

**1. DESCRIPTION**

**IMPA ENDURACRYL COOL ROOFPAIN** is a pure acrylic, ready to use paint, when coated on roofing materials, reflects sunlight to a greater extent and prevents the roofing material from getting heated up, even in peak summer afternoons. Since it works on the principle of continuous rejection of UV and IR rays, the roof itself is not getting heated up. So the air below the roof never gets hot, keeping the rooms cool and comfortable. This prevents the buildings for a longer period, extending the life of the buildings. In air-conditioned areas, an attractive power saving of up to 20% can be noted during summer.

**IMPA ENDURACRYL COOL ROOFPAIN** is a high performance one component, non-toxic, high emissivity, ready-to-use high Albedo, Heat Re-Radiating paint which significantly lowers the surface temperature of your roofs and exteriors resulting in:

- Your building remains cool and even under intense sunlight conditions
- Your staff remains cool and maintain higher level of productivity.
- Your humidification and air conditioning costs cut up to 20%
- Reduction of roof heat about 8°C to 20°C

**IMPA ENDURACRYL COOL ROOFPAIN** is a high albedo product having **Solar Reflectance of 0.95 and Emissivity as high as 0.91**. The Solar Reflective Index (SRI) for **IMPA ENDURACRYL COOL ROOFPAIN** is 122.

Solar heat incident on a roof is dissipated by means of three physical phenomena namely:-

- A fraction of the absorbed heat is conducted to the ground and surrounding buildings
- A fraction is dissipated by convection to air leading to higher air temperatures, and
- A fraction is radiated to the sky.

As such one has no control over the first two phenomena but the third one that is the amount of heat radiated can be maximized by **IMPA ENDURACRYL COOL ROOFPAIN** coatings that inherently possess high emittance values.

**IMPA ENDURACRYL COOL ROOFPAIN** is particularly useful where the terrace covers an air conditioned space. A higher roof temperature necessarily leads to a higher load on the air-conditioning plant. A reduction in roof temperature will result in lower roof temperature with consequent savings in power consumption.

**ACRYLIC ROOFPAIN**

**IMPA ENDURACRYL COOL ROOFPAIN**

ISSUED DATE: JUNE 2014 REV1

**TECHNICAL DATA**

<i>Product Code</i>	SU 1022
<i>Colour</i>	As per Standard Colour card
<i>Appearance</i>	Low Sheen
<i>Shelf life</i>	12 Months
<i>Packaging</i>	5L & 20L
<i>Flashpoint</i>	Non flammable
<i>Viscosity</i>	100 – 105KU /23°C
<i>S.G (weight)</i>	1.19 – 1,25 kg/l
<i>Solids per volume</i>	34 – 36%
<i>Solids per mass</i>	46 – 48%
<i>VOC</i>	
<i>Practical Spreading rate (depending on porosity)</i>	6m <sup>2</sup> L per coat (smooth surface) will vary depending on the type of surface. Can drop to about 2-3m <sup>2</sup> /L per coat on tile surfaces with rough texture and high absorption.
<i>Recommended finishing coats.</i>	2 @max 60 – 65 µm per coat
<b>DRYING TIME</b>	
<i>Touch dry time</i>	30 min at 23°C
<i>Recoating Time</i>	2 Hours at 23°C
<i>Full Cure</i>	4-7 Days
<b>APPLICATION</b>	
<i>Roller &amp; Brush</i>	Ready for use, do not Dilute
<i>Spray</i>	Do not Dilute.
<i>Cleaning</i>	Warm water and soap.
<i>Mixing</i>	Stir until homogeneous Stir occasionally during use.

**IMPA ENDURACRYL COOL ROOFPAIN** coating can be applied with ease on following surfaces:

- Concrete, Plaster & Fiber (Nutech) Cement Sheet, Precoated Sheets
- Galvanized/Powder coated galvanised Sheet.
- Primed Metal

**2. FEATURES**

Some advantages of **IMPA ENDURACRYL COOL ROOFPAIN**

- **15 Year Guarantee**
- Ready to use single pack system
- Repels heat energy & control heat transfer
- Reduces air-conditioning running cost
- The coating acts as a shield and protects the surface from heat and water
- Its film is water resistant and does not support growth of fungus and algae
- Does not crack due to wide temperature fluctuation
- For green building as its application gives required credit points
- In poultry and livestock sheds for reducing heat stress
- Malls, Schools, Hospitals for providing better work environment
- In Industrial Sheds as its application reduces heat load
- Residential Houses and Office Buildings by reducing cost of air conditioning
- For Cold storage buildings
- Railway Trucks and Defence vehicles
- Has an outstanding adhesion capacity in the case of prepared galvanised surfaces, fiber cement and cement roof tiles.
- Dries out rapidly and is hard and dry within 4 hours; (2) coats can therefore be applied within a day.
- The product is water-based; dilution of the product and cleaning of equipment therefore performed at low cost.
- It is coloured with a colour-fast pigments and will therefore not fade in the sun or be affected by alkaline salts.
- Reduction of temperature will save power and cost.
- Excellent **flow** and **leveling** properties
- **Impa Mouldtech™** antibacterial, fungal and algae protection
- **Low VOC**

**3. SPECIAL FEATURES**

- **IMPA ENDURACRYL COOL ROOFPAIN** enhances durability of the roof and reduces both building cooling loads and the urban heat island effect
- **IMPA ENDURACRYL COOL ROOFPAIN** is also an effective alternative to bulk insulations under the roofs in humid tropical climates. Bulk insulation can be to an extent replaced by **IMPA ENDURACRYL COOL ROOFPAIN** coatings that reflect solar radiation and provide emission to the sky
- **IMPA ENDURACRYL COOL ROOFPAIN** has excellent abrasion and water resistance it is also resistant to fungal growth
- **IMPA ENDURACRYL COOL ROOFPAIN** is recommended for reduction in the “carbon foot print” of a building as it reduces fuel consumption of the air-conditioning plant
- Has a built in Zinc Phosphate Anti Corrosion substance, therefore does not require a special primer (unless stated recommended primer). Zinc Phosphate is not toxic like the traditional Zinc Chromate rust-repellents. It may therefore be used on roofs that serve as water retention surfaces.

In general the roof temperature is in the range of 60°C to 80°C in summer and this can be substantially reduced by coating the roof with **IMPA ENDURACRYL COOL ROOFPAIN**. Below mentioned is an example of reduction in surface temperature after the application of **IMPA ENDURACRYL COOL ROOFPAIN** coating:

- RCC terraces.....Up to 14°C
- Fiber cement sheets .....Up to 16°C
- GI or powder coated sheets .....Up to 22°C

The above figures are indicative and will vary according to ambient atmospheric conditions

**4. SUBSTRATE CONDITION**

- Substrate must be clean, dry and sound for painting. **Moisture content** must be **below 14% WME**, measured using a PROTIMETER (or equally approved).

**5. SURFACE PREPERATION**

- Ensure that all surfaces are dry, clean and free of oil, grease, laitance and in accordance with above **SUBSTRATE CONDITIONS**.

**NEW WORK**

**CEMENT AND FIBRE CEMENT**

- Prime with **IMPA HYDROPRIME AR PLASTER PRIME** as supplied to seal the surface. Allow 12 hours to dry.

**CLAY TILE SURFACE**

- These surfaces may have a powdery layer present due to age. **RENO WB BONDING LIQUID** is recommended to treat these surfaces and to increase the spreading rate of **IMPA ENDURACRYL COOL ROOFPAIN**. Pre-wetting with clean water will assist application.

**GALVANISED IRON**

- Galvanised iron surfaces must be cleaned with **RESTORE GALVANIZED IRON CLEANER** in accordance with product data sheet. Ensure to obtain a water break-free surface. If the area are situated in the coastal region or are known for humid conditions, then apply one coat **IMPA NOVA ETCH PRIMER** and allow 4 hours drying.

**CHROMADEK**

- Wash down with **RESTORE HEAVY DUTY DEGREASER**. Allow drying and apply directly.

**PREVIOUSLY PAINTED SURFACES**

**BAD CONDITION - CEMENT AND ASBESTOS**

- Remove all flaking and chalking paint by high pressure water jet at 300kPa. If algae is present, treat these areas with **RESTORE MOSS & MOULD KILLER** in accordance with product data sheet. Prepare and prime all exposed metal roof screws with **IMPA MP5 PRIMER**. Apply a full coat of **IMPA HYDROPRIME AR PLASTER PRIMER** as supplied or **IMPA NOVA SB AR PLASTER PRIMER** (For friable/chalky surfaces; dilute **NOVA SB AR PLASTER PRIMER** up to maximum 10% with **RESTORE TURPENTINE**). Allow 12 hours to cure.

**BAD CONDITION – GALVANISED IRON AND CHROMADEK**

- Apply **RESTORE HEAVY DUTY DEGREASER** to lift atmospheric pollution. Remove all flaking and chalking paint by high pressure water jet at 300kPa. If algae is present, treat these areas with **RESTORE MOSS & MOULD KILLER** in accordance with product data sheet. Sand all rusted areas to ISO 850101:1988 – St 3 to attain a bright metal finish before application. Spot prime all bare sanded metal areas using one liberal coat **IMPA MP5 PRIMER** and allow 12 hours drying.
- Apply one full primer coat of **IMPA NOVA ETCH PRIMER** and allow 4 hours drying.

**GOOD CONDITION**

1. Surfaces in good sound condition should be high pressure washed at 180kPa after applying **RESTORE HEAVY DUTY DEGREASER** or a solution of **RESTORE SUGAR SOAP** before applying **SABRE ACRYLIC ROOF PAINT** directly.

**6. APPLICATION**

How to calculate the surface area of the roof to be painted:

- First calculate the flat square metre area of the house, building etc.
- Then adjust to the pitch of the roof by adding the following % to your flat area calculation.

Then apply the following % according the pitch of the roof:

- If high pitch add 40%
- If standard pitch add 33%
- If Low pitch add 20%

Then add the following on top of the above calculation to account for the roof profile.

- Normal corrugated profile add 33%
- IBR profile add 35%
- Normal smooth clay or cement tiles add 20%
- Profiled granular type roof tile add 25%

You have arrived at the total area to be painted , divide this total by the average spreading rate as indicated under technical information for the particular roof type and multiply with two (2) for the total number of litres needed for two (2) coats.

#### BASE COAT

Apply one coat **IMPA ENDURACRYL COOL WHITE ROOFPAIN**T as basecoat when applying darker colours, allowing 4 hours drying.

#### FINAL COAT

Apply two coats **IMPA ENDURACRYL COOL ROOFPAIN**T allowing 4 hours drying time between coats.

#### IMPORTANT:

- Do not apply **IMPA ENDURACRYL COOL ROOFPAIN**T in inclement weather. Allow sufficient drying time before dewfall.

#### 7. PRECAUTIONS

- Application should be avoided in cold and moist weather conditions.
- **Do Not** apply the product at surface temperatures below 6°C (minimum of 2°C above dew point) and temperatures above 40°C
- **Do Not** apply if ambient temperature is less than 10°C or more than 40°C.
- **Do Not** apply if relative humidity temperature is less than 10°C or more than 85. °C
- Pay attention to the preparation of surfaces.
- Do not dilute **IMPA ENDURACRYL COOL ROOFPAIN**T
- Friable and powdery surfaces require special care before painting- if in doubt contact **Impa Advisory Service** 0514328913
- For health reasons, avoid dusting when preparing fibre-cement surfaces. Keep surfaces wet and wash off residues with water.
- **The painting of slate, slurry tiles and wooden shingles is not recommended.**
- Do not paint under conditions of frost, dew, rain or fog or inclement weather. **Note:** Painting under the above conditions may affect the performance of the paint film.
- To ensure that colours on a project are consistent, check that batch numbers are the same.
- The **IMPA ENDURACRYL COOL ROOFPAIN**T 10 year Quality guarantee is not applicable where **IMPA ENDURACRYL COOL ROOFPAIN**T is used on **flat surfaces**.
- To ensure maximum TSR% and cooling effect on dark coloured roofs, apply first/base of **Impa Enduracryl Cool Roofpaint, White** followed by two coats of **IMPA ENDURACRYL COOL ROOFPAIN**T in desired colour.

#### Environmental Health & Safety Information

**WARNING! IRRITANT! HARMFUL IF SWALLOWED. CONTAINS: PROPYLENE OR ETHYLENE GLYCOL. MAY CAUSE EYE, NOSE AND THROAT IRRITATION. AVOID CONTACT WITH SKIN AND EYES AND AVOID BREATHING OF VAPORS AND SPRAY MIST. WEAR EYE PROTECTION AND PROTECTIVE CLOTHING. USE ONLY WITH ADEQUATE VENTILATION.** To avoid breathing vapours and spray mist, open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches or dizziness, increase fresh air. If properly used, a respirator (NIOSH approved for organic vapor with P series particulate pre-filter) may offer additional protection; obtain professional advice before using. A dust mask does not provide protection against vapors. Avoid contact with eyes and skin. Wash thoroughly after handling. Close container after each use. **FIRST AID:** If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately. In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention; for skin, wash thoroughly with soap and water. If swallowed, get medical attention immediately.

**CAUTION: KEEP OUT OF REACH OF CHILDREN AND ANIMALS - DO NOT TAKE INTERNALLY.**

Refer to **Material Safety Data Sheet** for additional health and safety information.

**IN CASE OF FIRE:** Use foam, CO2, dry chemical, or water fog.

**SPILL** – Absorb with inert material and dispose of as specified under **Thinning/Clean-up**.

† **WARNING!** If you scrape, sand or remove old paint, you may release lead dust

#### DISCLAIMER

*The technical information contained in this document are given in good faith and are meant to be used as a guideline by the specifier or user. Whilst we are confident about the quality of our products, we cannot accept any liability for the incorrect use or application of our products. Surface preparation forms an integral part of the scope of works and it is expected that the highest standards are maintained during surface preparation and application, to ensure that our products perform as intended. Always ensure to use the same product batch numbers, refrain from doing spot touch-ups and paint surfaces from corner to corner to prevent colour and sheen variance. As technology may change over time we reserve the right to change products to keep up with changes in raw materials or product trends without pre notice. Although we will always prevail to keep clients informed about changes to be made, but cannot bind ourselves to such notes Please ensure the use of the latest Technical Data Sheet.*

**Please note:** that all our latest Product Data Sheets and Material Safety Data Sheets are available for viewing on our website at [www.impa.co.za](http://www.impa.co.za). All information listed is owned or used under licence of Impa Paints and its related companies. © 2010 Lurama 149 (Pty) Ltd. All rights is reserved.