

# FGI – 4440 Insulation Coating

Unique Coatings – Extreme Results

## Description

**FGI-4440** is an extremely unique ultimate performance insulation, corrosion and moisture protection coating. FGI-4440 is an epoxy ceramic based coating that is impervious to heat and water providing for extreme insulation value. At 10 mils (0.25 mm) thickness the K value is 0.002 WmK or an equivalent R value of 30. The 4440 is not just reflective, it is truly insulation. It can get dirty, lose its reflectivity, and it will still insulate because of the type components that we have incorporated into the product. Also provides for up to 68% sound reduction based on independent tests. Because it is “wetter than water”, FGI-4440 can even be applied under salt water. Applied properly, FGI-4440 warrants against damage from standing water and can remain under water permanently with no harm to the coating. Can be applied directly over rust and offers unmatched protection against heat and cold extremes, mildew, alkali, UV, oils and grease. FGI-4440 can be applied to a dry or wet surface making rain a non issue when it comes to application time. It is water proof and can be applied equally well direct to Metal, PVC, Concrete, EPDM and capsheet. The 4440 can also be applied to wood, stucco, sheetrock, virtually any substrate. Adheres to practically all surfaces, including EPDM, with remarkable flexibility. It is probably easier to say what surfaces the 4440 can not be applied to.....the few surfaces the 4440 is not recommended to be applied directly are Teflon, high-plasticized vinyl's, polyethylene, and silicone rubber. However, by utilizing our primer the 4440 can even be applied to polyethylene. The product maintains flexibility to prevent cracking. Very easy to use with long pot life, high insulation, high reflectivity, high emissivity, encapsulates friability of virtually all roof material, chemically inert finish, withstands acids, alkalis, animal fats, grease and oils, encapsulates asbestos, so no tear off or landfill waste. Withstands 2.5 inch hail at 140 mph. Stops Thermal shock thus extending roof life.

ASTM Test Battery:

ASTM B117 500 hour Salt fog test –Passed

ASTM 518 Thermal Conductance 2.61 Btu(h)(ft<sup>2</sup>)(F) Excellent

ASTM 518 Thermal Conductivity 0.0139 Btu(in)/(h)(ft<sup>2</sup>)(F), metric 0.002 w/m/K, Excellent

ASTM D-2240 Hardness 85 Shore Durometer

ASTM E108-91A UBC32-7 Class A Fire Rated

ASTM D-638 Tensile Strength 1393 PSI

ASTM E-96 Water Vapor Transmission 0.7 perms

ASTM G-53 500 hour accelerated weathering test, bend double with no cracking, highly flexible

ASTM 1640, D-92, D-1644A, D-2196, D-696, D-570, C-836, D-1652, D-1259

Flexibility is retained in sub-zero conditions (down to -92 F)

## Features & Benefits

- **Very High Insulation Capacity**
- **Can be applied over Wet Surface and remain under water**
- **Very Little Prep Work over Rusty Metal**
- **UV, Weather, Chemical, Salt and Abrasion Resistant**
- **Extreme Adhesion to Substrate**
- **Extremely Durable Wear Surface**
- **No Top-Coat necessary**
- **Contains No Zinc, Lead or Chromates**
- **Typical Applications: Roofs, metal buildings, ducts, concrete walls, basements, etc.**

## Application Methods

FGI-4440 may be applied by brush, roller, or spray. Surfaces should be free of loose rust, mill scale, paint, grease, oil and of any other film-forming foreign material. An example of the prep work needed is to water blast with high-pressure (3,000 psi MIN) water to thoroughly clean off all debris, dirt, and other contaminants. The result shall be to have a clean tight substrate. Optimum results are obtained if the surface is dry although entirely satisfactory protection is obtained if the surface is damp and/or wet. Surplus water should be removed to prevent excessive bubbling of the coating. Applied properly, one 13.3 mil wet coat dries to 10 mils making it impervious to water, providing for unsurpassed insulative properties and flexibility.

No primer is needed on metal surfaces thereby reducing total job cost. Airless spray is the most efficient application method for larger projects. Brushes and rollers may be used for detail work such as edge termination, filling of voids, pinholes, and small cracks.

**MIXING: Prior to combining Part A and Part B, mechanically mix Part A pail and Part B pail for 2 minutes**, then thoroughly mechanically combine and mix (4 to 1 ratio) 4 Parts Base (part "B") with 1 Part Activator (part "A") for 5 minutes in the 5 gallon pail (or for 1 minute in one gallon pail), with a power mixer until all streaks and/or lumps disappear and the mixture has uniform color and consistency. Be sure to allow mixing blade to rub on sides and bottom of container to recombine any settling. Allow to stand (or ingest) for 45 minutes to one hour before adding thinner or beginning application. Use of thinner increases possibility of sag and reduces dry film thickness. Thinner also retards cure time. For best results, use just as it comes from the pail. However, thinner (use **new** lacquer thinner) can be added to the product with no harm to the coating. Thinning will necessitate applying more coats to achieve the desired mil thickness.

Any overspray and equipment must be cleaned immediately with acetone, toluene, xylene, or MEK.

FGI-4440 is 75% solids. Approx. Pot Life: 4 to 6 hours at 80 F. Drying time 1 to 2 hours at 80 F. Curing time: Initial: 8 hours at 80 F, Complete: 3 days at 80 F. Apply 13.3 mils (.0133 inches or 0.337 mm) wet to achieve a final dry mil thickness of 10 mils (0.010 inches or 0.254 mm). FGI-4440 will cover approximately 120 square feet (11.2 sq meters) per gallon at 10 mils (0.254 mm) thickness. If second coat is needed wait till first coat is tacky dry, usually one to two hours in 80 F. An example of the suggested Spray Equipment: Graco 5900 with 0.021 to 0.035 tip size with 3000 PSI capability and typically a reversible self-cleaning tip. Remove all filters from gun and hose, including bung hose. Contact FGI representatives for specific applications.

Use in well ventilated area; if not possible, use a NIOSH approved self contained breathing apparatus or vapor filters on a mask. Protective gloves and safety glasses must be worn at all times. Only very high abrasion will remove the coating. Caution: With the extreme adhesion characteristics of this product all safety procedures must be followed.

### **Storage Stability & Shelf Life**

The shelf life of FGI - 4440 is one year when stored in original, unopened container. Store cans in a well ventilated and covered area away from extreme heat and moisture. Please contact your FGI representative if you have any questions about product usability.

Additional information is available at [www.fginternational.net](http://www.fginternational.net)

Health, safety and environmental information are provided for this product in the Materials Safety Data Sheet. This gives details of potential hazards, precautions and First Aid measures, together with environmental effects and disposal of used products. Before using the product other than directed, please contact FGI for consultation.

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