



**HYDRO™-TDC-R is a high-performance roof protective and Thermal Dynamic coating for all roof-type applications. It is a thermal dynamic, water-resistant flexible polymeric coating that can be applied by various rollers, brushes or airless systems. HYDRO™-TDC-R is applied like a standard exterior coating but will provide a much higher level of protection and durability. HYDRO™-TDC-R is fortified for roof areas with high moisture impermeability and temperature fluctuations. HYDRO™-TDC-R also contains a patented mineral platform that ensures a high level of thermal dynamic reducing in excess of 20% radiant heat based on as little as 0.8kg/m<sup>2</sup> or 200 microns dry build. HYDRO™-TDC-R performance is enhanced when HYDRO™-TDC-Primer coat is applied as the initial coating in all circumstances and adding another 10-15% to the final 30%+ reduction. HYDRO™-TDC-R is white in its base state and can be coloured.**

#### Features & Benefits:

- Long Term exterior protection
- Low-build Thermal protection
- Water-based
- Moisture Impermeable
- Excellent Flexibility
- High Water resistance
- Mould resistance
- UV stable
- High scuff resistance
- Excellent bonding to most surfaces
- Bitumen surface friendly
- Easy to use
- Easy to maintain
- Early adhesive strength
- High resistance to cracking and peeling
- No VOC
- Not flammable
- Not combustible



## Technical Data Sheet **TDC™-Roof**

### Recommended Use:

HYDRO™-TDC-R Will provide an excellent low-profile paint finish over roofs such as Aluminum and Zinalume guttering or tiled roofs; Designed to be used where a high level of temperature, flexibility and waterproof; HYDRO™-TDC-R Provides excellent added durability and ensures a low maintenance coating. HYDRO™-TDC-R is used in combination with HYDRO™-TDC-Primer, or and HYDRO™-TDC-Clear for a more luster Satin finish. Normal application one coat HYDRO™-TDC-Primer and two coats of Topcoat HYDRO™-TDC-R; HYDRO™-TDC-Clear (optional)

### Colours:

HYDRO™-TDC-R Provided in Low Sheen / Matt only; HYDRO™-TDC-R can be coloured to all Australian Standard AS2700 Colours with excellent Colourant acceptance.

### General Application:

- Any surface to be coated must be cleaned from any rust, oil old paints, growth or conterminous matter. Use a high-pressure cleaner and /or appropriate mechanical help to achieve a clean and dry surface before the first application.
- Apply MouldEx or similar to the substrate as directed by TDS to clean any organic matter and clean before application of TDC™ for better adhesion.
- Any damage to the substrate should be repaired before the application of TDC™.
- The typical application methods are by Brush, Roller or airless Sprayer (Wagner Pro).
- Ensure the surface is clean and dry prior to applying the first single coat of TDC™-Primer and allow to dry for at least 1 hour before Topcoat.
- Be sure to keep a wet edge with your product and plan your work to suit the product and weather conditions.
- The best practice is to finish at an external or internal corner, or at a control line when work will continue the next day.
- Keep sheltered from rain and moisture for 24-48 hours after completion depending on conditions.
- The wet film build required for maximum benefit is 3 coats (200-300 microns) apply TDC™-Primer plus TDC™ Topcoats.
- The first coat can be diluted. Dilution rates depend on temperature conditions but typically can be diluted up to 20% with water for hot surfaces.
- Recoating is typically after 30-60 minutes depending on conditions at the time of application. It is recommended to discuss this with a technical service representative for thorough guidance before applying below 5°C or greater than 35°C.
- Touch Dry ~ 30 minutes (standard temperature @25°C). Total drying time at ~ 2 hours (standard temperature @25°C).
- The coverage rate is approximately 5-6m<sup>2</sup>/ltr and will change when diluted further or on a smooth surface.
- Clean up with water.
- Shake/stir/mix containers well before opening them for initial use.
- To ensure colour consistency, the same paint batch should be used on the finish coat. If this is not possible then multiple containers should be purchased together; Please make sure you start and finish with the same batch for consistency.



## Technical Data Sheet **TDC™-Roof**

- For a standard low-profile finish, use a 10-20mm lambs wool sleeve/nap, for airless spray use a WAGNER Pro or similar with a 0.021-0.025 tip.
- The applicator should check the colour prior to application. Flux Design Australia will not accept liability once the product has been applied for inconsistency colour.
- Do not apply on areas of continual dampness or areas saturated with water, the surface has to be dry before application.

### Substrate Conditions:

- Should NOT be applied in temperatures below 5°C or above 35°C, unless you consult your technical support prior to application for evaluation.
- Not suitable for application in areas of constant dampness, or areas submerged in water.
- Test a small area first when humidity is greater than 90%.
- If applying TDC™ over a previously painted surface or rendered finish, ensure the surface is thoroughly cleaned and free of flaked paint or loose cement particles.
- Fresh cementitious substrates such as mixed sand and cement renders or concrete must be left to cure for up to 28 days, containing not more than 15% WME prior to application.
- TDC™-Roof can be diluted up to 20% with water when applied as an initial coat or primer.
- Please be aware that any pre-cast walls/roofs or concrete pre-cast products have to be properly cleaned in the event that diesel was used in the delamination process of the panels/parts in order to achieve adhesion of the coating to the product.
- If applying TDC™ over previously painted surfaces or rendered finishes, ensure the surface is thoroughly clean and free of flaked paint or loose cement particles.

### Transport & Storage:

- Store in a cool place
- Keep containers sealed when not in use.
- Container weight is approximately 18-20kg(15ltr) so ensure the correct lifting technique is applied. Coverage 5-6m<sup>2</sup>/ltr.

### Disposal:

- Spilt material must be absorbed with sand/sawdust or appropriate materials to lift for proper disposal.
- The product must not be allowed to run into drains or open body of water.
- Residual small amounts of leftover paint on brushes, rollers should be wiped onto an old cloth or paper and allowed to dry, rather than being washed down the sink.
- Dispose of in accordance with the local regulations.

### Health & Safety:

- Avoid contact with skin and eyes. Wear suitable protective clothing.
- Avoid inhalation or ingestion.
- In case of contact with skin or eyes, rinse immediately.
- Seek medical attention immediately if ingested and refer to SDS!



## Technical Data Sheet TDC™-Roof

### Technical:

HYDRO™-TDC and how does the 30% reduction come about and what is this in 'R' rating:

AWTA Laboratory -NATA- test report on ASTM C518-2017

- i. Blank Standard Fibre Panel 1359kg/m<sup>3</sup> = 0.3168 W/m.K
- ii. Substrate Grey Fibre Panel 1364kg/m<sup>3</sup> = 0.2723W/m.K
- iii. Approx. 0.0445W/m.K improvement in Thermal Conductivity at less than 0.3mm
- iv. TDC-Primer will add another 10-12% to the total of 0.0504W

'R' rating equations:  $\lambda$ - 0.0445W/.mK at less than 0.3mm is equal to R 0.022 (typical insulation panels at 100mm with 0.0445W/.mK is equal to R 2.25 or R 2.52 when primer and topcoats are applied) TDC applies 1 primer 2 topcoats = R 0.75.

	TDC™-Primer	TDC™-Topcoat	TDC™-Clear
Volume Solids	55%	45%	25%
Coverage m <sup>2</sup> /Lt	8	6	4
UV Resistance (ASTM 5894)	NA	Passes 5000hours	Passes 5000hours
Elongation Break (ASTM D-412)	200%	300%	200%
Flexibility (ASTM E1713) Pass	180° Bend	180° Bend	180° Bend
Abrasion Resistance (ASTM D4060)	NA	>3000 Cycles	>2000 Cycles
Pull Test Adhesion on Concrete/Mild Steel (AS/NZ 1580.408.5:1994)	1.6MPa	1.5MPa	1.5MPa
VOC <0.5g/L considered NO VOC	< 0.10g/L	<0.30g/L	< 0.10g/L

HC-TDC is available for walls HYDRO™-TDC-W (interior and exterior); HYDRO™-TDC-F for flooring (driveway, garage etc), HYDRO™-TDC-R (roofs), HYDRO™-TDC-Clear and HYDRO™-TDC-Primer and HYDRO™-TDC-P for Pools and in water applications. Available in 15ltr pails and IBC.

Further reference please also go to [www.hydrotdc.com](http://www.hydrotdc.com)



## Technical Data Sheet **TDC™-Roof**

- Please refer to the relevant SDS for further information. For further information please contact us through the mailbox: [fluxdesignaustralia.com](mailto:fluxdesignaustralia.com)
- Notice to the reader
- While the Information provided in this TDS is believed to provide a useful summary of the hazards of this product as it is commonly used, the safety data sheet cannot anticipate and provide all of the information that might be needed in every situation. Inexperienced product users should obtain proper training before using this product. In particular, the data furnished in this sheet do not address hazards that may be posed by other materials mixed with this product or similar. We accept no responsibility for loss or injury caused by improper use, incompetent preparation or ordinary wear and tear. Users should review other relevant material Safety Data Sheets before working with this product or its mixed state.
- **SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY Flux Design Australia Pty Ltd., except that the product shall conform to contracted specifications. Flux Design Australia Pty Ltd retains the right to update this TDS without prior notice. Due to the fluent nature of colours and consequent uncontrollable possible colour changes or colour differences in print or application Flux Design Australia Pty Ltd is not responsible or can guarantee any final colour.**
- Any guarantee does not cover paint failure caused by any breakdown of coatings applied previously or when used on glass and plastics or in combination with other coatings.
- Any thermal efficiency guarantee cannot be made on darker tinting colours used.
- TDC™-Primer is an undercoat only and can not be used as a topcoat.
- TDC™-Clear is a surface protection and satin varnish that enhances the thermal dynamics of the HYDRO™TDC system further.
- Where a roof is used for the collection of water it is necessary not to collect drinking water within 12 hours after painting to allow the coating to fully dry (at the standard temperature at 25°C).
- The information provided herein was believed by Flux Design Australia Ltd. to be accurate at the time of preparation or prepared by the manufacturer and believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

