



Guide Specification

Aviation & Automotive Flooring System

Sky-Gard 35

PART 1 - GENERAL

1.01 SUMMARY

- A. Provide labor, materials, equipment and supervision necessary to install an aviation and automotive flooring system as outlined in this specification.
- B. The manufacturers application instructions for each product used are considered part of this specification and should be followed at all times.
- C. Related Sections:
 - 1. Expansion and Contraction Joints: Section 0315_____.
 - 2. Cast-in-Place Concrete: Section 0330_____.
 - 3. Sealants: Section 0790_____.

1.02 SYSTEM DESCRIPTION

- A. Sky-Gard 35 shall be a complete system of compatible materials manufactured by Neogard to create a seamless light-reflective, skydrol-resistant flooring system.
- B. Sky-Gard 35 shall be designated on the specific type of substrate indicated on the drawings.

1.03 SUBMITTALS

- A. Product Data: Submit Neogard's product literature and installation instructions.
- B. Project Reference List: Submit list of projects as required by this specification.
- C. Samples: Submit samples of specified aviation and automotive flooring system. Samples shall be construed as examples of finish only.
- D. Applicator Approval: Submit letter from manufacturer stating applicator is approved to install the aviation and automotive flooring system.
- E. Warranty: Submit copy of manufacturers product warranty to cover a period of one year.

1.04 QUALITY ASSURANCE

- A. Supplier Qualifications: Sky-Gard 35, as supplied by Neogard, is approved for use on this project.
- B. Applicator Qualifications: Applicators shall be approved to install specified system.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Materials shall be delivered in original sealed containers, clearly marked with supplier's name, brand name and type of material.
- B. Storage and Handling: Recommended material storage temperature is 75°F (23.8°C). Handle products to avoid damage to container. Do not store for long periods in direct sunlight.

1.06 JOBCONDITIONS

A. Environmental Conditions:

1. Do not proceed with application of materials when floor temperature is less than 50°F (10°C).
2. Do not apply materials unless surface to receive coating is clean and dry.
3. Moisture content of concrete not to exceed three pounds per 1,000 square feet per 24 hours when tested by the referee or the quantitative calcium chloride test method.

B. Safety and Health Conditions:

1. During coating application, it is **essential** that maximum effort is made to protect the coating mechanic and others near the workplace from breathing vapors and coming in contact of material with skin or eyes.
2. In confined areas, the best form of protection against organic solvents or other potentially sensitizing vapors is a **fresh air supply**. For maximum protection, it is recommended to use NIOSH/MSHA-approved, self-contained breathing apparatus with a full-face piece operated in a positive pressure mode.
3. In unrestricted areas, it is recommended to wear a suitable mask or respirator of a type approved by NIOSH/MSHA.
4. To prevent excessive skin contact with the material, it is recommended to use fabric coveralls and neoprene or other resistant gloves. To prevent eye contact, wear a full-face mask or OSHA-approved protective goggles.

C. Protection:

1. Keep products away from heat, sparks and flames. Do not allow use of spark producing equipment during application and until vapors are gone. Post "No Smoking" signs.
2. Vapors from coatings can carry considerable distances and care should be taken to do the following:
 - a. Post warning signs a minimum of 100 feet from the work area.
 - b. Cover all intake vents near the work area.
 - c. Set up windbreaks when needed.
 - d. Minimize or exclude all personnel not directly involved with the coating application.
 - e. Have CO₂ or other dry chemical fire extinguishers available at the jobsite.
 - f. Provide adequate ventilation.

3. After completion of application, do not allow heavy traffic on coated surfaces for a period of at least 48 hours @ 75°F (21.1°C).
4. Protect plants, vegetation and animals, which might be affected by coating. Use drop cloths or masking as required.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Aviation & Automotive Flooring Materials:
 1. Primer: 70714/70715 clear epoxy.
 2. Epoxy: 70714/70715 clear or pigmented.
 3. Polyurethane: 70805/7952 clear or pigmented polyester aliphatic polyurethane.
 4. Crack Filler: 70718/70719 flexible epoxy or other flexible epoxy approved by Neogard.
 5. Sealant: 70991 or others approved by Neogard.
 6. Fillers: Fumed silica and blended aggregates.
 7. Texture: Neogrip spheres.

2.02 PERFORMANCE CRITERIA:

- A. The minimum performance requirements for the 70714/70715 used on this project are:

PERFORMANCE REQUIREMENTS OF CURED FILM		
PHYSICAL PROPERTIES	TEST METHOD	RESULTS
Compressive Strength	ASTM D695	25,300 psi
Tensile Strength	ASTM D638	3,700 psi
Elongation	ASTM D638	25%
Flexural Strength	ASTM D790	3,180 psi
Flexural Modulus	ASTM D790	57,700 psi
Shore D Hardness	ASTM D2240	78
Adhesion	ASTM D4541	350 psi
Impact Resistance	Mil-D-3134 Sec. 4.7.3	Passes 16 ft/lbs
Taber Abrasion (cs17)	ASTM D4060	25 mg/1,000 rev
Water Resistance	ASTM D570	0.21%
MVT @ 10 mils	ASTM E96	0.16 Perm
Fungus & Bacteria Resistance	Mil-F-52505	No Support of Growth Under TT-P-34

- B. The minimum performance requirements for the 70805/7952 used on this project are:

PERFORMANCE REQUIREMENTS OF CURED FILM		
PHYSICAL PROPERTIES	TEST METHOD	RESULTS
Tensile Strength	ASTM D412	4,000 psi
Elongation	ASTM D412	30%
Permanent Set	ASTM D412	20%
Adhesion	ASTM D4541	300 psi
Taber Abrasion (cs17)	ASTM D4060	40 mg/1,000 rev
Water Resistance	ASTM D471	<1%
MVT @ 5 mils	ASTM E96	1.4 Perm
Fungus & Bacteria Resistance	Mil-F-52505	No Support of Growth Under TT-P-34

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that the work done under other sections meets the following requirements:
 1. That the concrete substrate surface is free of ridges and sharp projections, sound and dry.
 2. That the concrete was cured for a minimum of 28 days (Minimum of 3,500 psi compressive strength). The use of concrete curing agents, if any, shall be of a sodium silicate base only; others require written approval from Neogard.
 3. That damaged areas of the concrete substrate be restored to match adjacent areas. Use 70714/70715 clear and oven-dry silica aggregate approved by Neogard for filling and leveling at a ratio of one part 70714/70715 mixed with four parts aggregate by volume.

3.02 PREPARATION

- A. Surface Preparation: Steel shotblast the surface to remove surface contaminants. Proper care and procedure should be taken to leave the concrete surface as unopened as possible. Note: Steel shot-blasting does not remove deep penetrating oils, grease, tar or asphalt stains. Proper cleaning procedures should be followed to insure proper bonding of the epoxy primer. An improper steel shotblast can cause "pinholes" in concrete surfaces which can result in blister problems during the application of Sky-Gard 35.
- B. Cleaning: Surfaces contaminated with oil or grease shall be vigorously scrubbed with a power broom and a strong, non-sudsing detergent. Thoroughly wash, clean and dry. Areas where oil or other contaminants penetrate deep into the concrete may require removal by mechanical methods.
- C. Moving Cracks: Route all large cracks, remove dust and debris, and fill flush with 70718/70719 or other flexible epoxy approved by Neogard.
- D. Moving Control Joints: Seal secondary control joints with 70991 or other polyurethane sealant approved by Neogard. Reincorporate expansion joints and control joints into flooring system. Consult Neogard for details on moving cracks, expansion joint details and moving control joints.
- E. Non-moving Cracks or Control Joints: After shotblasting, fill all non-moving cracks and control joints with 70714/70715 mixed with fumed silica to form a paste. The mix ratio is one part 70714/70715 to 2 (up to 3) parts fumed silica by volume.
- F. Surface Condition: Surface shall be clean and dry prior to coating. Moisture content of concrete not to exceed three lbs. per 1,000 square feet per 24 hours when tested by the referee or the quantitative calcium chloride test method.

3.03 APPLICATION

- A. Primer: Mix 70714/70715 at a ratio of 2:1 for three minutes. Apply at a minimum rate of 200 square feet per gallon (8 mils dft), depending on the

porosity of the substrate. Primer should be tack-free before applying base coat.

- B. Base Coat: Mix 70714/70715 at a ratio of 2:1 for three minutes. Apply mixed 70714/70715 at a minimum rate of 80 square feet per gallon (20 mils dft) and allow to cure 8 to 12 hours @ 70°F (21.1°C) or until tack free.
- C. Seal Coat: Mix 70805/7952 at a ratio of 2:1 for three minutes. Apply material at a rate of 250 square feet per gallon (6.5 mils wft) and allow to cure 8 to 12 hours @ 70°F (21.1°C) or until tack free. Note: If the top coat is not applied within 24 hours of seal coat application, the seal coat must be sanded and primed with 70714/70715. If this procedure is not strictly followed, inner coat delamination will occur!
- D. Top Coat: Mix 70805/7952 at a ratio of 2:1 for three minutes. Apply top coat at a rate of 250 square feet per gallon (6.5 mils wft) and allow to cure for 24 hours @ 70°F (21.1°C) before allowing foot traffic.
- E. Optional Textured Finish: To achieve a cleanable limited slip-resistant surface, add Neogrip Spheres into the final top coat of 70805/7952 noted in item "D" above. Add one and one-half ounces by volume of Neogrip Spheres to one gallon of 70805. Mix the one gallon of 70805 with the Neogrip Spheres added to one-half gallon of 7952. Mix for three minutes. The coverage rate for the final top coat must be applied at 250 to 300 square feet per gallon to yield 4 mils dft. Note: Installing the textured finish thicker than 4 mils dft will cause the Neogrip Spheres to sink into the 70805/7952 coating, thus eliminating the desired slip-resistant texture.

3.04 CLEANING

- A. Remove debris resulting from completion of coating operation from the project site.
- B. Reference Seamless Flooring Systems Manual for typical cleaning methods.

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