

SafeCoat® Steel

<p>WRINKLES Noticeable wrinkled texture on paint surface while drying.</p> <p>Reasons</p> <ul style="list-style-type: none"> • Application of WFT was higher than recommended • Improper environmental conditions: high moisture • Surface influenced by improper conditions while drying <p>Remedies</p> <ul style="list-style-type: none"> • Follow mil thickness and environmental requirements <p>Repair <u>Aesthetics:</u> sand to a smooth surface <u>Safety:</u> does not adversely affect fire performance</p>	
<p>SAGS</p> <ul style="list-style-type: none"> • Immediate downward “drooping” movement of paint • May see pooling in corners and horizontal surfaces • May crack <p>Reasons</p> <ul style="list-style-type: none"> • Application of WFT was higher than recommended • Improper thinning of the product (addition of water) • Improper surface and/or environmental conditions • Spray gun was held too close to the surface • Excessive overlapping or re-coat applied too soon <p>Remedies</p> <ul style="list-style-type: none"> • Follow application requirements for all the above <p>Repair <u>Aesthetics:</u> sand to a smooth surface <u>Safety:</u> sagging does not affect fire performance</p>	
<p>DRY SPRAY Poor atomization of SafeCoat® Steel</p> <p>Reasons</p> <ul style="list-style-type: none"> • Applicator too far from the steel member while spraying • Application temperature too high <p>Remedies</p> <ul style="list-style-type: none"> • Follow recommendations for correct spraying distance • Follow required product spray temperatures <p>Repair <u>Aesthetics:</u> sand to a smooth surface <u>Safety and Adhesion:</u> sand all dry spray off the surface between coating applications to avoid future delamination issues and product re-application</p>	

POOR HANG

SafeCoat® Steel WFT does not build as expected.

Reasons

- Condensation or moisture on the steel surface
- Product was improperly thinned (water added)
- Residual water in the spray pump

Remedies

- Ensure environmental conditions are followed
- Ensure spray equipment is clean and free of all water
- Do not thin the **SafeCoat® Steel**
- Apply thin 15-20 mil WFT catch-coat to dry steel surface prior to applying heavier coats

Repair

Aesthetics: sand to a smooth surface

Safety: hang does not affect fire performance as long as the total final mil thickness specified is accurate



SURGES

SafeCoat® Steel sprays out of the pump in a stream instead of an atomized spray fan.

Reasons

- Insufficient product in the pump feed
- Short tip blockage by foreign material

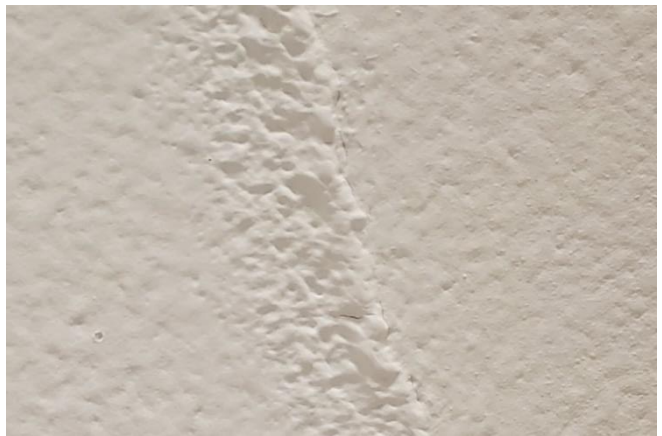
Remedies

- Ensure sufficient level of product is in the pump feed
- Ensure tips are clean and not worn – replace if required

Repair

Aesthetics: sand to a smooth surface

Safety: surges do not affect fire performance



CRACKS

SafeCoat® Steel has visible cracks on the surface.

Reasons

- Higher than recommended WFT
- Insufficient cure time between coats (<50D Hardness)
- High air flow, low humidity

Remedies

- Follow mil thickness and cure time recommendations
- If conditions seem unfavorable, apply a stripe coat

Repair

Aesthetics: apply a brush coat on top of hairline cracks

- hairline cracks do not affect fire performance



CRACKS continued...

Large Cracks where adhesion may be compromised

- Coating around the cracks appears to be lifting or appears hollow underneath
- may be visibly apparent or coating falls off or sounds hollow when lightly tapping coating in the area

Repair: Fire Performance Safety Issue

Large cracks where adhesion is affected will adversely affect fire performance

- For large cracks, check adhesion of the coating to the steel in the area of the cracking as per above
- Remove any loose, poorly adhered product and clean
- Repair the area by re-applying coating to the proper mil thickness of the surrounding area



PINHOLES

SafeCoat® Steel has minor pinholes on the surface.

Reasons

- Poor atomization
- Air entrapment

Remedies

- Check pump settings to ensure parameters are within product requirements
- Check tip for signs of wear – if in doubt, change the tip

Repair

Aesthetics: sand to a smooth finish

Safety: pinholes do not affect fire performance



CRATERS

There is an issue with the top coat when there are pock marks on the surface of the finished project.

Reasons

- Foreign matter in the top coat
- May be incompatible with the **SafeCoat® Steel**
- This is not a **SafeCoat® Steel** issue

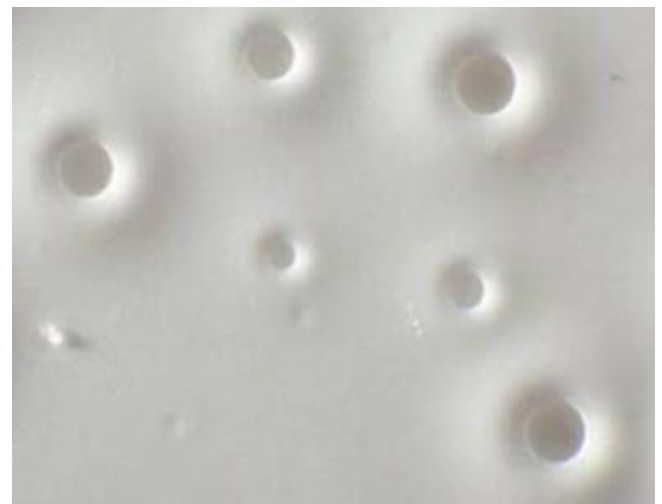
Remedies

- Use only top coats approved according to the detailed product application instructions
- This issue is frequently observed with polyurethane and silicone top coats

Repair

Aesthetics: sand to a smooth finish; re-apply thin coat

Safety: Top coat craters do not affect fire performance



POOR ADHESION DURING APPLICATION

SafeCoat® Steel does not adhere to the substrate.

Reasons

- Primer is incompatible or primer re-coat window was not followed
- Contaminated substrate (oil, grease, excess moisture)

Remedies

- Use approved primer; follow primer recoat instructions
- Ensure there are zero contaminants on the steel

Repair: Fire Performance Safety Issue

- This will affect fire performance; all product **MUST** be completely removed, including primer if incompatible; re-blast and apply approved primer.
- If primer is OK, completely remove fire retardant, clean off all contaminants and re-coat to specifications.



DELAMINATION OF COMPLETED PROJECT

SafeCoat® Steel delaminates off the steel member after it is dry.

Reasons

- Product applied over incompatible surface or primer
- Contamination of the substrate or the product
- Moisture ingress over time

Remedies

- Only use approved primers and remove contaminants
- Interior use only in dry areas; humidity 75% or lower

Repair: Fire Performance Safety Issue

- **SafeCoat® Steel** and primer **MUST** be removed and re-applied as fire protection is compromised
- Re-apply after blasting to specified profile and priming the steel with an approved primer



BLISTERS

SafeCoat® Steel surface has blisters.

Reasons

- Exposure to water: pooling; standing; running

Remedies

- Interior use only in dry areas; humidity 75% or lower

Repair: Fire Performance Safety Issue

- **SafeCoat® Steel** and primer **MUST** be removed and re-applied as fire protection is compromised
- Re-apply after blasting to specified profile and priming the steel with an approved primer



DELAYED DRYING TIME

SafeCoat® Steel not drying at the expected rate.

Reasons

- Temperature and humidity are not within the recommendation of the specification
- Low air flow or air exchange
- **SafeCoat® Steel** coats are applied too thick
- **SafeCoat® Steel** was thinned
- Additional coats of **SafeCoat® Steel** applied too soon
- Top coat applied too soon

Remedies

- Follow environmental and application requirements

PRODUCT NOT SPRAYING OR FLOWING

SafeCoat® Steel is impossible to spray.

Reasons

- Equipment may not have been cleaned
- Product is too cold
- Product was previously frozen
- Expired shelf life
- Container left open too long
- Material not shear-mixed prior to use

Remedies

- Check equipment: tips, pressure, blockages, hose diameter, hose length; ensure filters are removed
- Ensure detailed application instructions are followed
- If the product is like thick mud and can't be stirred, it has been frozen and thawed
- Frozen product is unusable; follow proper disposal instructions for your area

FROZEN PRODUCT

Product that has been frozen or is expired will be curdled or have the consistency of thick mud that can't be stirred or mixed and will be unable to spray.



POOR SPRAY PATTERN/HEAVY OVERSPRAY

SafeCoat® Steel is spraying with an uneven or non-consistent spray pattern and/or excessive overspray.

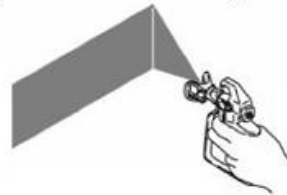
Reasons

- Using the wrong tip size or fan; tip is worn
- Pressure from the pump is too high or too low

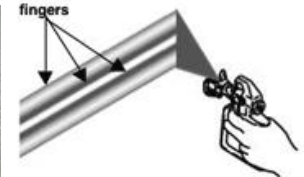
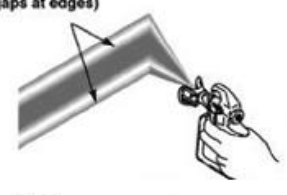
Remedies

- Use required equipment from the application guide
- Check pump settings to ensure parameters are correct
- Check tip for signs of wear – if in doubt, change the tip

Good spray pattern provides uniform coverage



Examples of poor spray pattern tails (gaps at edges)



Sand overspray off between coats for proper adhesion.

POST-INSTALLATION REPAIR PROCEDURES

Damage to Both SafeCoat® Steel and Primer

1. Remove loose and damaged coatings to a clean edge.
2. Remove any corrosion.
3. Limited small areas: prepare surface in accordance with SSPC SP11; avoid polishing the substrate.
4. Large areas of exposed steel: prepare by abrasive blasting to a minimum standard of SSPC-SP6.
5. Feather coating edges by abrading and apply approved primer, avoiding overlap on surrounding product.
6. Within primer re-coat window, re-apply **SafeCoat® Steel** in multiple applications with a brush to the required thickness originally specified.
7. If a top coat was already applied, minimize overlap over the existing topcoat.
8. Re-apply topcoat if previously used.

Damage to SafeCoat® Steel Only

1. Lightly abrade the damaged area to a feathered edge, or if needed, cut out a suitable area of the product and feather out the edges.
(Avoid damaging the primer or all the procedures above will need to be followed.)
2. Continue with step 6 above.