ABSOLUTELY ECO-FRIENDLY

GREENCOAT™
ECO PAINT

THERMALPROOF

TECHNICAL AND MATERIAL SAFETY DATA SHEET

DISCLAIMER AND IMPORTANT SAFETY NOTICE

To the best of our knowledge the technical data contained herein is true and accurate at the date of issuance and is subject to change without prior notice. User must contact GREENCOAT before ordering to ensure the correct products are used for application. No guarantee of accuracy is given nor implied. We guarantee that all GREENCOAT products have undergone quality control procedures to conform to GREENCOAT quality control standards. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, is limited to the replacement of products. Prices and cost data, if shown, are subject to change without prior notice. The factory will NOT be responsible for damage or loss if application is not done by GREENCOAT trained applicators or if GREENCOAT specifications are not adhered to. It is the customers' responsibility to ensure they familiarize themselves with the correct application methods and ask for help from GREENCOAT. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY GREENCOAT, EXPRESSOR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

SUPPLIER IDENTIFICATION AND INFORMATION

Manufacturer name	GREENCOAT
Address of manufacturing	7 Vuyisile Mini Street, Bethal, 2310 071
Tel number	482 2029
Fax number	017 647 6011
Email	admin@greencoatpaint.co.za

PRODUCT DESCRIPTION

Product name	Thermalproof
Product Description	GREENCOAT Thermalproof is a water-based pure acrylic heat reflective coating. It has advanced ceramic bead technology with reflective properties of up to 45%. It will cool your home in summer, insulate your roof in winter and also waterproof your roof. The product is environmentally-friendly and does not emit noxious fumes and odours during and after application. Low sheen/silk fine texture finish available in standard colours. The standard colours available are Light Grey and White.
Principal Characteristics	• Due to the unique formulation, the paint acts as a one-way membrane, allowing moisture to escape to the surface and has excellent heat reflective properties. • Has excellent adhesion to practically any surface. • Colour fastness, fungi retarded and heat resistant. (UV protection by natural pigmentation). • The product will not harden or deteriorate with age. • The product can withstand aggressive scrubbing and has a low flame index. • Non-toxic and colourless on application no H.A.P. • Thermalproof is a cost-effective addition to under – roof insulation system.
Intended use	GREENCOAT Thermalproof has seal and adhering properties and can be applied to concrete, metal, wood etc. The ideal area for application is metal / tile roofs.

COMPOSITION

TECHNICAL DATA:	
Drying time	The product dries physically within a few minutes but needs approximately 23 – 36 hours to be fully cured. Allow each application to dry before the next one.
Thinner	Product should NOT be thinned.
Minimum application temperature	5°C
Temperature tolerance	From -50°C up to 196°C
Storage	Room temperature and must be tightly closed
Spreading rate	2 – 5 m^2/L (1 coat) – 500 microns
Cleaner	Water
Shelf life	2 years from manufacturing
De-canning sizes	1Litre 5 Litre 20 Litre
Application	Suitable to apply with a Brush, Roller and/or Spray Gun. Product should be stirred before use.

Primary route of exposure:	
Inhalation	No effects observed during application in confined space.
Eye contact	Direct contact with material can cause slight irritation.
Skin contact	Prolonged and repeated contact cause no irritation. No specific symbols are required for the use of the products – the products are not combustible or flammable and do not have specific acute, chronic or toxic effects on humans, nor are they harmful to the natural environment when released.

FIRST AID MEASURES

Eye contact	Flush eyes with large amount of water, if irritation persists, consult a physician.
Skin contact	Wash the skin with soap and water.
Ingestion	Drink plenty of water.

FIRE-FIGHTING MEASURES

When applied on surfaces: Non-combustible, could act to retard the spread of flame.

Smoke toxicity index	Toxic gas factor – 1.0.
When cured (not applied)	Can burn.
Extinguishing agents	Normal foam, powder, water spray, or carbon dioxide (CO2).

ACCIDENTAL RELEASE MEASURES

Personal precautions	Follow normal safety precautions and if spillage occurs in a confined space, ensure there is adequate ventilation. There is no LD 50 data available for the products and the concentrations of particularly hazardous materials are so low that they are not considered a significant hazard under the recommended conditions of use.
Environmental precautions	No environmental hazard when applied on surfaces or cured (solidified). No threat to freshwater or marine life.
Methods for cleaning up	Contain the spillage with sand or earth and take up spilled material (if possible) on a non-flammable absorbent (sand, earth, diatomite, chemical binders) and put in an appropriate container. Label the container with the waste designation, and dispose according to the legislation – do not use solvent.

Safe handling advice	Avoid direct contact with skin and eyes. Avoid inhalation and ingestion. Take personal protective measures and follow the protection and safety regulations. When working with coating products in a spray cabin, sufficient control of aerosols are unlikely and breathing apparatus such as respirators can be worn during spraying if preferred.
Measure to prevent fire	No specific preventative measures are required, but keep the application area well ventilated.
Requirements for storage	Store in original containers (if possible) and keep tightly closed in a cool, dry, well-ventilated area. Although the products are not defined as dangerous goods, protect the products from direct extreme heat such as sources of ignition. Avoid direct sunlight and do not store in conditions below freeze-point.

EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limit: OHSA PEL 15 mg/m (total dust), 5 mg/m(respiration fraction)

Personal protection:	
Respiratory protection	Respiratory programme must be followed whenever workplace conditions warrant a respirator's use. Not required if airborne concentrations are maintained below exposure limit listed in exposure limit information.
Eye Protection	Safety glasses with impenetrable side shields are recommend.
Skin protection	Gloves may be used if required, but no known effects have been observed.

STABILITY AND REACTIVITY

Stability	Stable when following the handling and storage recommendations.
Conditions to avoid	Avoid temperatures above 40°C, direct sunlight and below freeze point for storage conditions.
Incompatibility	None known
Hazardous decomposition	By fire – carbon dioxide (CO2) and carbon monoxide (CO).

Appearance	Liquids
Odour	Characteristic of the specific product (faintly similar to a PVA paint product in some cases)
PH	~8 -9
Reactivity	Salt fog resistant
Density	> 1 gm/cm
Solubility	Miscible in / with water prior to cure
Evaporation rate	< 1 water (see section 5)

TOXICOLOGICAL INFORMATION / HEALTH EFFECTS

Acute toxicity	No known effects – health hazard rating in group 4 (minimal) of the Recommended Practice (ARP 006: 1991) guideline
Skin contact	No known effects
Eye contact	Splashes can cause eye irritation
Chronic toxicity	No known effects
Carcinogenicity	No known effects
Mutagenicity	No known effects
Neurotoxicity	No known effects
Reproductive hazards	No known effects
Additional information	The products have not been tested, but their classifications calculated according to conventional methods from the dangerous substances regulations. The products have been used to paint aquariums that house tropical fish and ponds that house Koi fish with no effects at all. The products do not emit noxious fumes or odour during and after application.

ECOLOGICAL INFORMATION

Aquatic toxicity	No known effects
Biodegradability	Products are considered highly biodegradable, but not tested
Bioaccumulation	No known effects
Mobility	Not tested
Additional information	The product is environmentally friendly with a very low VOC (Volatile Organic Compound) as tested by the Huntingdon / SWL laboratories, Report number: 261394 – 23093 and described by America as a revolutionary breakthrough.

DISPOSAL CONSIDERATION

Disposal key	080103 – EWC waste from water-based paints.
Disposal method	Hand over empty packaging to an authorised disposal company / waste company – the waste regulations of the appropriate authorities are to be followed.

TRANSPORT INFORMATION

ADR / FID (Road)	Not dangerous materials according to these regulations.
GGVSee / MDG (Maritime)	Not dangerous materials according to these regulations.
IATA (AIR)	Not dangerous materials according to these regulations.

REGULATORY INFORMATION / EEC CLASSIFICATION

EEC hazard classification	None of the substances of the products are classified by the EEC as hazardous.
TSCA certification	All of the substances in the products are listed, or exempt from listing, on the TSCA.
National legislation	Pay attention to the Occupational Health and Safety Act.

OTHER INFORMATION

All data is based on the current knowledge of GREENCOAT and describes the product with reference to safety data, and is therefore not intended to guarantee certain properties.

APPLICATION INSTRUCTIONS AND TECHNICAL DATA

These instructions are not intended to show product recommendations for specific services. They are issued as an aid in determining correct surface preparation and application procedures. It is assumed that the proper recommendations have been made. These instructions should be followed closely to obtain the maximum service from the material.

TECHNICAL PRODUCT INFORMATION:

GREENCOAT Thermalproof is developed with advanced radiant barrier coating with space age insulation properties. This space age product has a tremendous impact on the environment around us and is revolutionary approach to the coating industry worldwide.

GREENCOAT Thermalproof's unique Elastomeric Radiation Control Coatings for roofs and walls is without a doubt the coating material for the future.

With a coating of GREENCOAT Thermalproof radiant heat is deflected, absorbed and dissipated.
When solar heat radiant's on a roof, the surface temperature of the roof rises, resulting in a 75% - 90% increase in heat build-up within the building. GREENCOAT Thermalproof repels up to 75% of the heat in the direction of the heat source, allowing light heat transfer into the building therefore reducing the temperature up to 45%. GREENCOAT Thermalproof has an ultraviolet resistance of 96%, a solar reflectance of over 80% and an emissivity of 90%. In other words – this product is nearly as good as a mirror.

GREENCOAT Thermalproof's high thermal reflective properties are due to millions of hallow ceramic beads that cluster together to provide dead air space. When applied, this liquid acrylic emulsion dries and forms an Elastomeric heat shields, due to this the temperature inside a building is reduced.

Unlike other roofing systems, GREENCOAT Thermalproof is simple in application with dramatic results. Before a GREENCOAT Thermalproof coating is applied, the surface must be cleaned; prepared and any loose roof fasteners are replaced or tightened. Reinforcing should be applied to seams where needed and two GREENCOAT Thermalproof coats must be applied. Once applied the coating chemically converts rust into iron sulphate and prevents further corrosion.

The product also seals and waterproofs a roof; apart from forming the radiant heat barrier and eliminates 80% of very destructive thermal shock, a major cause of roof degradation and water leakage.
The movement in various roofing materials i.e. roof sheets, flashings, purloins and fasteners against each other causes roof degradation and water leakage.

Standard Testing Method has verified that GREENCOAT Thermalproof is extremely resistant to fire, water, rain, chemicals, abrasions and fungal growth.

GREENCOAT Thermalproof is highly adhesive, flexible, water-based, non-toxic and totally environmentally-friendly.

The product has endless application possibilities due to the amazing space age insulation properties.

Due to GREENCOAT Thermalproof's effective radiant heat barrier properties, it is the most revolutionary hi-tech coatings product in the world today:

- Reduces temperature dramatically by up to 45%
- Cuts air-conditioning and refrigeration equipment running costs.
- Stops thermal ageing and thermal shock by reducing heat load, Ultra Violet penetration and degradation.
- Reduces roof maintenance by up to 80%.
- Protects by eliminating blistering, peeling, cracking and fading.
- Converts rust and increases metal life.
- Reduces the risk of serious burns caused by high surface temperatures on metals.
- The most advanced radiant barrier insulating coating available and has waterproofing properties.

GREENCOAT Thermalproof is South Africa's foremost ceramic based total solution liquid thermal coating that offers:

- Reduces capital investment in cooling equipment.
- Lowers maintenance costs.
- Creates a better working and living environment.

These instructions are not intended to show product recommendations for specific services.
They are issued as an aid in determining correct surface preparation and application procedures.
It is assumed that the proper recommendations have been made.
These instructions should be followed closely to obtain the maximum service from the material.

MICROSPHERES:

Microspheres in the coating drastically reduce the sun's rays and heat from getting through. Instead the rays are bounced harmlessly back into the atmosphere.

Benefits of Microspheres:

- Reduces interior heat of buildings by up to 45%
- Save electricity by using less air conditioning and refrigeration.
- Greater indoor comfort during hot weather.
- Stops thermal ageing by reducing heat load.
- Insulates the roof at a fraction of the cost of conventional insulation products.
- Prevents rust, blistering, peeling and cracking.
- Eco – friendly as it reduces dependence on electricity.
- Easy and quick low – cost durable application.

Features Included:

- Quick drying - overcoat 30 - 60 minutes
- Excellent flexibility - will never harden
- Ultraviolet and weather resistant: 75, OOO hours +
- Good abrasion resistance
- Exceptional performance in wet weather.
- Rust prevention
- Colour fastness
- Zero flame spread

Excellent resistance to: Acids, alkalis, water, salt solutions and solvents.

Temperature resistance: Minus 50°C - 196°C. At 110°C loss of gloss is observed, and discoloration takes place, without loss of film integrity.

Application: Suitability prepared concrete, metal and any surfaces as recommended.

Compatible Coatings: A test patch is recommended before use of most coatings. Contact your GREENCOAT dealer for specific information.

REQUIREMENTS FOR STORAGE AND APPLICATION

Parameter	Storage (Un-opened)	Paint	Substrate	Environment
% RH (Relative Humidity)	100 % Maximum	-	Min 2°C above Dew Point	85 % Max
Temp °C Min	5°C	5°C	5°C	5°C
Temp °C Min	40°C	40°C	40°C	40°C

Surface Preparation:

- Before application surfaces must be cleaned with GREENCOAT Greenwash to help remove all loose material, particles and any contaminations.
- Previously painted and old primed surfaces must be cleaned by removing all grease, paint and loose friable dirt.
- No other paint should be applied over Zero V.O.C Environmental Maintenance Technology Products as this will defeat the purpose of the technology.

Application: Suitable to apply with brush, roller and spray.

GREENCOAT™ ECO PAINT

GREENCOAT CC
7 Vuyisile Mini Street, Bethal, 2310
Customer Service Department admin@greencoatpaint.co.za
Facsimile 017 647 6011