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DKS SDI PAINTING INSTRUCTIONS

Hollow Metal Doors and Frames - Field Painting and Coating Guide

Document Purpose: This guide provides detailed surface preparation, field painting, inspection, and protection requirements for DKS hollow metal doors and frames. It is intended for distributors, installers, contractors, painting subcontractors, service personnel, and project teams responsible for finishing hollow metal products after installation.

Item	Guidance
Document Type	Painting and finishing instructions - hollow metal doors and frames
Applicable Products	Commercial hollow metal doors, frames, borrowed lite frames, sidelight frames, fire-rated assemblies when supplied with valid labels
Primary References	ANSI/SDI A250.10, ANSI/SDI A250.11, SDI-122, SDI/HMMA painting guidance, NFPA 80 where applicable
Contractor Responsibility	Verify substrate condition, primer compatibility, coating system, jobsite environment, surface preparation, fire-label protection, and project specifications before painting

1. General Requirements

- Finish painting is required after installation unless the approved project documents specifically state otherwise.
- Factory-applied primer is intended to provide temporary protection during normal shipping, handling, and short-term storage. It is not intended to serve as the final finish coat.
- Do not apply finish paint until doors and frames are properly installed, adjusted, cleaned, and protected from active construction contamination.
- The painting contractor is responsible for confirming compatibility between the factory primer, touch-up primer, and selected finish coating system.
- Project specifications, coating manufacturer instructions, local codes, fire codes, and approved submittals take precedence when more restrictive.

2. Receiving, Handling, and Storage Before Painting

- Inspect doors and frames for scratches, abrasions, dents, rust, moisture exposure, freight damage, or contamination before field painting begins.
- Store material in a clean, dry, ventilated area on wood blocking or dunnage. Do not store directly on concrete slabs or in standing water.
- Keep products covered from overspray, mortar, plaster, concrete wash, drywall dust, and chemical exposure while allowing air circulation.
- Do not wrap tightly in plastic if condensation may occur. Trapped moisture can cause primer failure, rusting, blistering, or coating adhesion issues.
- Report damaged or wet material before painting. Painting over a damaged substrate may conceal the issue and transfer responsibility to the finishing contractor.

Condition	Acceptable Practice	Do Not
Storage	Dry, ventilated area on blocking	Store flat on wet slabs or against damp walls
Handling	Lift, carry, and protect edges/faces	Drag across concrete, gravel, or metal racks
Protection	Cover from dust and overspray while allowing ventilation	Seal in wet plastic wrap or trap condensation
Fire labels	Keep labels visible, intact, and legible	Paint over, remove, cover, or obscure labels
Contamination	Clean before sanding and painting	Paint over oil, dust, residue, or jobsite chemicals

3. Pre-Paint Verification Checklist

Check Item	Requirement
Installation complete	Doors and frames are installed, adjusted, secure, and ready for finishing
Surface condition	Surfaces are clean, dry, sound, free of rust, oil, grease, dust, and loose material
Primer condition	Factory primer is intact or repaired with compatible primer where damaged
Openings operate	Doors swing, close, latch, and clear the frame before finish coating
Hardware status	Hardware is removed or fully masked before painting

Check Item	Requirement
Labels	Fire labels and certification marks are protected and remain legible
Environment	Temperature, humidity, dew point, ventilation, and drying conditions are acceptable
Coating compatibility	Primer, touch-up primer, and topcoat are compatible and approved for exposure condition

4. Required Tools and Materials

- Clean lint-free rags, approved solvent or detergent cleaner, abrasive pads or fine sandpaper, sanding blocks, tack cloths or clean dry cloths, masking materials, painter tape, drop cloths, brushes, rollers, spray equipment, and wet film/dry film thickness gauge where required by specification.
- Use only cleaning products and coatings recommended by the coating manufacturer for the selected paint system.
- Do not use harsh acids, masonry cleaners, strong alkalis, or unapproved solvents on hollow metal surfaces. These products can attack primer, galvanizing, seam areas, and finish coatings.
- For repair areas, use a compatible rust-inhibitive primer or touch-up primer appropriate for the factory primer and final topcoat.

5. Surface Preparation

- Remove oil, grease, dirt, dust, handprints, chalking, loose primer, moisture, rust, and jobsite contaminants before sanding or coating.
- Clean surfaces with an approved degreaser, solvent cleaner, or detergent solution as recommended by the coating manufacturer. Rinse or wipe as required so no residue remains.
- Lightly sand or abrade factory primer to promote adhesion where required by the coating manufacturer or project specification.
- Feather edges around damaged primer, scratches, or abrasions. Remove loose material and spot prime exposed steel before finish painting.
- After sanding, remove all dust from seams, edges, hinge areas, lock preps, louver corners, lite kits, frame returns, stops, and undercuts.
- Do not paint over rust. Remove rust to a sound substrate and apply an appropriate rust-inhibitive primer before applying finish coats.

6. Primer Conditions and Limitations

- Factory primer is not a weatherproof finish and should not be left exposed for extended periods without final painting.
- Primer may be affected by moisture, UV exposure, jobsite chemicals, abrasion, concrete wash, mortar, plaster, or prolonged storage.
- Damaged primer must be repaired before finish coating. The repair primer must be compatible with both the substrate and the selected finish coating.
- DKS does not control field surface preparation, coating selection, environmental conditions, or application workmanship after product delivery.
- When compatibility is uncertain, perform a coating adhesion test in an inconspicuous area or consult the coating manufacturer before proceeding.

7. Environmental Conditions

- Apply coatings only when surface temperature, air temperature, humidity, ventilation, and dew point are within coating manufacturer requirements.
- As general guidance, avoid painting below 50 degrees F, above 90 degrees F, or when relative humidity is above 85%, unless the coating manufacturer specifically permits it.
- Do not paint wet surfaces, surfaces with condensation, or surfaces likely to drop below dew point during curing.
- Avoid painting in direct sun on hot metal surfaces, during rain, fog, blowing dust, or when construction activity may contaminate wet paint.
- Provide adequate ventilation during application and curing, especially for enclosed interior areas and high-performance coatings.

Condition	Verify Before Painting	Risk if Incorrect
Temperature	Within coating manufacturer range	Poor cure, soft film, adhesion failure
Humidity	Below coating manufacturer limit	Blushing, blistering, slow dry
Dew point	Surface above dew point	Condensation and coating failure
Ventilation	Adequate air movement	Solvent entrapment or slow cure
Dust control	Area clean during application	Contaminated finish or rough surface

8. Coating System Selection

- Select coating systems based on interior/exterior exposure, humidity, traffic level, corrosion risk, cleaning chemicals, and project specifications.
- Use finish coatings compatible with the factory primer and touch-up primer. Compatibility must be confirmed by the coating supplier or paint manufacturer.

- Do not mix coating systems without manufacturer approval. Latex, alkyd, epoxy, urethane, water-based, and solvent-based products may not be interchangeable.
- Exterior or high-humidity applications may require upgraded primer, epoxy intermediate coats, polyurethane topcoats, or other high-performance systems.
- Galvanized or galvannealed products may require specific cleaning and coating procedures. Follow coating manufacturer recommendations for the substrate.

Exposure Condition	Common Coating Approach	Notes
Interior dry	Quality acrylic latex or alkyd enamel	Coordinate with project specification and primer compatibility
Interior high traffic	Alkyd enamel, epoxy, or urethane system	Useful where abrasion, frequent cleaning, or impact exposure is expected
Interior high humidity	Epoxy or moisture-resistant system	Restrooms, kitchens, mechanical areas, locker rooms
Exterior protected	Alkyd/urethane or compatible exterior-grade system	Coordinate with weather exposure and maintenance expectations
Exterior exposed/corrosive	High-performance primer plus epoxy/urethane system	Requires coating manufacturer recommendation and strict surface preparation
Fire-rated openings	Compatible finish coating that does not obscure labels	Maintain NFPA 80 and listing requirements

9. Application Methods

- Spray application is preferred where a uniform shop-like finish is required and site conditions allow proper masking, ventilation, and overspray control.
- Brush or roller application may be acceptable for field conditions, touch-up, or small areas, but may leave texture or brush marks depending on coating type.
- Apply multiple thin, even coats rather than one heavy coat. Heavy coats can run, sag, trap solvent, extend cure time, or interfere with hardware and clearances.
- Maintain a wet edge and follow coating manufacturer requirements for recoat windows, dry time, cure time, thinning, mixing, induction time, pot life, and cleanup.
- Paint all exposed edges, faces, returns, stops, rabbets, frame heads, jambs, and door edges as required by the project specification.

10. Film Thickness and Clearance Control

- Follow the coating manufacturer's recommended wet film thickness and dry film thickness. Excessive film build can create operational problems.
- Avoid heavy paint buildup on hinge edges, lock edges, frame stops, rabbets, astragals, meeting stiles, louvers, lite kits, gasketing contact surfaces, and door bottoms.
- After painting and curing, verify that doors still swing freely, close properly, latch securely, and do not bind against the frame, threshold, gasketing, or hardware.
- Where tight clearances exist, coordinate with the project team before applying heavy-build coatings or textured finishes.

11. Hardware, Labels, and Accessories Protection

- Remove hardware before painting where practical. If hardware remains installed, mask it completely and protect moving parts from paint contamination.
- Do not paint hinges, pivots, locks, latchbolts, strikes, closers, exit devices, coordinators, flush bolts, electric strikes, power transfers, thresholds, gasketing, door bottoms, sweeps, or silencers unless specifically directed by the hardware manufacturer.
- Do not paint over fire labels, listing marks, serial plates, inspection labels, or certification marks. Labels must remain attached, visible, and legible.
- Protect glass, glazing stops, louvers, weatherstrip, seals, and accessory finishes from overspray and cleaning chemicals.

12. Hollow Metal Frame Painting Notes

- Clean frame faces, stops, rabbets, returns, anchors exposed at base, welded corners, miters, drywall returns, and strike/hinge reinforcement areas before painting.
- Do not fill, bridge, or build excessive paint in silencers, hinge preparations, strike pockets, ASA strike cutouts, electric strike preps, closer reinforcement areas, or anchor screw locations.
- Where frames are grouted or installed in masonry, confirm that surfaces are dry and free of alkaline residue before finish painting.
- For KD drywall frames, avoid excessive coating at compression anchor access holes, mitered corners, and snap-on casing areas where applicable.

13. Hollow Metal Door Painting Notes

- Paint top and bottom edges when required by the project specification or exposure condition, especially where moisture or exterior exposure is possible.
- Avoid excessive coating around hinge preparations, lock edges, flush bolt preps, exit device preps, louver cutouts, glass kit cutouts, raceway access points, and door bottom channels.
- If doors include glass kits, louvers, armor plates, kick plates, edge guards, viewers, or applied trim, confirm whether these items are installed before or after finish painting.
- For exterior doors, coordinate coating system, sealing, weatherstrip, threshold, and maintenance requirements to reduce water intrusion and corrosion risk.

14. Fire-Rated Assemblies

- Fire-rated doors and frames are part of a listed assembly. Painting must not alter, damage, remove, or obscure the label or listed components.
- Do not field modify labeled doors or frames to prepare them for painting unless permitted by the listing, code, and authority having jurisdiction.
- Paint must not interfere with self-closing, self-latching, gasketing, clearances, auxiliary hardware, glazing, louvers, or fire exit hardware operation.
- Before turnover, verify that labels are legible and that openings comply with NFPA 80 inspection requirements where applicable.

15. Touch-Up and Repair Procedure

Repair Condition	Recommended Procedure	Important Note
Light scratch in primer	Clean, sand feathered edge, spot prime, finish coat	Primer must be compatible with topcoat
Exposed steel	Remove contamination/rust, prime exposed steel, finish coat	Do not leave bare steel unprotected
Rust staining	Identify moisture source, remove rust, prime, repaint	Painting over rust will not correct failure
Damaged finish coat	Sand smooth, clean, touch up or repaint panel	Blend repair per coating manufacturer guidance
Paint on hardware	Remove carefully without damaging hardware	Do not use chemicals that damage finish or seals

16. Inspection and Quality Control

- Inspect painted surfaces under normal project lighting after coating has dried sufficiently for evaluation.
- Verify full coverage, uniform color, consistent sheen, clean edges, and absence of visible runs, sags, holidays, pinholes, blistering, peeling, contamination, or overspray.
- Check corners, seams, hinge edges, lock edges, frame stops, frame returns, door tops, door bottoms, lite kits, louvers, and accessory edges for complete coverage.
- Operate each door after coating cure. Confirm that coating buildup does not prevent proper swinging, closing, latching, gasketing, or hardware function.
- Correct deficiencies before final project turnover.

Inspection Item	Verify
Coverage	All required surfaces are coated with no missed areas
Adhesion	Coating is bonded and not peeling, flaking, or lifting
Appearance	Finish is uniform in color and sheen without runs or sags
Labels	Fire labels remain visible, legible, and unpainted
Hardware	Hardware is clean and operates without paint interference
Operation	Door swings, closes, latches, and seals as intended
Protection	Finished work is protected from construction damage until turnover

17. Troubleshooting Guide

Symptom	Likely Cause	Recommended Check
Peeling or flaking	Poor cleaning, incompatible coating, moisture, or insufficient sanding	Check surface prep, primer compatibility, and moisture exposure
Blistering	Moisture, trapped solvent, painting over hot/wet surface	Check dew point, cure time, and substrate dryness
Runs or sags	Coating applied too heavily	Sand smooth after cure and recoat with thinner coats
Orange peel/rough texture	Spray setup, wrong reducer, dust, fast drying	Review spray pressure, tip, thinning, and site cleanliness

Symptom	Likely Cause	Recommended Check
Poor adhesion	Contamination or incompatible coating system	Perform adhesion test and consult coating manufacturer
Rust bleed	Bare steel, damaged primer, moisture exposure	Remove rust, prime correctly, repaint
Door binds after painting	Excessive film build at edges, frame stops, or hardware	Check clearances and remove excess buildup where permitted
Hardware does not operate	Paint on moving parts or in preps	Clean hardware and verify hardware was masked or removed

18. Final Painter Sign-Off Checklist

- Doors and frames were inspected before painting.
- Factory primer condition was reviewed and damaged areas were repaired.
- Surfaces were cleaned, sanded or abraded as required, and dust was removed.
- Coating system compatibility was verified with the coating manufacturer or project specification.
- Environmental conditions were acceptable during application and cure.
- Hardware, labels, glass, gasketing, and accessories were removed or protected.
- Finish coat is uniform, fully cured, and free of obvious defects.
- Doors and frames operate properly after painting.
- Fire labels remain visible and legible where applicable.
- Finished work is protected until final turnover.

19. Maintenance and Owner Care

- Clean painted hollow metal surfaces with mild, non-abrasive cleaning methods. Avoid harsh solvents, acids, masonry cleaners, or abrasive pads unless approved by the coating manufacturer.
- Inspect high-traffic, exterior, or humid openings periodically for scratches, coating damage, corrosion, hardware wear, and seal condition.
- Repair coating damage promptly to prevent corrosion. Exposed steel should not remain unprimed or unpainted.
- Maintenance repainting should use a compatible system and follow the same cleaning, sanding, priming, and application procedures as original field painting.

20. Disclaimer and Project Coordination

- These instructions are general painting and finishing guidelines for DKS hollow metal doors and frames. Project specifications, approved submittals, coating manufacturer instructions, local building codes, fire codes, accessibility requirements, and authority having jurisdiction requirements take precedence when more restrictive.
- DKS is not responsible for field-applied finishes, improper surface preparation, incompatible coatings, improper storage, jobsite contamination, moisture exposure, chemical exposure, application defects, or damage after delivery.
- Questions regarding coating compatibility, fire-rated openings, field labeling, field modifications, or inspection requirements should be coordinated with the coating manufacturer, project authority, listing agency, and authority having jurisdiction before work proceeds.

Sincerely,
DKS Steel Door and Frame Systems, Inc.