



# ASTEC #900

## Ceramic Insulating Coating

2/24/05

### PRODUCT DESCRIPTION

**ASTEC #900** is a fluid applied material incorporating heat reflecting, refracting, and dissipating ceramic particles in an extremely durable and adhesive coating. The product dries to a linen like finish.

Although originally designed as a topcoat to a variety of roofing systems, the product has proven effective for numerous other applications. These applications include, but are not limited to: roofing (metal, built-up, light weight concrete, polyurethane, modified bitumen, aluminum, and others); exterior and interior walls; ceilings (plaster, drywall, and cathedral); steampipes; ductwork for heating and air conditioning; tanks (chemical storage, boilers, and food preparation); refrigeration units and refrigeration trucks.

### COMPOSITION

**ASTEC #900** is a ceramic filled 100% acrylic elastomeric. Although it is available in 30 standard colors, the product base color is white, and white or very light colors are recommended as the most effective radiant barriers. Custom Colors are available by special order.

### DURABILITY

A 12 mils thick dry film coating of **ASTEC #900** will remain durable for a minimum of 10 years. Depending on local environmental factors, the average wear factor is .5 mils/year or 5 mils over 10 years. This low wear rate is due to high thermal properties of reflectivity (over 85% for white) and high physical properties of emissivity (over 90%, all colors) and the ceramic's density. These properties combine to eliminate "thermal stress or drift" by 1) creating a barrier to the entry of radiant energy; 2) shedding any absorbed heat quickly to control "heat build-up" in the substrate; and 3) blocking ultraviolet degradation of the coating system components and

substrate. The insulating effects of the product remain constant throughout its useful life.

Useful life may be extended to another 10 years by pressure cleaning, resealing any breaks in the **ASTEC** system's monolithic integrity, and the re-application of one ceramic topcoat at a rate of 148 sf/gal.

### APPLICATION PREPARATION

Surfaces to be coated with **ASTEC #900** must be clean, structurally sound, and dry. All block, brick, metal, or masonry surfaces must be cleaned thoroughly and free of all efflorescence, dirt, or debris at each stage.

Rusted or bare metal surfaces must be also treated with **ASTEC B-16-71 Metal Primer** prior to application. Masonry surfaces are treated with **ASTEC CMCE Masonry Primer** or **ASTEC #4000 Surface Conditioner**. (See application specifications.)

### APPLICATION

May be applied by brush or roller. For better results, use a deep nap (1" or Longer) industrial roller. For best results, use airless spray equipment that delivers at least two gal/min at no less than 3000 PSI to propel product through carbide or tungsten steel reversible tips ranging in size from .031 to .035. **ASTEC #900** is reducible in water, if

necessary, do not add more than one quart per 5 gallons of product.

Recommended rates of coverage and dry film thickness vary by substrate, surface use, and environmental conditions. Application of two or more coats to achieve an average minimum of 12 mils or 74sf/gal is required for optimum product performance. (See application specification.)

### QUICK FACTS

Weight/gal	10.2 lbs.
Solid Contents	59% (by weight) 55% (by volume)
Coverage Rate	59-74 sf/gal
Dry Film Thickness	12-15 mils
Tensile Strength	110.4 PSI
Solvent Type	Water
Prime Pigments	Titanium
Fungal Resistance	Highest Rating
Flash Point	Non-Flammable
Average Dry Time	1-2 hours touch dry 48 hours full dry 21 days full cure
	@ 75°F



## Product Specification

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### LIMITATIONS

Because this product is water based, application shall not begin during: inclement weather; when precipitation appears imminent; when freezing conditions are imminent; or when freezing may occur within 24 hours. It also requires at least two hours of full sun drying time before it can withstand exposure to heavy dew or light rain. No ponding at all within 48 hours of application. Applications to hot surfaces should be cooled to below 150°F. On dark or hot surfaces warmed by external radiant energy, this may be accomplished by the application of a light mist coat (250 sf/gal) of white **ASTEC #900**, regardless of finish color desired, prior to the specified double application of the ceramic topcoat. Application to new, hot mopped tar or other petroleum based materials must wait until after the petroleum has fully cured, usually 60-90 days.

New metal surfaces must be free of grease and oily residues. Pressure wash with TSP, other detergent, or with vinegar. New mortar and or freshly poured concrete must be allowed to cure 30 days before applying **ASTEC #900**.

Due to **ASTEC** Ceramic Coating's high level of reflectivity and emissivity, winter time condensation may be a factor if applied to a roof that does not have a conductive insulation on the underside of the roof deck. Applications to surface of substrates designed for carrying or holding heated air or fluids (pipes, ducts, tanks) often require shut-down to cool their surfaces to below 150° prior to being coated. Operations may resume 24 hours after applications of **ASTEC #900**, which will tolerate temperatures up to 400° after curing.

### MAINTENANCE

If used on a roof, check it every 6 months for structural damage and remove accumulated debris. Check ceramic finish coat annually for surface integrity. Repair any cuts, cracks or punctures according to General Requirements of Application Specification.

### PACKAGING

Product comes in 2 and 5 US gallon buckets, 55 US gallon barrels.

### STORAGE

With proper storage, the shelf life of **ASTEC #900** is 12 months. Do not store in direct sunlight, on roof prior to use, or near high heat sources. Air temperature of storage area shall be maintained between 40°F to 110°F. During long term storage, it is recommended that containers be turned upside down or shaken every 3 months to retard complete separation of solvents and solids.

### WARRANTY

The technical data furnished herein is true and accurate to the best of our knowledge. However, no guarantee of accuracy is given or implied. ICC guarantees its products as to the quality control procedures used in their manufacture as of the date of sale. Specific warranties are available through ICC's Authorized Dealers.

### HEALTH AND SAFETY

Product is non-toxic and non-flammable. See this product's Material Safety Data Sheet for further information.