

[TECHNICAL BULLETIN]

ASTEC FLOOR COATING
WATER BASED EPOXY

Epi-tec Gloss

PRODUCT TYPE

Water Based, Two Pack Epoxy Floor Coating.

PRODUCT DESCRIPTION

Epi-tec Gloss is a two component BIS A PHENYL and POLYAMIDE water based epoxy coating designed for high traffic concrete floor applications. The product is supplied as a Part A and Part B, which is mixed at a 1:1 ratio just prior to application and can be applied to most correctly prepared concrete surfaces.

Epi-tec Gloss is waterbased and therefore, provides a coating that is simple to mix, apply and clean-up. Most importantly, the product provides the applicator with a low odour environment during application.

The applied wet film of Epi-tec Gloss flows and levels extremely well and dries to provide a cured film that is tough, smooth and defect free. Floors coated with Epi-tec Gloss are low maintenance, easy to keep clean and have excellent resistance to most chemicals, hydrostatic water pressure, abrasion and general wear from vehicle and human traffic. Epi-tec Gloss exceeds the chemical resistance of conventional solvent based epoxy's in areas of solvent resistance.

This system is suitable for use on new or existing surfaces in areas such as;

- Heavy Industrial flooring.
- Commercial vehicle workshops.
- Storage facilities.
- Basement walls.
- Manufacturing plants.
- Food preparation areas.
- Commercial laundries.
- Food processing plants.

SURFACE PREPARATION

The preparation of concrete floors must be carried out to exact standards to ensure the long-term performance of the applied coating.

Surface preparation requirements can change dramatically due to the wide and varied conditions of new and existing floors. As a result, it is not possible to cover all preparation techniques within this Bulletin.



Astec Paints is a 100% Australian owned company committed to the research and development of technologically advanced coatings that provide premium durability against our harsh Australian conditions. Our coatings are manufactured with high regard for worker safety and environmental care and will provide you with absolute confidence in long term performance.



Epi-tec Gloss

[TECHNICAL BULLETIN]

ASTEC FLOOR COATING

SURFACE PREPARATION

Therefore, this Technical Bulletin must be read in conjunction with a separate Publication covering all preparation techniques.

All preparation for this system **must be** in accordance with Technical Guidelines, prepared by the International Concrete Repair Institute, Guideline Number 03732, January 1997. The guideline is entitled "**Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings and Polymer Overlays**".

This guideline is available from International Concrete Repair Institute, 1323 Shepard Drive, Suit D Sterling VA 20164-4428, **phone** 703-450-0116, **fax** 703-450-0119, **email** concrepair@aol.com

The tables and information below are summaries from "Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings and Polymer Overlays"

This excerpt has been provided as indicative information only and is not complete. The complete Technical Guideline should be read in conjunction with this summary.

EPITEC EXAMPLE FOR SELECTING PREPARATION METHOD FROM CHART ONE

One coat Epitec primer 62.5 mic D.F.T.

Two coats Epitec Gloss 118.6 mic D.F.T.

Total D.F.T **181.10 mic D.F.T.**

CHART ONE	Concrete Surface Profile (CSP)				
Coating to be Applied	CSP1	CSP2	CSP3	CSP4	CSP5
Sealers 0-3 mils (0-75micron)	✓	✓	✓		
Thin Film 4-10 mils (100-250micron)	✓	✓	✓		
High Build 10-40 mils (250-1000micron)			✓	✓	✓

Reference - Technical Guidelines, International Concrete Repair Institute, Guideline Number 03732, January 1997. "Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings and Polymer Overlays".

CHART TWO	Concrete Surface Profile (CSP)				
Preparation Method	CSP1	CSP2	CSP3	CSP4	CSP5
Detergent Scrubbing	✓				
Low Pressure Water Clean	✓				
Acid Etching	✓	✓	✓		
Grinding	✓	✓	✓		
Abrasive (sand) Blasting		✓	✓	✓	✓

Reference - Technical Guidelines, International Concrete Repair Institute, Guideline Number 03732, January 1997. "Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings and Polymer Overlays".

The summary charts provide the following information, for the example Epittec coating system.

The minimum requirements for preparation are CSP1, CSP2 and CSP3. However, the example Epittec system of 181.10 mic D.F.T. is at the high end of the (100-250 micron bracket)Therefore, the preparation method should be selected from either, acid etching, grinding and/or abrasive blasting or any other method that will achieve a surface profile of CSP2 or CSP3.

Again, this information is indicative only and the entire guideline should be read in conjunction with this technical bulletin.

EPI-TEC PRODUCT RANGE

- Epi-tec Water Based Epoxy Non Skid.
- Epi-tec Water Based Epoxy Satin.
- Epi-tec Water Based Epoxy Primer.

COLOUR RANGE

Available in light Base only.
Light Base can be "in store" tinted to most mid and light tone colours selected from the Astec Living Colour fan deck.

MIXING RATIO

1 : 1 by volume

POT LIFE

Useable 1 hour.

Although the mixed product will remain fluid for 3 to 4 hours the entire content should be used within 1 hour. After 1 hour the product starts to partially set and therefore makes application difficult as a result of reduced flow and leveling.





[TECHNICAL BULLETIN]

ASTEC FLOOR COATING

RECOAT WINDOW

12 hrs minimum - 24 hrs maximum.

PHYSICAL AND THERMAL PROPERTIES OF WATER BASED EPOXY GLOSS

Drying Mechanism	Chemical Crosslink Reaction, evaporation
Adhesion	high
Alkali Resistance	med - high
Resistance to vapour permeation	very high
Flexibility	low
Hydrostatic Pressure Resistance	345 to 414 kPa (50 to 60 psi) at total DFT 250-300 microns
Coefficient of Thermal Expansion	med - high
Chemical Resistance	excellent
Solvent Resistance (aged)	excellent
Abrasion Resistance	med - high
Heat Resistance	dry continuous (cured film) 110°C
UV Resistance	medium
Moisture Tolerance (during application)	medium
Cure Shrinkage	low
Accelerated Weathering	Good (slight chalking 1200 hrs U.V.A.)
Min application Temperature	5° C
Colour Range	Full range

PHYSICAL PROPERTIES

Gloss level	High Gloss
Drying Time @ 25°C	
(Touch Dry)	1 to 3 hours
(Dry)	12 to 24 hours
Recoat Window	12 minimum - 24 hours maximum
Recommended Thinners	Thinning should not be required, however water can be used up to 10%
Pot Life	1 to 2 hours maximum
UN Number	None Allocated
Hazchem Code	None Allocated
Poisons Schedule	S5
D.G. Class	None Allocated
Solids by Volume (mixed)	43.5%
Specific Gravity (Part A)	1.39
Specific Gravity (Part B)	1.01
V.O.C. (mixed)	Does not exceed 125 gms/ltr

COVERAGE

Theoretical spread rate at required D.F.T (118.60 microns Dry)	3.625 m ² per ltr
Theoretical spread rate at 59.3 microns dry	7.25 m ² per ltr
1st coat	6-8 m ² /ltr
2nd coat or re-coats	6-8 m ² /ltr
1 single coat only	3.625 m ² per ltr

(Rates given are applicator and substrate dependent.)

NOTE: It is better to apply multiple thin coats rather than one thick coat, however in some circumstance where shut down time is a major project consideration, single coat applications can be suitably achieved.

CHEMICAL RESISTANCE

CHEMICAL NAME	EFFECT / 100 RUBS / IMMERSION
Hydrochloric acid 10%	Slight Deterioration
Nitric Acid	Slight Deterioration
Sodium Hypochlorite 10%	No Deterioration
Sodium Hydroxide 10%	No Deterioration
Sea Salt Solution 5%	No Deterioration
Soap Solution	No Deterioration
Chlorine Gas	No Deterioration
Xylene	No Deterioration
Degreaser	No Deterioration
Toluene	No Deterioration
Methyl Ethyl Ketone	Slight Deterioration
Antifreeze	No Deterioration
Methanol	Slight Deterioration
Transmission Fluid	No Deterioration
Two Stoke Oil	No Deterioration
Brake Fluid	No Deterioration
Diesel	No Deterioration
Unleaded Fuel	No Deterioration
Paint Stripper	Slight Deterioration

MIXING

Epi-tec Gloss is a 2 part formulation and should be **thoroughly mixed for 1 minute** at a 1:1 ratio by volume just prior to using.



Epi-tec Gloss

(TECHNICAL BULLETIN)

ASTEC FLOOR COATING

APPLICATION

Epi-tec Gloss can be applied with most application equipment such as; brush, spray ,rollers and rubber squeegees. For roll application the most suitable roller cover is a "Rota Cota Rolana All Paints Cover".

During application and mixing, air can be entrained in the material. Any air present in the applied film should be removed by tipping off immediately with a spiked roller, to reduce the effects of bubbles on the final finish.

Ensure all equipment such as brushes, rollers and other painting utensils are clean and free of contaminant material prior to application.

During application, use a brush or small roller to cut into the edges. Coating should be performed out of direct sunlight and not during the hottest part of the day, early morning or late in the afternoon is preferable.

With the surface prepared, seal/prime the surface with one coat of Epi-tec Primer at (refer to Epi-tec Primer Technical Bulletin).

Allow 6 to 12 hour for the primer to dry then apply first coat Epitec Gloss.

Allow no less than 12 hours or no more than 24 hours between each coat. If recoating is performed out of the maximum 24 hours, then the surface must be abraded and cleaned again.

Do not paint in moist conditions, damp surfaces, direct sunlight or if rain is imminent. To ensure the substrate is dry tape down a 100cm by 100cm clear plastic piece with duct tape, if any condensation appears within three hours, the substrate is not ready for coating. Apply this test in several areas of the floor. Rain or moisture will cause slight blushing of the surface coating.

If the concrete surface is wet or high in moisture adhesion of the final coat may be affected by delamination or blistering due to the hydrostatic pressure. Consult your Astec Paints representative for situations where the concrete is still wet or high in moisture. For these situations Epi-tec Gloss may not be appropriate.

After the final coat allow at least 5 days of warm weather for final cure. Full resistance characteristics are achieved after 5 days cure.

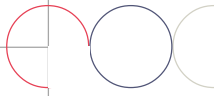
DRYING / RECOATING

First coat will be dust dry in 2 to 4 hours depending on temperature. Tack dry in 4 to 6 hours. Apply the second and third coats when the surface is firm to walk on usually 8 to 24 hours. If more than 24 hours is allowed between coats then the previous coat should be lightly abraded to provide adequate key for the next coat.

The system is a two-pack system with a pot life of approximately one to two hours, ensure all preparation is performed prior to mixing of Part A and B. If pot life has exceeded the specified time bracket the coating will be difficult to apply and the final system integrity may be affected. Do not use if the system has exceeded the specified pot life.

SAFETY / DISPOSAL

The system is based on water based epoxy coating and all equipment can be washed in water. Avoid repeated or prolonged exposure to skin or via inhalation. Use adequate ventilation when mixing and applying the system. Do not wash down the equipment to storm water or sewer system. Refer to Material Safety Data Sheet for further information before using the product.



The technical data furnished herein is based upon data believed by Astec Paints to be true and accurate at the time of writing, however, no guarantee of accuracy is given or implied and is subject to change without notice.

It is given in good faith for the assistance of users. No legal warranty expressed or implied is made as to its accuracy, completeness or otherwise.

Every person dealing with this material herein does so at their own risk absolutely and must make independent determinations of suitability and completeness from all sources to ensure the products proper use.

We have no control over the condition under which these products are stored, handled or used, therefore our recommendations must not be regarded as a mounting to legal warranty or as involving any liability on us.



Astec Paints Australia Pty. Ltd.
24 Pinn Street, St. Marys,
South Australia 5042

Telephone +618 8277 6067
Facsimile +618 8277 6291
e-mail enquiries@astecpaints.com.au

Your nearest Astec Paints distributor is:

Revised Edition August, 2002

Astec Paints Distributors, Australia:

South Australia

→ St Marys, Head Office and
Manufacture

New South Wales

→ St Peters

Victoria

→ Melbourne

Queensland

→ Benowa

→ Acacia Ridge

Darwin

Astec Paints Distributors, International:

China

Japan

→ Tokyo

→ Okinawa

Singapore

Taiwan

United Kingdom