

INFRASTRUCTURE SYSTEMS

ISO 12944

Epoxy 8930 ST
Epoxy Multi
Epoxy Multi MIO HB
Epoxy Surtol Aluminium Fast
PU 55 HB Topcoat
PU DTM HB
PU DTM Flexi HB
TopAcryl DTM HB
Zinc Epoxy Multi Prime

R & D, MANUFACTURING CAPABILITY & QUALITY

R & D plays an important roll in our business. With the ever changing technologies available to us we are able to maintain and improve existing product formulations, and develop new solutions for the various markets. It facilitates achieving quality standards which enable our products to be recognized and accepted in the market place.

The markets perceive Specialized Coating Systems as a credible brand competing with other established global brands. Our manufacturing plant is continually maintained, improved and capacity increased to meet increasing demands for our products.

TESTING

Internally and externally:

- Orytech – Independent Corrosion & Paint Testing Laboratories and Consultants – Accelerated and natural testing of products as per ISO 12944 for Eskom Distribution Technical Bulletin 10TB011.
- Orytech testing of Epoxy Multi Zinc as per SSPC Paint 20 Type ii Level 2 and ISO 12944.5.
- Accelerated exposures – Salt Sprays, Condensations Chamber, QUV.
- Compatibility with various substrates.
- Intercoat & substrate adhesion.
- Application properties such as flow, film formations, cracking tendency.
- Determination of correct application equipment & methods.
- Mechanical properties (flexibility, impact, abrasion resistance).

CASE STUDIES

Sun City

Sun International's flagship resort, SUN CITY is as popular today as it was when it was first built in 1979. Located on the border of the Pilanesberg National Game Park is a favourite getaway destination.



The project involved the repainting of the weathered roof and cladding of the entertainment centre in the latter half of 2016.

The total area was in the region of 20,000m². The chosen system was Epoxy WB GP Primer and PU DTM Flexi HB.

Specialized Coating Systems met the requirement and supplied 5,000Lt of PU DTM Flexi HB. The client is extremely satisfied with the finish.

SAB Breweries Alrode

SAB Breweries, in Alrode South Africa, a project involving the extension of plants. Conditions of high internal humidity and condensation. There were limitations in terms of surface preparation, a surface tolerant system was chosen.

Epoxy 8930 ST as the primer and PU 55 HB Topcoat and the finish.

The total surface area was 42,000m².

Specialized Coating Systems met the requirement and supplied 18,000 Litres of product.

The consulting engineers on this project were Hatch.

9 PRODUCTS
17 STANDARD SYSTEMS

PRODUCTS



EPOXY 8930 ST

A General purpose, high solids surface tolerant epoxy primer/finish. Excellent adhesion to steel, galvanized steel and aged epoxy surfaces.



EPOXY MULTI PRIME

A Zinc Phosphate pigmented, fast drying, general purpose, high build epoxy primer for steel and concrete surfaces. Contains zinc phosphate, has good wetting & low temperature curing properties.

EPOXY MULTI ZINC

A Zinc Rich, fast drying, high performance, high build, epoxy primer formulated to give maximum protection as part of any anti-corrosive coating system for aggressive environments.

EPOXY SURTOL ALUMINIUM FAST

A Zinc Phosphate & Aluminium pigmented, general purpose epoxy primer with fast curing properties. Excellent wetting properties allow excellent adhesion to hand prepared surfaces.

EPOXY MULTI MIO HB

A Micaceous Iron Oxide pigmented, general purpose epoxy intermediate coat. The MIO enhances resistance to water vapour transmission making it an extremely tough coating for aggressive environments.

PU 55 HB GLOSS TOPCOAT

A Polyurethane acrylic topcoat with excellent gloss and colour retention.

PU DTM HB SATIN

A high performance, zinc phosphate pigmented, polyurethane in a satin/semi-gloss finish. Used as a direct-to-metal primer/finish or as a topcoat for moderately corrosive environments. Provides excellent colour and gloss retention.



PU DTM FLEXI HB GLOSS

A specially modified, zinc phosphate pigmented, high performance polyurethane with outstanding flexibility, gloss and colour retention. Used as a direct-to-metal primer/finish or as a topcoat for highly corrosive environments. The high degree of flexibility provides outstanding impact resistance.



TOPACRYL DTM HB

A Zinc Phosphate pigmented, solvent based acrylic primer/finish for application direct-to-metal. Has a satin finish and rapid drying properties.

with the ability
to interchange
primers,
intermediates
and topcoats

PRIMER PROPERTIES	EPOXY MULTI ZINC	EPOXY MULTI PRIME	EPOXY SURTOL ALUMINIUM FAST	EPOXY 8930 ST
Colour	Greenish Grey	Tintometric System	Aluminium	Tintometric System
Mix Ratio	4:1	4:1	4:1	4:1
Activator	Epoxy Activator Multi Zinc	Epoxy Activator Multi	Epoxy Activator Multi	Epoxy Activator 8930 ST
Density	3.39 kg / Litre	1.58 kg / Litre	1.3 kg / Litre	1.5 kg / Litre
Volume Solids	70%	63%	57%	83%
Typical Film Thickness	100µm	100µm	100µm	125µm
Theoretical Coverage	7.0 m ² /Lt @ 100 µm DFT	6.3 m ² /Lt @ 100 µm DFT	5.7 m ² /Lt @ 100 µm DFT	6.64 m ² /Lt @ 125 µm DFT
Dry to Touch @ 25°C	1.5 hrs	1.5 hrs	1.5 hrs	4 hrs

INTERMEDIATE PROPERTIES	EPOXY MULTI MIO HB
Colour	Reddish Brown
Mix Ratio	4:1
Activator	Epoxy Activator Multi
Density	1.63 kg / Lt
Volume Solids	55%
Typical Film Thickness	100µm
Theoretical Coverage	5.5 m ² /Lt @ 100 µm DFT
Dry to Touch @ 25°C	2.5 hrs

TOPCOAT PROPERTIES	PU 55 HB GLOSS TOPCOAT	PU DTM HB SATIN	PU DTM FLEXI HB GLOSS	TOPACRYL DTM HB
Colour	TintoMetric System	TintoMetric System	TintoMetric System	TintoMetric System
Mix Ratio	4:1	4:1	4:1	One component
Activator	PU Activator 60	PU Activator 60	PU Activator 90	N/A
Density	1.3 kg / Lt	1.22 kg / Lt	1.13 kg / Lt	1.28 kg / Lt
Volume Solids	55%	60%	55%	49%
Typical Film Thickness	60µm	60µm	60µm	100µm
Theoretical Coverage	9.1 m ² /Lt @ 60 µm DFT	10.0 m ² /Lt @ 60 µm DFT	9.1 m ² /Lt @ 60 µm DFT	4.9 m ² /Lt @ 100 µm DFT
Dry to Touch @ 25°C	45 minutes	1 hr	1.5 hrs	30 minutes

WHY ISO 12944?

Unprotected steel in the atmosphere, in water and in soil is subject to corrosion that may lead to damage. Therefore, to avoid corrosion damage, steel structures are normally protected to withstand corrosion stresses during the service life required of the structure.

ISO 12944 deals with corrosion protection by paint systems and is intended to assist owners of structures, planners, consultants in adopting best practice in corrosion protection of structural steel at new construction and maintenance.

ISO12944 is progressively being used as the global benchmark in corrosion control

Selecting specifications that comply with ISO 12944 provides you with:

- Ensuring the corrosion protection system is fit for purpose
- Simplified approach to selecting a coating system
- Flexibility in speed of application
- An internationally recognized standard for corrosion protection

Always consult with Specialized Coating Systems before specifying

HOW TO SELECT YOUR PAINT ISO 12944 COMPLIANT SYSTEM IN 3 EASY STEPS:

STEP 1

SELECT THE CORROSIVE ENVIRONMENT

Use the following table to select the most appropriate classification for your project.

ISO 12944 - Atmospheric Corrosivity Categories and examples of typical environments

CORROSIVITY CATEGORY	EXAMPLES OF TYPICAL ENVIRONMENTS	
	Exterior	Interior
C1 Very low		Heated buildings with a clean atmosphere such as offices, shops, schools, hotels.
C2 Low	Atmosphere contaminated to a small extent, mainly rural regions	Buildings which are not heated, where condensation may occur e.g. storehouses, sports halls
C3 Medium	Industrial and urban atmosphere with an average sulphur oxide (IV) contamination level. Inshore areas of low salinity	Production space of high humidity and certain air contamination e.g. foodstuff plants, laundries, breweries, dairies.
C4 High	Industrial areas and inshore areas of medium salinity.	Chemical plants, swimming pools, ship repair yards.
C5-I Very High (industrial)	Industrial areas of high humidity and aggressive atmosphere.	Buildings and areas of almost constant condensation and high contamination.
C5-M Very High (marine)	Inshore areas and offshore areas of high salinity.	Buildings and areas of almost constant condensation and high contamination.

STEP 2

HOW LONG UNTIL FIRST MAJOR MAINTENANCE?

Use the following table to select how durable you want your coating system to be. The higher the durability, the longer the first time for major maintenance.

Durability required for your paint system

Low (L) **2 to 5 years**

Medium (M) **5 to 15 years**

High (H) **more than 15 years**

The lifetime of a paint system is assumed to be the period of time which passes until maintenance is required for the first time after application.

Durability does not equate to guarantee time. Durability relates to the performance duration of the coating system before first major maintenance. Regular maintenance should always be planned in order to achieve the required durability for first major maintenance.



STEP 3

SELECT YOUR ISO 12944 COMPLIANT SYSTEM FOR INFRASTRUCTURE

Systems for construction steel internally and externally

C1/C2	Up to High Durability (>15 Years)***		DFT (µm)
	TopAcryl DTM HB	80	
	TopAcryl DTM HB	80	
	Total DFT	160	
	or PU DTM Flexi HB Gloss	80 Total DFT	
	or PU DTM HB Satin	80 Total DFT	

*** As defined in ISO 12944

Systems for main steel structure

(structural steel, pipes and valves, tanks, machinery and equipment etc.)

C3	Medium Durability (5-15 Years)***		DFT (µm)
	New Building Systems	Epoxy Multi Prime**	100
		PU 55 HB Gloss Topcoat*	60
		Total DFT	160
	Maintenance	Epoxy 8930 ST	100
		PU 55 HB Gloss Topcoat*	60
		Total DFT	160
	High Durability (>15 Years)***		DFT (µm)
	New Building Systems	Epoxy Multi Zinc	140
		PU 55 HB Gloss Topcoat*	60
		Total DFT	200
	Maintenance	Epoxy 8930 ST	180
PU 55 HB Gloss Topcoat*		60	
Total DFT		240	

* Can be substituted for PU DTM HB Satin or PU DTM Flexi HB Gloss

** Can be substituted for Epoxy Surtol Aluminium Fast

*** As defined in ISO 12944

Systems for hot dip galvanized steel, aluminium, stainless steel

(systems typically for tanks, stairs, catwalk, railings, pipes etc.)

C3	High Durability (>15 Years)***		DFT (µm)
	Epoxy Surtol Aluminium Fast or Epoxy 8930 ST	60	
	PU 55 HB Topcoat*	60	
	Total DFT	120	

* Can be substituted for PU DTM HB or PU DTM Flexi HB

*** As defined in ISO 12944

Always consult with Specialized Coating Systems before specifying

Systems for main steel structure
(structural steel, pipes and valves, tanks, machinery and equipment etc.)

C4/C5 I	Medium Durability (5-15 Years)***		DFT (µm)	
	New Building Systems	Epoxy Multi Zinc	100	
		PU 55 HB Gloss Topcoat*	60	
		Total DFT	160	
	New Building Systems	Epoxy Multi Prime**	140	
		PU 55 HB Gloss Topcoat*	60	
		Total DFT	200	
	Maintenance	Epoxy 8930 ST	180	
		PU 55 HB Gloss Topcoat*	60	
		Total DFT	240	
High Durability (>15 Years)***		DFT (µm)		
New Building Systems	Epoxy Multi Zinc	90		
	Epoxy Multi MIO	90		
	PU 55 HB Gloss Topcoat*	60		
	Total DFT	240		
New Building Systems	Epoxy Surtol Aluminium Fast	110		
	Epoxy Multi MIO HB	110		
	PU 55 HB Gloss Topcoat*	60		
	Total DFT	280		
Maintenance	Epoxy 8930 ST	220		
	PU 55 HB Gloss Topcoat*	60		
	Total DFT	280		

* Can be substituted for **PU DTM HB Satin** or **PU DTM Flexi HB Gloss**

** Can be substituted for **Epoxy Surtol Aluminium Fast**

*** As defined in ISO 12944

Systems for hot dip galvanized steel, aluminium, stainless steel
(systems typically for tanks, stairs, catwalk, railings, pipes etc.)

C4/C5 I	High Durability (>15 Years)***		DFT (µm)
	Epoxy Surtol Aluminium Fast or Epoxy 8930 ST	90	
	Epoxy Multi MIO HB	90	
	PU 55 HB Gloss Topcoat*	60	
	Total DFT	240	
	Epoxy 8930 ST	180	
	PU 55 HB Gloss Topcoat*	60	
	Total DFT	240	

* Can be substituted for **PU DTM HB Satin** or **PU DTM Flexi HB Gloss**

*** As defined in ISO 12944

System Features & Benefits

- Extremely Fast Application
- Ultra-High Performance
- Industry proven systems
- Latest technology

Additionally our technical department can offer:

- Solvent Free Systems
- Water Based Systems
- Different systems for applications with limitations
- Customized systems based on lifetime requirements
- Customized project specifications
- Application guidelines
- Applicator training and support
- On-Site attendance

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INDUSTRIAL & PROTECTIVE PRODUCT RANGE:

Acrylic | Acrylonitrile | Alkyd | Bitumen Modified | Cementitious
Chlorinated Rubber | Epoxies | Inorganic Silicate | Intumescent
MRO | Pipeline Corrosion Protection | Polyaspartic | Polyurea
Polyurethane | PVB | Silicate | Silicone | Specialized | Vinyl | Zincfix®

OTHER PRODUCT CATEGORIES:

Tintometric | Aerosols | Automotive | Decorative | Floor
Hi-Décor | Industrial & Protective | Waterproofing | Wood Finish