Apcoflor TC 510

Two Components, High Build, Solvent Free, Epoxy Floor coating

Description

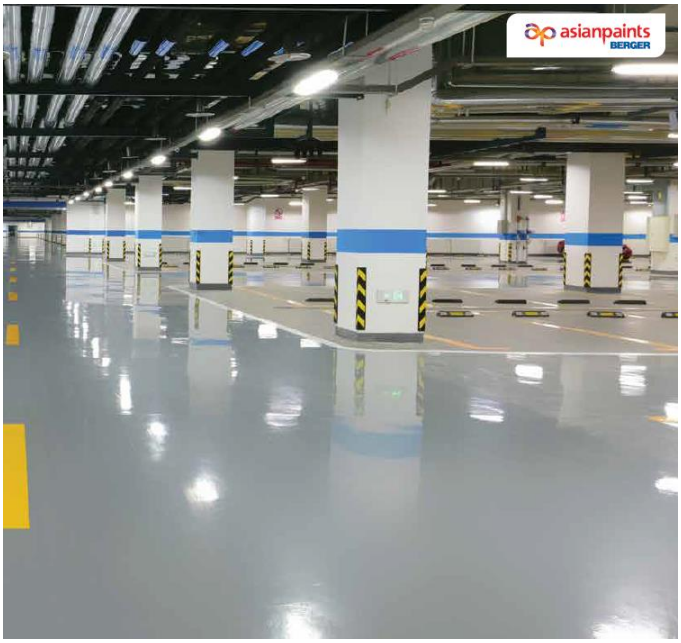
Apcoflor TC 510 is a two pack high build solvent free Epoxy floor coating suitable for wide range of applications.

Uses

- Car Park decks
- Storage areas
- Easy clean floor coating for food processing plants, soft drinking plants
- Seamless automotive plants, warehouses, chemical plants and car parks.

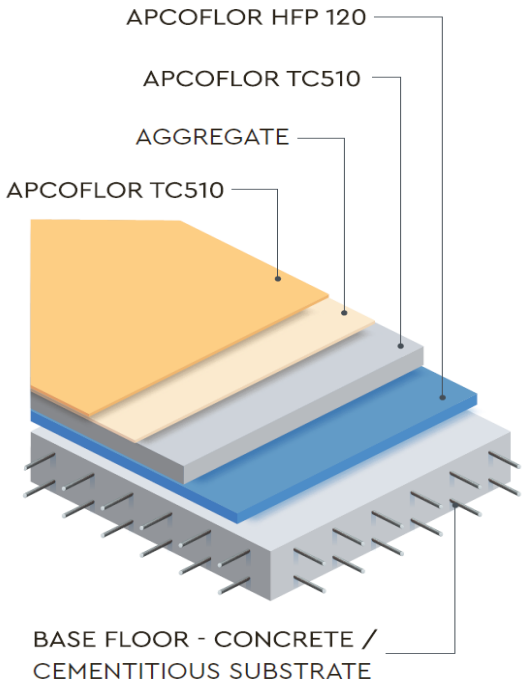
Characteristics

- Durable, wear resistant top coat
- Impervious, flexible film.
- Excellent flow and levelling giving self-levelled finish
- Wide spectrum chemical resistance
- Attractive, easy to clean and maintain
- Odorless and safe to apply.



Properties

Volume solids (ASTM D2697)	98%±2%
Typical Dry Film Thickness	200 - 300 microns
Wet film thickness	204 - 306 microns
Color	As per shade card
Finish	Glossy
VOC	3.9 g/L
Slip Resistance (ASTM E303-93 (2018)	Dry slip PTV - 74
	Wet slip PTV - 48
Shore D hardness ASTM D 2240-15e1	D/68/1
Modulus of Elasticity (ASTM D638-14)	9101 N/mm^2
Compressive Strength ASTM C 579-18	74.1 N/mm^2
Flexural Strength ASTM C 580-18	48.2 N/mm^2
Tensile Strength ASTM C 307-18	23.5 N/mm^2
Impact resistance ASTM D2794-93 (2019)	No sign of cracks or disbanding was observed (Kg-m – 0.73)
Impact Strength EN ISO 6272-1	3.0
Crack Bridging Ability BS EN 1062-7:2003	2.2mm
Water Absorption ASTM D570-18	Nil
Pull-off Adhesion Strength ASTM D4541-17	3.7 N/mm2
Antifungal Test ASTM D 3273	No growth in 28 days of test
Anti-bacterial activity ASTM D588	Zero colonies
Flame spread index ASTM E84-17a	10
Smoke developed index ASTM E84-17a	15
Red Oak Calibration (%*Min) ASTM E84-17a	71.0
Abrasion resistance ASTM D 4060-19	AVG weight loss after 1000 cycles – 37.00 mg



Chemical Resistance

CHEMICALS	OBSERVATION	TYPE OF EFFECT
Lactic Acid (20%)	No blistering, softening or disbonding observed	Resistant
Nitric Acid (5%)		
Acetic Acid (20%)		
Copper Sulphate (25%)		
Zinc Sulphate (25%)		
Tap water		
Sea water		
Ground water		
petrol		
Diesel		
Hydraulic Oil		

Drying time

Ambient Temperature	Touch Dry	Hard Dry	Full cure	Recoating Interval (Min)	Pot Life
25°C	6 Hrs	24 Hrs	7 days	24 Hrs	90 minutes
35°C	3 Hrs	16 Hrs	7 days	16 Hrs	30 minutes
45°C	1.5 Hrs	12 Hrs	5 days	12 Hrs	20 minutes

Induction time: 2-5 hours

Application Method

Surface Preparation:

- A sound, clean and dry substrate is absolutely essential for successful coating application and in ensuring maximum bonding between the substrate and coating system. New concrete surface must be minimum of 28 -days old, free form curing compounds and sealers and have a moisture content less than 5% prior to application of the primer.
- The surface can be prepared mechanically using sand blasting, diamond grinding, shot blasting or scarifier. The choice of surface preparation should be determined by the extent and nature of contamination present on the concrete surface. All dust present must be removed by vacuum pump.
- All cracks present, based on the depth of the crack, should be filled either by **Apcoflor Epoxy Putty** or epoxy mortar, Expansion joints should be brought up through the coating using **Smartcare UnyverSeal PU Sealant or SmartCare Unyverseal Polysulphide Sealant.**

Moisture Testing

- The concrete moisture content should be 5% or less or 5 lbs/1000ft^2/24 hrs via calcium chloride test.

Priming

- Priming is normally not required for sound, non-porous concrete.
- For porous concrete substrate, should apply primer with Apcoflor range of primers. Contact Asian Paints Berger Smart Care Technical team for advice.
- The primer should be left to achieve a tack-free condition before applying the top coat. A second coat of primer may be required if the substrate is excessively porous.
- If the concrete substrate is sound, nonporous and have good anchorage, Apcoflor TC 510 can be applied directly by 5-10% thinning. Contact Asian Paints Berger for further advice.

Mixing

Stir the base and hardener separately. If settling is observed in the base or hardener, loosen the settled material with the help of hand stirrer followed by power driven stirrer for quick homogeneous mixing. Mix hardener gradually into the base under continuous stirring as per stated mixing ratio. Apply after induction time and before expiration of pot life.

Antiskid finish

antiskid finish can be achieved by broadcasting Antiskid Aggregates over the wet film of **Apcoflor HFP 120**, preferably 30-45 minutes depending on the ambient temperature.

Antiskid aggregates are available as following:

Anti-slip 1 (Fine aggregates): 0.1 to 0.3mm

Anti-slip 2 (Medium aggregates): 0.3 to 0.6mm

Anti-slip 3 (Coarse aggregates): 0.5 to 1.5mm

Application
Apply in two coats of 200 – 300 microns each wet film thickness using a short pile roller or airless spray.

Theoretical Coverage
Apcoflor HFP 120 – 16 m^2 /kg @ 50 microns DFT
Apcoflor TC 510 - 3.92 m^2/Ltr @ 250 microns DFT
Actual coverage will depend on surface profile and wastage.

Application Conditions
Do not apply this product if the relative humidity exceeds 95% or if the substrate temperature is within 3°C of the dew point.

Mixing Ratio
7 parts Base to 1-part hardener (by volume)

Airless Spray
This is a possible method of application Maximum 10% thinner may be added.
Tip size: 0.38 – 0.48 mm (0.015 - 0.019 in)
Pressure: 110 – 160 kg/cm^2 (1600 -2300 psi)

Brush or Roller
This is the recommended method of application.
Thinner maximum 5% may be added

Additional Information

Thinner/ cleaning solvent	Solvalux7-45
Flash point	Mixed less than 28°C
Packaging	Apcoflor HFP 120 – 5 kg and 20 kg
	Apcoflor TC 510 - 18 Ltr and 3.6 Ltr
Shelf life	24 months from the date of manufacturing

Product usage restrictions
- Do not apply this product if the relative humidity exceeds 85% or if the substrate temperature is within 3°C of the dew point.
- Generally recommended for interior use. Can be used on exterior over-coated with **Apcoflor TC600 or other PU Top Coats.**
- As common with all epoxy products, this product also will tend to discolor and chalk on exposure to direct sunlight (UV rays)

Storage
Store in a cool, dry, shaded area away from direct sunlight.

Safety Precautions
Avoid contact with the skin and eyes. Wear suitable protective clothing such as overalls, goggles. Use a barrier cream.
Ensure that there is adequate ventilation in the area where the product is being applied. Do no breathe vapor or spray.
This product is flammable, keep away from sources of ignition. Do not smoke. Take precautionary measures against static discharge. In case of fire, blanket flames with foam, carbon dioxide or dry chemicals.
Refer MSDS for detailed health & safety information on this product.
Eyes: in the event of accidental splashed, flush eyes immediately with warm water and obtain medical advice
Skin: wash skin thoroughly with soap and water, or with an approved industrial cleaner. Do no use solvents.
Inhalation: move patient to fresh air, loosen collar and keep rested.
Ingestion: do not induce vomiting, obtain immediate medical attention
For detailed handling & storage information refer to MSDS

Version No. V01/23. Please note that this datasheet supersedes all previous versions