be removed before the etching process. This method should only be used on areas exposed to light or moderate foot traffic.



Grinding

Profile achieved:
CSP2

Method and machinery:
A diamond grinder uses horizontally-rotating discs to level, smooth and clean the concrete slab surface.

Note:
Low surface damage risk.

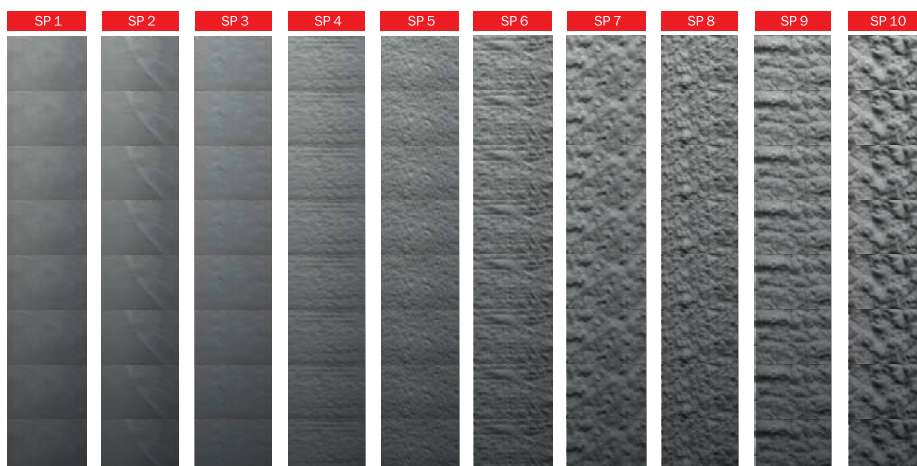


Shotblasting

Profile achieved:
CSP3-CSP7

Method and machinery:
A dust-free technique that removes, cleans and achieves the desired profile of the surface in a single step. Thousands of steel shot particles are propelled onto the surface, removing the top layer and contaminates on the concrete surface. Steel shots can vary in size resulting in CSP from 3 to 7.

Note:
Low surface damage risk.



The CSP chart is used as a visual representation of desired concrete surface textures, roughness and general appearance. The guideline designates each CSP classification as a suitable base for specific coating types and thicknesses. It also describes the method(s) or equipment typically used to achieve the texture according to the CSP classification.

Flooring to be applied	DFT (microns)	CSP1	CSP2	CSP3	CSP4	CSP5
Sealer or primer	0-75					
Epoxy coating	100-300					
Epoxy self-levelling	1000-3000					
Screed S	5000-1000					

Strata

Ultimate protection for floors

Since 1915 Hempel has been producing protective coatings that help customers to safeguard their assets whilst keeping them looking their best. Today we are a world-leading supplier of trusted solutions in the Protective, Decorative, Marine, Container and Yacht markets. Employing over 5,000 people, across 80 countries worldwide, with 28 factories and more than 150 stock points globally. This includes many recognised brands like Crown Paints, Schaeppman and Jones-Blair.

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