

Identifying Defects in MH Coatings and How to Fix Them

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There are 6 primary FAILURE MECHANISMS that occur in MH coatings

- 1. Delamination**
- 2. Pinholes**
- 3. Blisters**
- 4. Cracking**
- 5. Uncured coating**
- 6. Holidays**

Delamination:

- Defined as a loss of adhesion, either to the substrate or between individual coats.

Typical Causes:

- Inadequate surface preparation
- Contamination
- Exceed coating recoat window
- Incompatible coatings

Repair:

Depending on the extent, abrade and recoat or completely remove the delaminated coating and reapply.



Pinholes:

- Small holes or craters in the dried coating film.

Typical Causes:

- Air entrapment in porous substrate
- Outgassing (moisture vapor)
- Solvent entrapped in coating film
- Incorrect spray application

Repair:

Abrade, clean and apply one or more coats as necessary.



Blisters:

- Dome shaped “bubbles” in the dried coating film (local loss of adhesion).

Typical Causes:

- Excessive moisture in substrate
- Solvent entrapment
- General poor adhesion

Repair:

Remove excessive moisture condition if present. Abrade, clean and apply coating(s) as necessary.



Cracking:

- The splitting of the coating film that may penetrate down to the substrate.

Typical Causes:

- Surface movement
- Lack of flexibility
- Traffic load

Repair:

Abrade to remove. Reapply coating or use more flexible system if continued movement is anticipated.



Uncured Coating:

- A coating that has not cured or is soft, tacky and easily deformed.

Typical Causes:

- Insufficient dry time
- Poor environmental conditions
- Incorrect mix ratio
- Wrong hardener

Repair:

Remove uncured coating and recoat. Large areas may require removal.



Holiday:

- A discontinuity in the coating film exposing the substrate.

Typical Causes:

- Application error
- Pinhole

Repair:

Apply additional coatings to the missed area.



CONCLUSIONS:

Epoxy Protective Coatings have a decades long, successful track record as a superior material technology in protecting manholes and other concrete collection system structures. Their mechanical and physical properties, along with their high chemical resistance and moisture tolerance make them a perfect fit for the application.



Thank You!

Questions?



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