

Product Description:

Using NASA's experience, **IPOM-CCD** division developed an advanced radiant barrier coating with space age insulation properties. This space age product is having a tremendous impact on the environment we live in and is a revolutionary approach to the coatings industry worldwide.

CHEMIGREEN – WHP series unique Elastomeric Radiation Control Coatings for roofs and walls Without doubt the coating material of the future.

Why is CHEMIGREEN – WHP series so effective?

With a coating of **CHEMIGREEN – WHP series**, radiant heat is deflected, absorbed and dissipated. When solar heat radiates on a roof, the surface temperature of the roof rises, resulting in a 75% to 90% increase in heat buildup within the building. With **MASTERCOAT** up to 75% heat is repelled in the direction of the source, allowing little heat transfer into the building, therefore reducing the temperature by up to 45%. **CHEMIGREEN – WHP series**, furthermore, has an ultraviolet resistance of 96%, a solar reflectance of over 80%, and an emissivity of 90%. In other words – it is nearly as good as a mirror.

CHEMIGREEN – WHP series high thermal reflective properties are due to millions of hollow ceramic beads that cluster together and provide dead air space. When applied, this liquid acrylic emulsion dries and forms an elastomeric heat shield. Because of this, it reduces inside temperatures very dramatically.

CHEMIGREEN – WHP® Roof Management Systems can be applied over virtually any existing substrate, including:

- Asphalt-Based (BUR, Modified Bitumen)
- Plastic Single-Ply (Hypalon®, PVC, TPO)
- Rubber Single-Ply (EPDM)
- Metal Roof Coating
- Sprayed Polyurethane Foam (SPF)
- Concrete
- Metal



Key Benefits:

Superior Protection:

- Superior durability and performance compared to traditional roofing
- Seamless, fully adhered and watertight.
- Total UV blocking. Protects against the main cause of roof leaks and failure.
- Solutions proven over two decades.

Advantages:

- Provides a seamless, durable membrane.
- Superior adhesion to various substrates.
- Contains fungicides and mildew icides.
- Excellent UV protection for polyurethane foam.
- High Heat reflective coating helps reduce cooling costs.
- Reflects the sun's UV-rays and prevents premature degradation.

Prevents premature roof failure by controlling thermal cycling.

Easy to use, non-toxic and VOC compliant water based coating.



Chemi.
Green

Advanced Technology

Installation:

- a) All surfaces to be coated must be clean, dry and free of any oil, grease or dirt.
- b) Any existing coating must be checked for good adhesion.
- c) Before application, any loosely adhered coating must be removed and bare surfaces must be prepared, cleaned and checked for compatibility.
- d) Energy Guard & trade; Elastomeric Roof Coating is ready to use. Thinning is not recommended.
- e) Containers should not be left open for extended periods of time.
- f) Follow our roof restoration procedures and always perform a coating adhesion test before doing the entire roof.
- g) Spray: Airless Sprayer, 1gpm, 3,000 psi, .027 or .031 tip.
- h) Brush: Good quality synthetic bristle brush.
- i) Roller: Short nap roller.
- j) Clean Up: Water.

Warranty:

On pre-approved, qualified applications, using approved applicators, a 10 years warranty is available. Contact us for complete warranty information.

Packing:

- 20 Kg Pail.
- 200 Kg drum.

Storage:

- a) Keep containers closed.
- b) Store in a dry, cool place.
- c) Protect from freezing (33°F).
- d) For cold weather application, keep material stored above 65°F.

Thinning:

Thinning is not required or recommended.

Safety Equipment and Ventilation:

Spray application creates finely atomized particles and vapors which dictate specific procedures to minimize health and safety risks.

Protective Equipment:

- a) NIOSH approved liquid particulate filter mask
- b) Fabric coveralls
- c) Gloves
- d) Safety goggles or face shield

CHEMIGREEN - WHP Series Technical Data:

Coating Type	Acrylic Elastomeric Coating
Thermal Transmission	ASTM C 177-97 / C1045 -0.05 - 0.06 W/m/K
Solar Reflectance	ASTM E 1980-01 Reflects > 85 %
Toxicity	None
Water Absorption	ASTM D 471 12 % after 4 weeks
High Humidity Resistance	ASTM D3273 No growth or discoloration
Fungus Resistance	ASTM G21 No growth or discoloration
Impact Resistance	Good
Tensile Strength (MPa)	ASTM D 412 / 11.50
Elongation, (%)	ASTM D 412 / +450
Compressive Strength, (psi)	ASTM C 469 / 3.6 X 10 ⁶
Adhesion, (N/mm ²)	ASTM C 836 / 7.50
Color	White
Chemical Resistance	
Alkali Solution (NaOH 5 %)	Discoloration and surface damage
Hydrochloric acid (HCl 5%)	No Reaction
Alkali Soutlion (H ₂ SO ₄ 5%)	Discoloration and surface damage
Alkali Soutlion (HNO ₃ 5%)	No Reaction
Lead (Pb)	ppm / LT 0.05
Cadmium (Cd)	ppm / LT 0.05
Chromium (Cr)	ppm / LT 0.05
Violate Organic Compound	None
Fire rating	ASTM E-48-01 Class A UL 790 CLASS A
Abrasion Resistance	Excellent
Number of Coats	2 or 3
Surface Ozone Cracking	ASTM D-1149 70 days exposure
Breathing Trapped Water Vapor	ASTM 1653 9.4 perms
Solids by weight	53.00%
Solids by volume	61.80%
Warranty	10 years
Accelerated Weathering	D822 Discoloration – None / Chalking – None

Mastercoat method of application:

- **Inspection and marking:** Locate, identify source of potential problems and existing problem areas and mark with spray paint or other marker to receive specialized attention.
- **2. Correct all underlying defects.** Replace any wet or damaged isolated areas of roofing (felts, insulation, decking, flashings etc.) that is not suitable base to the roof cap, before proceeding.
- **3. Clean surface thoroughly** using stiff push brooms; commercial vans/blowers are preferred to avoid getting water beneath the roof. If water is necessary, be careful not to damage the seams or surface with excessive pressure. Remove all foreign matter and failed coatings, any soft bitumen and any accumulations over ¼" thick.
- **From this point forward, the roof must be completely dry for work**
- **4. Apply prep-coat to entire roof.**
- **If the existing roof is bitumen,** apply Bond bleed-through blocker and conditioner at 100 square feet per gallon. If surface is uncoated concrete apply **CHEMIGREEN – WHP series** at 200 square feet per gallon. These are most easily applied using a low pressure pump-up sprayer but a roller may be used instead. Allow roof to dry completely. The surface must be clean, dry, and free of moisture, including dew, from this point forward during application. Allow to dry overnight. Note:
 - Normally no extra time is planned or needed for pre-coat aging prior to coating, since this occurs
 - while repair work proceeds.
- **5. Repair blisters** by cutting an "X" into blisters. Clean and generously apply **CHEMIGREEN – WHP series** inside.
- Fold flaps closed tightly and tamp so excess comes out. Cover with more **CHEMIGREEN – WHP series**.
- Roofs with a substantial number of blisters are not good candidates for this system.
- **6. Work GIOTEXTILE 80G into loose seams** after any underlying damage is corrected. Imbed 4" **GIOTEXTILE 80G** into **CHEMIGREEN – WHP series**, as needed, to secure seam and top coat so the membrane is totally concealed.
- Apply **CHEMIGREEN – WHP series** to all flashings and areas needing repair, and reinforce with **GIOTEXTILE 80G** as needed.
- Reinforce all other critical areas.
- **7. Clean roof to remove all dirt,** vegetation, grease, chalk, and any other foreign matter. Roof must be totally clean and dry before any application begins. For roof surfaces that are extremely dirty we recommend the use of Sweet water to help remove the accumulation of dirt. Dilute MultiUse Cleaner to a minimum of 6 oz. of cleaner per gallon of water and scrub cleaner into the wet concrete roof surface with a stiff bristle brush prior to power washing. From this point forward, the roof must be completely dry for work.
- **8. Apply first coat** using **CHEMIGREEN – WHP series** as Base Coat for concrete at a rate of 1½ gallon per 100 square feet. Product should be back rolled when applied to insure all areas are properly covered. Allow the Topps Seal® Base Coat for EPDM/PVC to cure a minimum of 24 hours or as required to tack-free.
- **9. Apply final coat** using **CHEMIGREEN – WHP series** for concrete at a rate of 1 ½ gallons per 100 square feet.

Coating Spray Guide

Introduction:

CHEMIGREEN - WHP Coatings This guide covers handling and airless spray application of CHEMIGREEN - WHP water-borne single component acrylic elastomeric coatings. CHEMIGREEN - WHP products require only complete evaporation of water to achieve cure. It's used in a variety of applications to create tough, waterproof, weather-resistant elastomeric films. Airless spray is an effective method of application particularly on large areas and irregular or vertical surfaces.

Personnel using these products should familiarize themselves with procedures for personal safety, workplace precautions, and equipment operation. Refer to Product Data Sheets, Material Safety Data Sheets and General Instructions for product information. Refer to manufacturer's instructions for spray equipment operation, maintenance and safety.

Safety Equipment and Ventilation:

Spray application creates finely atomized particles and vapors which dictate specific procedures to minimize health and safety risks.

- Protective Equipment:
 - a) NIOSH approved liquid particulate filter mask
 - b) Fabric coveralls
 - c) Gloves
 - d) Safety goggles or face shield

Indoor Spraying Precautions:

- a) Isolate the area to be sprayed from the rest of structure. Spray only in well ventilated areas. Air from spray area must be exhausted outdoors in a manner that prevents return through windows, doors or intake vents.
- b) Keep spectators and other personnel away from spray area.
- c) Be sure to take proper precautions to not spray over unprotected energized lighting or electrical outlets. Doing so could be a fire hazard. Electrical wiring and conduit can be sprayed on as long as open energized circuits are protected. \

Outdoor Spraying Precautions:

- d) Rope off the area within 150 feet of spray area.
- e) Seal off ventilation intakes within affected area.
- f) Use windbreaks where necessary to confine spray mist and avoid damage to nearby surfaces, such as cars, due to overspray or drift.
- g) Keep spectators and personnel away from spray area.
- h) Be sure to take proper precautions to not spray over unprotected energized lighting or electrical outlets. Doing so could be a fire hazard. Electrical wiring and conduit can be sprayed on as long as open energized circuits are protected.

Storage & Handling.

Storage:

- a) Keep containers closed.
- b) Store in a dry, cool place.
- c) Protect from freezing (33°F).
- d) For cold weather application, keep material stored above 65°F.

Mixing:

- a) Settling or separation may occur upon storage.
- b) Mix material before using to assure uniform consistency.
- c) Place a small amount of clean water on top of mixed material to prevent formation of "skin."

Thinning

- a) Thinning is not required or recommended.

Spray Equipment.

Airless spray equipment generates very high fluid pressure. Spray equipment must be properly maintained and operated. Any misuse of spray equipment or accessories (such as over-pressurizing, modified parts, or worn or damaged parts) can result in serious bodily injury, fire, explosion, or property damage. Read and follow the equipment manufacturer's instructions and recommendations.

Airless spray pump must have minimum 2,700 psi output pressure rating and adequate delivery volume to support the spray tip orifice gallons per minute (gpm) rating. High-pressure airless sprayers with a higher maximum pressure capability will allow spray application in cold weather or using spray hose lengths greater than 250 feet.