HYDRO – REDUCING YOUR COST PER M^2

HEAVY DUTY WATER BASED COATING

HIGH VOLUME SOLIDS
ADHESION PROMOTED
CORROSION RESISTANT
UV STABLE
LOW VOC & LEAD FREE

dura paints
Innovation in action

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ISO 9001
REGISTERED FIRM

Hydro Range – Technical Information Pack

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1. Hydro Range of Water Based Industrial Coatings

Dura Paints is pleased to introduce the **Hydro** range of heavy duty water based coatings, specifically developed for use by fabrication shops, structural steel fabricators, palisade fencing contractors, container refurbishers, earthmoving equipment, cranes and mining equipment.

2.1. Hydro Prime

Hydro Prime is a direct-to-metal (DTM), cross-linking, low odour, water-based, high quality, adhesion promoted primer for application to prepared steel and galvanised iron. **Hydro Prime** is lead free, solvent free, low VOC, non-flammable, high build and corrosion inhibiting. **Hydro Prime** replaces and outperforms solvent- based alkyd coatings.

1.2. Hydro Finish

Hydro Finish is a high performance, cross-linking, low odour, lead free, water-based, UV resistant, adhesion promoted, tintable topcoat for steel applications. **Hydro Finish** is also suitable for roofs, ceiling boards, fibre cement and gypsum board. **Hydro Finish** replaces and outperforms solvent- based top coats. **Hydro Finish** is specifically formulated to be applied over **Hydro Prime**. It is not recommended to apply Hydro over solvent-based products or vice versa.

1.3. Hydro Clean (RFU)

Hydro Clean (RFU) is a water-based degreasing and surface preparation product for use on steel. **Hydro Clean (RFU)** is specially formulated to degrease and prepare steel surfaces prior to painting. Ideal for preparing structural steel, fencing, steel roofs etc. The product has been developed for use in conjunction with **Hydro Prime** and **Hydro Finish**. The product provides surface key and an anticorrosive phosphate layer. **Hydro Clean (RFU)** is most effective when applied with a high-pressure washer (Wap / Karcher), at temperatures greater than 25 degrees Celsius.

Product	Colours	Pack Sizes
Hydro Prime	Biscuit, Black & Grey	5L, 20L & 200L
Hydro Finish	Fully Tintable - 1000's of Colours	5L, 20L & 200L
Hydro Clean	Clear	5L & 25L

2. Benefits of Water Based Industrial Coatings

Industrial products are primed and coated for the purpose of corrosion protection and aesthetics. There have been a number of technological advancements in the field of industrial water based coatings over the past decade. B**enefits of industrial water-based coatings include**:

- Smaller ecological and environmental footprint.
- No solvent usage in product manufacturing, application, cleaning and thinning, resulting in significant cost savings (see Cost Benefit pg. 7).
- No fire hazard and the removal of fire store requirements.
- Reduction in insurance premiums.
- No need to dispose of contaminated solvent.
- Improved Health & Safety.
- The elimination of lead chromate pigments and reduced VOC's (volatile organic compounds).
- Reduced tank maintenance and product disposal costs.
- Higher volume solids and better coverage.
- Hazardous Substances Act Compliant – Lead and Methanol Free.

Further to these benefits, new generation water based coatings offer the following technical and performance benefits:

> **Technical:** New generation water based coatings generally have higher volume solids than QD's or AD's: they cover a greater m2 for each litre of paint, at the same thickness (DFT). New generation water based coatings dry faster, at lower temperatures and adhere better than traditional coatings.
>
> **Performance:** Current water based primers and top coats have improved performance over QD, AD or Super Gloss Enamels (Alkyds), specifically in areas such as yellowing, UV, corrosion resistance and chalking. Higher volumes solids generally result in higher build (DFT), therefore reducing the number of coats required.

Hydro products are cross linking and adhesion promoted which means they do not block (blocking is when dry, painted items are placed on top of each other and then stick together). They also give a hard finish, unlike most alkyds. Adherence to substrate continues to improve over a period of approximately 7 days. It should be noted that the coating gloss may initially be slightly lower than with solvent-based products. However, because of significantly superior performance the original gloss will remain long after alkyds have yellowed, faded and chalked.

3. Key Features

Hydro Clean	Hydro Prime	Hydro Finish
Water-based. Easy to use. Provides surface key. Provides anticorrosive phosphate layer.	Lead free. Solvent & methanol free. Low VOC's. APEO free. Low odour. Adhesion promoted. High build. High volume solids. Corrosion inhibiting. Pure Acrylic. Significant reduction in flash rusting when correctly applied. Reduce coating cost per square meter.	Pure Acrylic. Low odour. Reduced blocking characteristics. Reduced chalking. Lead free. Low VOC's. APEO free. Solvent & methanol free. UV resistant. Adhesion promoted. Non yellowing. Fully tintable. Gloss finish. Hard finish when fully cured. Reduced coating cost per square meter.

The Hydro products are not glossy water based decorative enamels, nor are they "roof paints" relabelled as water based industrial coatings.

The Hydro Range has been specifically formulated using the latest water based industrial coatings technology.

4. Technical Data

Hydro Prime		Hydro Finish	
SUBSTRATE:	Prepared steel, suitably prepared Galvanised iron.	**SUBSTRATE**:	Prepared steel, primed with **Hydro Prime**, roofs, ceiling boards, fibre cement and gypsum board.
APPEARANCE:	Matt.	**APPEARANCE**:	Gloss.
COLOUR:	Black, Biscuit, Grey	**COLOUR:**	White & tintable to NCS GLOSS Colours.
SOLID CONTENT:	Biscuit & Grey 54% by mass. 42 % by volume Black 34% by mass. 27% by volume	**SOLID CONTENT**:	41% by mass (Varies by colour/base) 33% by volume (Varies by colour/base)
SG @ 25°C:	Biscuit & Grey 1.36 Black 1.14	**S G @ 25°C**:	1.17 (Varies by colour/base)
RECOMMENDED DFT	MIN: 25µm MAX: 40µm per coat.	**RECOMMENDED DFT**:	MIN: 25µm MAX: 40µm
PRACTICAL SPREADING RATE @ 35µ: **Biscuit & Grey**: 12- 14 m². **Black:** 8- 10 m² (dependant on the substrate and application DFT).		**PRACTICAL SPREADING RATE** 10 - 12 m² (dependant on substrate and application (DFT).	
VISCOSITY @ 25°C:	Biscuit/Grey 80 TO 85 KU Black 60 TO 65 KU	**VISCOSITY @ 25°C**:	White/Pastel 68 - 73 KU. Deep 68 – 73 KU. Transparent 85 – 90 KU.
APPLICATION:	Brush or Airless/Pressure Pot Spray. Conventional spray not recommended.	**APPLICATION:**	Brush or Airless/Pressure Pot Spray. Conventional spray not Recommended.
DRYING TIME:	Touch dry 30 Min Dry to handle 2 hours Over coating 4 hours	**DRYING TIME**:	Touch dry 30 Min Dry to handle 2 hours Over coating 4 hours

APPLICATION ENVIRONMENT:

Surface Temp	Ambient Temp	Relative Humidity
Min 10°C or 2°C above dew point	Min 10°C or 2°C above dew point	Min: 10%
Max : 40°C	Max : 40°C	Max : 85%

PACK SIZES: 5L, 20L & 200L

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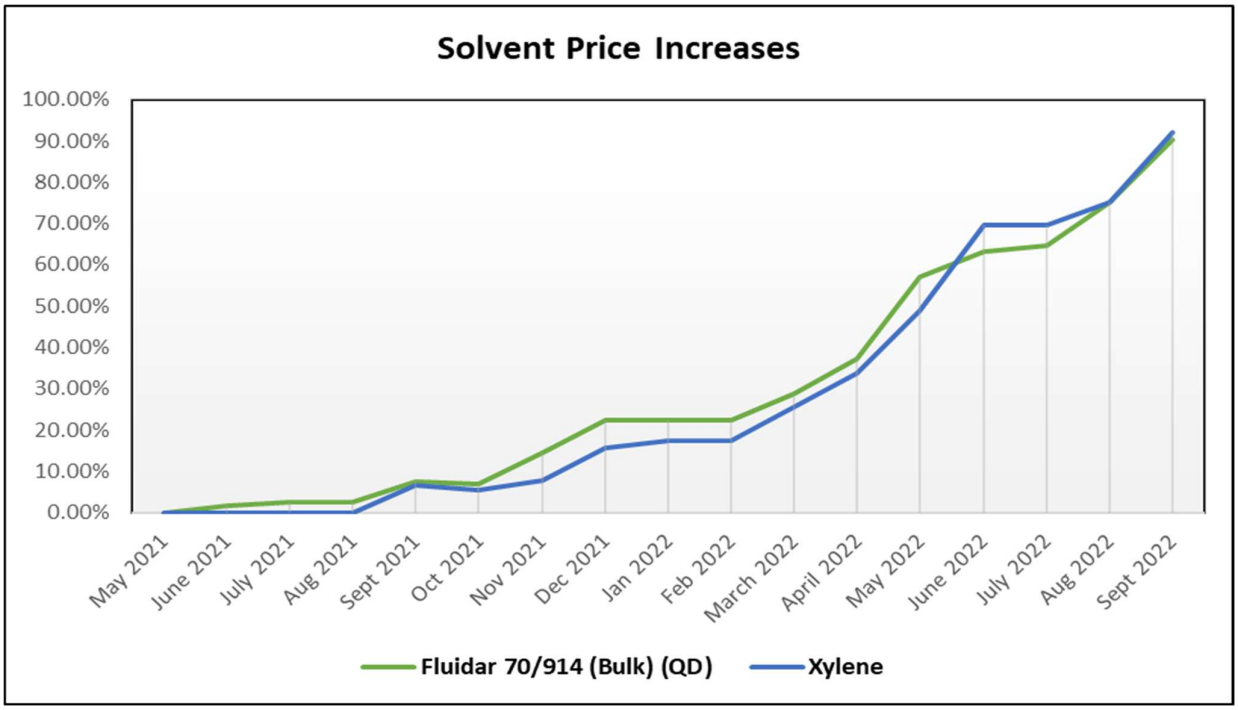
Note: Adhesion and hardness will continue to improve for approximately seven days after application, subject to ambient temperatures.

5. Airless Spray Application Recommendation:

Nozzle size	From 0.013 to 0.015
Nozzle pressure	170 Bar (+/- 2500 psi)

6. Cost Benefit.

The cost of solvent has escalated dramatically over the past 18 month (see table below) and constitutes a significant cost of manufacturing and applying solvent based coating systems. This cost is not only inherent in the cost of the coating, but also in thinning, cleaning, solvent disposal, solvent storage and fire insurance. Switching to the **Hydro** water based system saves 100% on solvent spend, whilst eliminating the associated fire, health and environmental hazards.



Case studies have indicated a total cost per square meter saving of between **28% and 50%*** when utilising the **Hydro** System as opposed to traditional solvent based coatings. Can you afford not to switch to **Hydro**?

subject to project nature, substrate, application and finish requirements.

7. Cost Reduction Case Study – Airless Spray Application

Project: **Container**

Dimensions: **12.19m (L) x 2.43m (W) x2.85m (H)**

Total square meters to be painted: **142.58 square meters**

	Volume Solids	Litre Cost
Zinc Phosphate Primer Grey	36%	R 58.55
Anchorbond White	24%	R 56.43
Thinners		R 32.28
Hydro Prime Biscuit	42%	R 70.78
Hydro Finish White	33%	R 69.30

Solvent Based Application			**Hydro Range Application**		
Zinc Phosphate Primer Grey (single coat)	30 microns		**Hydro Prime** Biscuit (single coat)	25 microns	
Anchorbond White (2 coats to achieve full coverage)	50 microns		**Hydro Finish** White (single coat)	30 microns	
Thinners					
Actual Application	**Actual Volume Used**	**Cost**	**Actual Application**	**Actual Volume Used**	**Cost**
Zinc Phosphate Primer Grey (5 square meters / l)	30 l	R 1,756.50	**Hydro Prime** Biscuit (9 square meters /l)	16.25 l	R 1,150.18
Anchorbond White (3 square meters /l) (2 coats)	51 l	R 2,877.93	**Hydro Finish** White (6 square meters/l) (1 coat)	22.34 l	R 1,548.16
Thinners	20 l	R 645.60			
Total Cost	**101 l**	**R 5,280.03**	**Total Cost**	**38.59 l**	**R 2,698.34**
Cost per square meter (142.58 square meters)		**R 37.03**	**Cost per square meter (142.58 square meters)**		**R 18.93**

SAVING 49%

Per litre cost as at August 2022

Significant Savings.

Improved Coverage.

Professional Finish.

Reduced application time due to higher build (DFT) and fewer coats.

8. Hydro Project Examples

Technical Data Sheets and Safety Data Sheets are available at www.durapaints.co.za

Contact your Technical Sales Representative for more information or email us at orders@durapaints.co.za.