

1. DESCRIPTION IMPA ENDURA ROOF & PAVING 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 on 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 preserves 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 ENDURA ROOF & PAVING 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 maintains a 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 ENDURA ROOF & PAVING 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 ENDURA ROOF & PAVING 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 ENDURA ROOF & PAVING coatings that inherently possess high emittance values. IMPA ENDURA ROOF & PAVING 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 ENDURA ROOF & PAVING ISSUED DATE: Oct 2023 REV4 <table> <tr> <th colspan="2">TECHNICAL DATA</th></tr> <tr> <td> <i>Product Code</i> <i>Colour</i> <i>Appearance</i> <i>Shelf life</i> <i>Packaging</i> <i>Flashpoint</i> </td><td> SU 1022 <i>As per Standard Colour card</i> Low Sheen 12 Months 5L & 20L Nonflammable </td></tr> <tr> <td> <i>Viscosity</i> <i>S.G (weight)</i> <i>Solids per volume</i> <i>Solids per mass</i> VOC </td><td> 100 – 105KU /23°C 1.19 – 1.25 kg/l 34 – 36% 46 – 48% < 25 </td></tr> <tr> <td> <i>Practical Spreading rate (depending on porosity)</i> <i>Recommended finishing coats.</i> </td><td> 6m²/L per coat (smooth surface) will vary depending on the type of surface. Can drop to about 2-3m²/L per coat on tile surfaces with rough texture and high absorption. 2 @max 60 – 65 µm per coat </td></tr> <tr> <td> DRYING TIME <i>Touch dry time.</i> <i>Recoating Time</i> <i>Full Cure</i> </td><td> 30 min at 23°C 2 Hours at 23°C 4 -7 Days </td></tr> <tr> <td> APPLICATION <i>Roller & Brush</i> <i>Spray</i> </td><td> <i>Ready for use, do not Dilute.</i> <i>Do not Dilute.</i> </td></tr> <tr> <td> <i>Cleaning</i> <i>Mixing</i> </td><td> <i>Warm water and soap.</i> <i>Stir until homogeneous.</i> <i>Stir occasionally during use.</i> </td></tr> </table>	TECHNICAL DATA		<i>Product Code</i> <i>Colour</i> <i>Appearance</i> <i>Shelf life</i> <i>Packaging</i> <i>Flashpoint</i>	SU 1022 <i>As per Standard Colour card</i> Low Sheen 12 Months 5L & 20L Nonflammable	<i>Viscosity</i> <i>S.G (weight)</i> <i>Solids per volume</i> <i>Solids per mass</i> VOC	100 – 105KU /23°C 1.19 – 1.25 kg/l 34 – 36% 46 – 48% < 25	<i>Practical Spreading rate (depending on porosity)</i> <i>Recommended finishing coats.</i>	6m²/L per coat (smooth surface) will vary depending on the type of surface. Can drop to about 2-3m²/L per coat on tile surfaces with rough texture and high absorption. 2 @max 60 – 65 µm per coat	DRYING TIME <i>Touch dry time.</i> <i>Recoating Time</i> <i>Full Cure</i>	30 min at 23°C 2 Hours at 23°C 4 -7 Days	APPLICATION <i>Roller & Brush</i> <i>Spray</i>	<i>Ready for use, do not Dilute.</i> <i>Do not Dilute.</i>	<i>Cleaning</i> <i>Mixing</i>	<i>Warm water and soap.</i> <i>Stir until homogeneous.</i> <i>Stir occasionally during use.</i>
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IMPA ENDURA ROOF & PAVING coating can be applied with ease on following surfaces:

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

2. FEATURES

Some advantages of **IMPA ENDURA ROOF & PAVING**

- **15 Year Guarantee (NOT APPLICABLE IF USED AS A PAVING PAINT)**
- Ready to use single pack system.
- Repels heat energy & controls 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 the cost of air conditioning.
- For Cold storage buildings
- Railway Trucks and Defense 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 colour-fast pigments and will therefore not fade in the sun or be affected by alkaline salts.
- Reduction of temperature will safely power and cost.
- Excellent **flow** and **leveling** properties
- **Impa Mouldtech™** antibacterial, fungal and algae protection
- **Low VOC**

3. SPECIAL FEATURES

- **IMPA ENDURA ROOF & PAVING** enhances durability of the roof and reduces both building cooling loads and the urban heat island effect.
- **IMPA ENDURA ROOF & PAVING** 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 ENDURA ROOF & PAVING** coatings that reflect solar radiation and provide emission to the sky.
- **IMPA ENDURA ROOF & PAVING** has excellent abrasion and water resistance. It is also resistant to fungal growth.
- **IMPA ENDURA ROOF & PAVING** is recommended for reduction in the "carbon footprint" 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.

Then apply the following % according to 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.

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**.

6. APPLICATION AS A ROOF PAINT

NEW WORK

CEMENT AND FIBRE CEMENT

Prime with **IMPA RENO AR MASONRY PRIMER** 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. **IMPA SB BONDING LIQUID** is recommended to treat these surfaces and to increase the spreading rate of **IMPA ENDURA ROOF & PAVING**. 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 is situated in the coastal region or is known for humid conditions, then apply one coat **IMPA MP10 PRIMER** and allow 4 hours drying.

CHROMADEK (FACTORY PAINTED SHEETING)

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

PREVIOUSLY PAINTED SURFACE

BAD CONDITION - CEMENT AND ASBESTOS SURFACES OR TILES

Remove all flaking and chalking paint by high pressure water jet at 300kPa. If any doubt exists regarding the quality or integrity of the existing old paint, it is advisable to remove all the existing paint. If algae are 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 MP10 PRIMER**.

(For friable/chalky surfaces; apply **IMPA SB BONDING LIQUID**. Allow 16 hours to cure. Should the top layer not show good binding after first application of the Bonding Liquid repeat the process until the necessary binding is reached. (**ALLOW 16 HOURS BETWEEN APPLICATION OF EACH LAYER.**)

BAD CONDITION – GALVANISED IRON AND FACTORY PAINTED SHEETING

Apply **RESTORE HEAVY DUTY DEGREASER** to lift atmospheric pollution. Remove all flaking and chalking paint by high pressure water jet at 300kPa. If any doubt exists regarding the quality or integrity of the existing paint, it is advisable to remove all the existing paint. If algae are present, treat these areas with **RESTORE MOSS & MOULD KILLER** in accordance with product data sheet. **AREAS WITH SEVERE RED RUST:** Remove any rust and mill scale by abrasive blast cleaning to Grade Sa 2 ½. Of ISO 8501-1:1998 – St3 with a blast profile not exceeding 20-30 µm. Or apply restore **FERRO RUST REMOVER** to remove all rusted areas as per product data sheet. Alternatively wire brush to Grade St 3 of the same standard to attain a bright metal finish before application. This is not as effective and may result in a shorter maintenance free period. Apply two coats of **Impa MP10 Primer (ALLOW 4 HOURS BETWEEN APPLICATION OF EACH LAYER.)** on all areas that had red rust and one coat (**ALLOW 4 HOURS TO DRY BEFORE APPLYING TOPCOAT.**) on the rest of the area which still has its galvanized top layer.

BAD CONDITION – CLAY TILES

Remove all flaking and chalking paint by high pressure water jet at 300kPa. If any doubt exists regarding the quality or integrity of the existing old paint, it is advisable to remove all the existing paint. If algae are present, treat these areas with **RESTORE MOSS & MOULD KILLER** in accordance with product data sheet. Prepare and prime apply all surfaces with **IMPA SB BONDING LIQUID**. Allow 4 hours to cure. Should the top layer not show good binding after first application of the Bonding Liquid repeat the process until the necessary binding is reached. (**ALLOW 16 HOURS BETWEEN APPLICATION OF EACH LAYER.**)

BASE COAT

Apply one coat **IMPA ENDURA ROOF & PAVING WHITE** as basecoat when applying darker colours, allowing 4 hours drying.

FINAL COAT

Apply two coats **IMPA ENDURA ROOF & PAVING** allowing 4 hours drying time between coats.

IMPORTANT:

Do not apply **IMPA ENDURA ROOF & PAVING** in inclement weather. Allow sufficient drying time before dewfall.

7. APPLICATION AS A PAVING PAINT

SUBSTRATE CONDITIONS.

IMPORTANT: Smooth steel floated concrete floors should be acid etched using **RESTORE BRICKCLEANER** in accordance with product data sheet to provide a key for the paint to grip. Alternatively, **DIAMOND GRINDING** can be used as a dry preparation method.

Floors should be dry before painting. Below 7% moisture as per above substrate conditions.

SURFACE PREPERATION

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

N.B. Remove all traces of mould with Restore Moss & Mould Killer. See data sheet for application.

NEW WORK

CEMENT

Wood floated cement, chemically etch **RESTORE BRICKCLEANER** diluted 1:10 with water or with pool acid diluted 1:20 with water until well etched and free of efflorescence, rinse thoroughly with water under pressure, allow drying. Apply a primer coat of **Aquafloor Primer. Allow to dry for 6 hours.**

N.B. Friable and cement: Not recommended.

CEMENT IMPRINT PAVING

High-pressure water wash at 180bar with a rotating nozzle to remove all dirt and grime. Allow to dry and apply directly or apply 1 coat **Impa Aquafloor Primer. Allow to dry for 6 hours.**

CEMENT PAVERS

High-pressure water jet cleaning and make sure to remove top layer of loose filling between pavers. Allow to dry and apply 1 coat **Impa Aquafloor Primer. Allow to dry for 6 hours.**

- Pay particular attention to the preparation of surfaces.
- Pay attention to the preparation of surfaces. When used in bathrooms or kitchens, keep the surface dry for at least seven (7) days.
- **IMPA ENDURA ROOF & PAVING** can only be applied to specified substrates and under recommended conditions.
- Adhesion to highly polished cement and gloss enamel floor paints is not good enough to ensure durability. If application will be completed on concrete screeds OR polished cement surfaces adherence will be influenced by hot tyres and could lead to paint film peeling off of said surfaces. **Epoxy paint should rather be used for these types of applications.**
- Colour range limited to suitable colours for driveways, i.e., no bright colours.
- Could be slippery on steep inclines and when wet.
- Prone to marking with tyres.
- To ensure a consistent appearance ensure that batch numbers on all the containers are the same. Where the batch numbers differ, intermix before use.
- **NOTE: exterior use on porous cement or ash brickwork can result in the coating peeling from the substrate. Water that rises from the soil can be absorbed into the brick resulting in the moisture being drawn to the surface and weakening the coating substrate interface, this can result in coating failure. The use of DPC below the brickwork to stop rising damp actually can have a detrimental effect, as the rainwater seeping in-between the bricks is simply trapped by DPC and is absorbed into the bricks anyway.**
- **Friable and powdery surfaces should not be painted.**
- Do not apply on stairs!
- Allow light traffic after 16hrs drying and heavy traffic after 72 hours of drying @23°C. Drying times must be extended in cold, damp, or humid conditions.
- Do not use on bituminous or asphalt surfaces.

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 is 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 work, 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 strive 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. 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.