Rust-Oleum® Industrial Brands Specification

Coating Specification for Rust-Oleum Virtual Solutions Coating Solution 23

A solvent based coating system

High Performance 4315 High Heat Aluminum
For service on steel substrate 500-1,200° F (260-649° C)

Specification Prepared by: Rust-Oleum Technical Service, March 2011

This is a general coating specification. Changes to this specification may void any product warranties. Contact your Rust-Oleum representative or Rust-Oleum Technical Service if modifications are required to better meet your needs.

RUST-OLEUM®
INDUSTRIAL BRANDS

PART I GENERAL

1.01 SCOPE OF WORK

A. Provide all materials and labor necessary to install Rust-Oleum High Performance 4315 High Heat Aluminum, in strict accordance with project drawings, specifications and current Rust-Oleum application instructions.

1.02 RELATED WORK BY OTHER (SELECT AS NEEDED)

A. Division 3 Concrete
B. Division 4 Masonry
C. Division 5 Metals
D. Division 6 Wood
E. Division 7 Thermal & Moisture Protection
F. Division 10 Specialties
G. Division 11 Special Construction

1.03 SYSTEM DESCRIPTION

A. The High Performance 4315 High Heat Aluminum is a pure silicone aluminum coating manufactured by Rust-Oleum Corporation, located at 11 Hawthorn Parkway, Vernon Hills, IL 60061 (847) 367-7700. The High Performance 4315 High Heat Aluminum is suitable for use on properly prepared steel surface with surface temperature up to 1,200ºF (649ºC).

1.04 ENGINEERING AND DESIGN REQUIREMENTS

A. The Design Architect and Project Engineer shall be responsible for all decisions pertaining to design, detail, structural capability and the like. Rust-Oleum Corporation has prepared guidelines in the form of specifications, technical data and application information to assist in the design and engineering processes.

B. Equivalent materials of other manufacturers may be substituted on approval of the engineer or designer. These requests for substitution shall include manufacturerôs literature for each product giving the name, generic type, descriptive information, solids by volume, recommended dry film thickness and a list of a minimum of ten (10) projects where the coating system has been applied and performed to expectations for at least three (3) years service. No requests for substitution shall be considered that lower system film thickness, number of coats and/or offer a change in the generic type of coating herein specified. Requests for review of equivalency will be accepted only from the Contractor and will be considered only after the contract has been awarded. Request for review submitted directly to the Engineer by coating suppliers will not be considered.

C. The 4315 High Heat Aluminum shall be used only in conformance to the air quality legislation applicable at the location of use.

D. The 4315 High Heat Aluminum is a direct to metal, self-priming product.

1.05 SURFACE PREPARATION AND APPLICATION DESCRIPTION

A. Substrate cleaning, surface preparation, coating application and dry film thickness shall be as specified herein and shall meet or exceed Rust-Oleum Corporationôs recommendations.

B. All application equipment shall be clean and maintained in proper working order in accordance with the equipment manufacturerôs recommendations.

C. The 4315 High Heat Aluminum shall be applied in accordance with the air and surface temperature limits and work areas shall be reasonably free of airborne dust during application and drying time.

1.06 PERFORMANCE REQUIREMENTS

A. The 4315 High Heat Aluminum has the following physical properties and these are published on the Rust-Oleum Corporation 9100 System Technical Data Sheet.

	4315
Solids by Volume	34%
Recommended Dry Film Thickness per Coat (DFT)	1-1½ mils
Practical Coverage @ Recommended DFT (Assumes 15% material loss)	300-450 sq ft/gal
Dry Times @70-80°F (21-27°C) 50% RH Flash off Recoat	 1 hour After 1 hour of heat cure @ 450º F (232º C)

1.07 QUALITY ASSURANCE

A. Applicator Qualifications:

1. Shall be knowledgeable in the proper installation of 4315 High Heat Aluminum and experienced in the application of silicone coatings.

2. Shall provide a minimum of one (1) year workmanship warranty for the application of the 4315 High Heat Aluminum.

3. A list of Certified Rust-Oleum Corporation Coating Applicators is available from Rust-Oleum Corporation.

B. Pre-, Mid-, and Post-Job Conferences shall be scheduled at discretion of the Project Engineer and/or Design Architect.

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1.08 SUBMITTALS

A. Product Data: 4315 High Heat Aluminum, application and related equipment information.

B. Applicator: If applicable, provide certified contractor documentation showing proof of familiarity with the 4315 High Heat Aluminum.

1.09 DELIVERY STORAGE AND HANDLING

A. Deliver the 4315 High Heat Aluminum on-site in Rust-Oleum Corporation's labeled, original, unopened containers.

B. Store materials inside or under cover at ambient temperature. Keep materials dry, protected from weather, direct sunlight, surface contamination, aging corrosion, extreme temperatures and other damage.

1.10 PROJECT CONDITIONS

A. Protect adjacent work from damage and overspray during application of the 4315 High Heat Aluminum.

1.11 WARRANTY

A. The technical data and suggestions for use contained herein are correct to the best of our knowledge, and offered in good faith. The statements of this specification do not constitute a warranty, expressed, or implied, as to the performance of these products. As conditions and use of our materials are beyond our control, we can guarantee these products only to conform to our standards of quality, and our liability, if any, will be limited to replacement of defective materials. All technical information is subject to change without notice.

B. Special project warranties may be issued on a request basis at the discretion of the Rust-Oleum Corporation Technical and Legal Departments and would not be contained within this specification document.

2. PRODUCTS

2.01 MANUFACTURER

A. The 4315 High Heat Aluminum shall be obtained through a Rust-Oleum distributor. To request nearest distribution source contact Rust-Oleum Corporation.

2.02 MATERIALS

A. The 4315 High Heat Aluminum is a pure silicone coating available in only an aluminum finish. Contact Rust-Oleum Corporation for availability of container size.

3. EXECUTION

3.01 JOB CONFERENCES

A. A pre-job conference shall be at the discretion of the architect, engineer or general contractor. Coating contractor, substrate installer and other trades whose work effects the application of 4315 High Heat Aluminum shall meet at the project site to review procedures and time schedule proposed for application of 4315 High Heat Aluminum and related work. Additional conferences are at the discretion of the architect, engineer, general contractor and/or owner.

3.02 SURFACE PREPARATION

A. All cleaning and surface preparations specified herein are minimums.

B. All surfaces to be coated shall be free of cracks, pits, fins, projections, or other imperfections that would interfere with the formation of a uniform, unbroken coating film.

C. All sharp edges shall be ground to smooth radius of at least 1/8 inch.

D. All oil and grease shall be completely removed with biodegradable degreasers prior to mechanical cleaning begins.

E. All welds shall be ground as necessary to remove sharp edges, undercuts, pinholes, and other such irregularities.

F. All weld spatter must be removed by grinding, or other appropriate method, prior to abrasive blast cleaning.

G. All ferrous metal substrates shall be abrasive blast cleaned to an SSPC-SP-10 Near White Grade (NACE 2). The surface profile shall be uniform and have a profile depth of ½ - 1 mils. The first application of coating shall be applied on the same day. If more surface area is prepared than can be coated in one day, the uncoated area shall be re-blasted to the satisfaction of the Project Engineer.

H. The coating contractor is to examine the substrate to determine if it is in satisfactory condition to receive the 4315 High Heat Aluminum. Obtain coating contractorôs written report listing conditions detrimental to performance of work in this specification. Do not proceed with the application of 4315 High Heat Aluminum until unsatisfactory conditions have been corrected.

3.03 MIXING AND THINNING

A. MIXING

The 4315 High Heat Aluminum shall be thoroughly mixed to uniform color.

B. THINNING

1. Thinning shall be done in accordance with applicable local air quality regulations.

2. Thinning, when necessary, shall be done only with Rust-Oleum 140 Thinner.

3.04 APPLICATION

A. Weather Conditions.

1. Apply when air and surface temperatures are between 32-125° F (0-52°C) and surface temperature is at least 5° F (3°C) above the dew point.

2. The relative humidity should not be greater than 85%.

B. Coating Application.

1. Apply first coat of 4315 High Heat Aluminum at the recommended film thickness and allow to air dry for one hour, then raise the surface temperature to 450º F (232º C) for one addition hour.

2. After the heat curing has been completed, allow the surface temperature to cool to 125º or lower and apply a second coat of 4315 High Heat Aluminum at the recommended film thickness and repeat the air drying and heat curing process.

3. In no instance shall the 4315 High Heat Aluminum be applied greater than 1½ mils dry film thickness per coat.

4. Sags, checks, blisters, skips, teardrops, or rolled edges shall not be accepted and shall be completely removed and recoated.

C. Protection of surfaces

1. The Coating Contractor shall be responsible for protecting all adjacent surfaces from spills, drips, overspray, or any other form of coating damage.

2. The coating contractor and its subcontractors shall be responsible for removing spots or repairing damaged surfaces to the satisfaction of the project engineer, design architect and/or owner.

3.05 CLEAN-UP

A. Clean-up shall be done to remove all spills, drips, overspray, or other unwanted coating from all surfaces not intended to be coated.

B. All used rags, brushes, roller covers, and other application related materials shall be removed from the work site and disposed in a proper manner and in accordance with local waste regulations.

C. All equipment, staging, ladders, and other contractor materials brought onto the jobsite by the contractor shall be remove at the conclusion of the job in a timely manner.

END OF SECTION