Moisture curing paint systems

(Moisture Curing Urethanes)

MCU

Libert industrial paints

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What are moisture curing paint systems or MCU's ?

One pack systems have the advantage to be very user-friendly: no possible mixing mistakes, no potlife, time winning and half as much packaging material to dispose of compared to traditional two-pack epoxies. Based on high quality polyurethane resins and thanks to their specific formulation, they can be used in extreme climatic conditions from Siberian to equatorial climates.
Being very surface tolerant makes them the best choice when painting substrates difficult to reach or impossible to derust and prepare properly. They will simply make your work easier as you can use one type of paint for various substrates. Furthermore, Libert Paints' MCUs will ensure you a durable protection together with a better project productivity!

Our range includes the following products :

- **Polysilco HS Universal**
- **Polyfix**
- **Polyzinc**
- **Polymicace**
- **Polyguard**
- **Polygloss**

In short, MCU is a coating for extreme situations !

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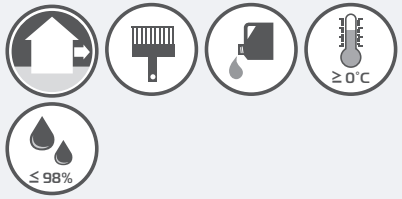
Advantages of Libert Paints' MCU :

- Can be applied with up to 98% of relative humidity, also in maritime environments
- Can be applied by freezing or very warm temperatures up to 40°C, measured on the surface, when the surface is dry
- Very high resistance against acids, chemicals, oils, greases and alkaline products
- Easy to prepare and to apply
- Less problems as no mixing errors can occur as no mixing error can occure
- Very good adhesion on rusted pieces, old paints or moderately prepared metal surfaces
- Early stress resistance: a sudden change in climatic coditions will not affect the curing and the quality of the paint film.
- No pot life
- Long corrosion protection, even under extreme climatic or environmental conditions.
- Can be part of a cathodic protection system
- Zinc rich primer can be applied as cold galvanisation
- MCU coatings resist a constant temperature of 120°C and peak temperatures up to 150°C

The MCU range includes the following products :

Polyfix

1L • 5L



Polyfix is a one-pack moisture curing polyurethane. It is used as rust fixator to repair corroded and damaged surfaces when full derusting is not possible.

Due to the special combination of polyurethane binders, a good adhesion and a remarkable elasticity are obtained. With its low viscosity and high penetration power, Polyfix prevents further expansion of rust. It can then be over coated by Polysilco HS Universal or other surface tolerant primers. In this manner a long lasting protection system can be build up.

Polyfix has the following properties :

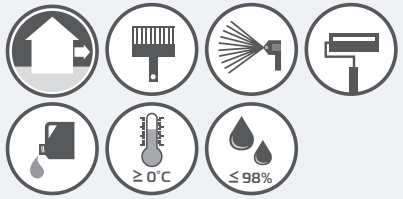
- Can be applied at a temperature between 0°C and + 40°C (on surface); at a relative humidity between 30 % and 98 % (no condensation)
- Ready for use by brush
- Colour: Transparant

Caution: Depending on the required volumes and location, not all packaging is available

The MCU range includes the following products :

Polysilco HS Universal

1L • 5L • 20L



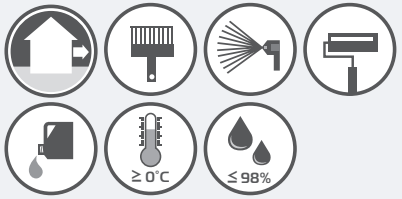
Polysilco HS Universal is a one-pack moisture curing polyurethane paint which cures with the humidity in the air. Polysilco HS Universal has the following properties:

- Universal adherence : very good adherence directly on steel, aluminium and galvanized steel
- Good anticorrosion properties on the substrates mentioned above by use of a special active modified (zinc free) phosphate anticorrosive pigment
- Perfect high performance primer when surface preparation through sandblasting is not possible.
- Very good drying and curing properties, also by low temperatures (to 0°C)
- Can be applied by roller, brush or spray
- High solids content
- Good elasticity (indirect and direct impact resistance)
- Can be applied in temperatures between 0°C and 40°C and with an air humidity between 30% and 98% (no condensation). The temperature of the surface has to be 3°C higher than the temperature of the dew point
- Colour : oxide red

Caution: Depending on the required volumes and location, not all packaging is available

Polyzinc

1L • 2.5L • 10L



Polyzinc is a zinc rich one-pack polyurethane paint that reacts chemically with humidity in the air. The adherence on sandblasted surfaces is excellent and the elasticity is higher than those of classic two-pack zinc rich paints. Polyzinc still hardens at low temperatures and high air humidity. The product is used as primer in high qualitive anticorrosion systems. Polyzinc has the following properties:

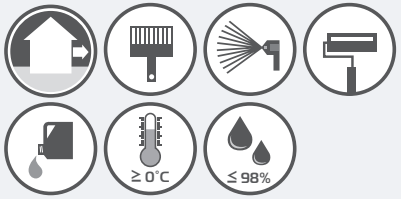
- Polyzinc contains 92% of zinc in the dry film. Therefore, it can be used for cold galvanization and offers an excellent cathodic protection to steel when prepared to SA to 2,5
- High performance primer that will offer extra-long corrosion protection when combined with an intermediate and top coat.
- Can be applied by brush, pneumatic or airless spray
- Can be applied at a relative humidity between 30-98% (no condensation). The air and surface temperatures should be between 0°C (no ice) and + 40°C. The temperature of the surface must be at least 3°C higher than the dew point
- Colour : Grey

Caution: Depending on the required volumes and location, not all packaging is available

The MCU ranges includes the following products :

Polymicace

1L • 5L • 20L



Polymicace is a moisture curing one-pack polyurethane combined with micaceous iron oxides. Due to the special lamellar structure of the pigmentation a very tight paint film is obtained with excellent water and corrosion resistance. The chemical inert pigmentation and the polyurethane binder provide a high chemical resistance. Polymicace can be applied as an intermediate and/or topcoat in one-pack polyurethane systems.

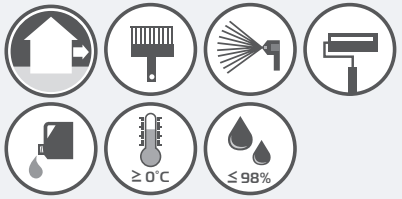
Polymicace has the following properties:

- Polymicace can be applied by brush, roller, pneumatic or airless spray
- Polymicace can be applied at a temperature between 0°C (no ice) and 40°C and at a relative humidity between 30% and 98%. The temperature of the surface must be 3°C higher than the dew point
- Can be applied as topcoat if the coating has no contact with direct sunlight
- Colour: Grey
- Gloss: Mat

Caution: Depending on the required volumes and location, not all packaging is available

Polyguard

1L • 5L • 20L



Polyguard is a one-pack moisture curing polyurethane paint, pigmented with specific inert lamellar pigments and micaceous irons oxide. Polyguard is especially recommended for immersion circumstances (seawater, water or soil).

Polyguard has the following properties:

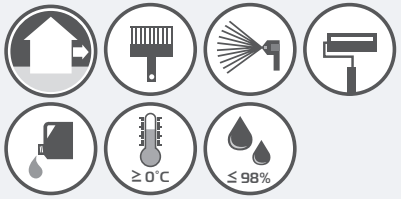
- Thanks to the special lamellar structure of the pigmentation, a very tight paint film is obtained with excellent water and corrosion resistance.
- The inert pigmentation and the polyurethane binder provide a high chemical resistance.
- Polyguard is the alternative to classic coal tar containing products and is thus far less harmful towards the applicator and the environment.
- Colour: Black
- Gloss: Mat

Caution: Depending on the required volumes and location, not all packaging is available

The MCU range includes the following products :

Polygloss

1L • 5L



Polygloss is a high gloss one-pack moisture curing finishing coat, based on aliphatic polyurethane resins. Polygloss is a high quality esthetical and very durable finishing coat. Polygloss can be applied as top coat on top of MCU intermediate coats or primer coats. Moreover Polygloss is also applicable on top of 2K PU and epoxy systems.

Polygloss has the following properties:

- Outdoor resistance with very good colour and gloss retention
- High resistance to chemicals
- High abrasion resistance
- Excellent dirt repellent properties
- High impact resistance
- Available in RAL 9005 - RAL 6001 - white - other colours available on demand
- Gloss : High gloss

Caution: Depending on the required volumes and location, not all packaging is available

Additive MCU HB

0,2L • 0,8L

Additive MCU HB can obtain the maximum allowed layer thickness during the application without any risk of blisters. Additive MCU HB can be added to Polysilco HS Universal, Polymicace en Polyguard.

Additive MCU HB has the following properties:

- Does not affect anticorrosion properties of the products, the gloss, the adhesion of Polysilco HS Universal on different substrates of the adhesion of Polymicace or Polyguard on top of the primer.
- Ensures an easier application of the paint a higher layer thickness
- Pot life: 7h
- Colour: Transparent

Caution: Depending on the required volumes and location, not all packaging is available

Overview of our technical specifications :

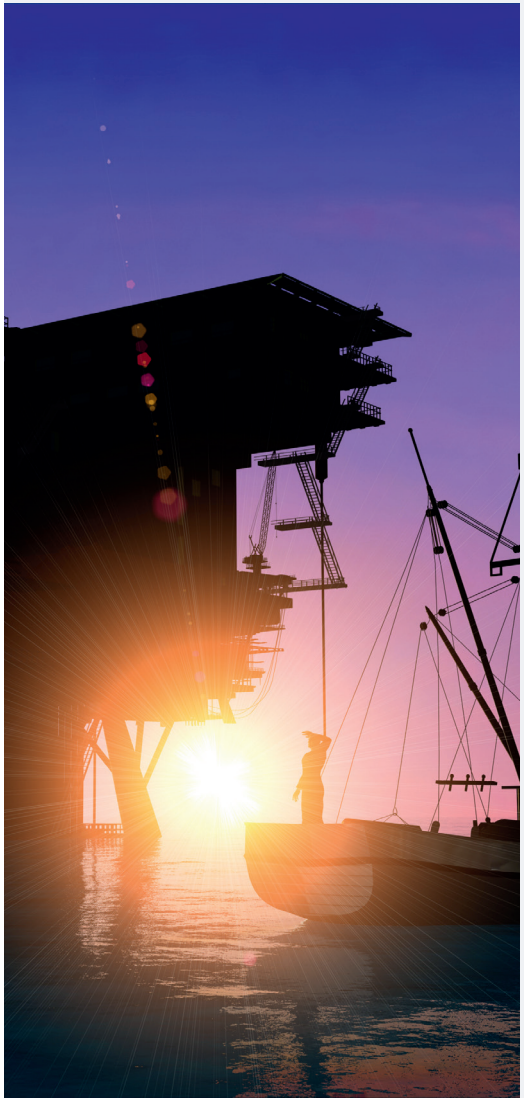
Libert Paints is one of the first producers in the world of this specific technology, millions of square meters of steel have already been protected with Libert Paints' MCUs across the world for more than forty years!

Libert Paints has a long tradition of intensive laboratory research. All our MCU products are developed in-house and tested before being delivered to the customer. Many tests are performed in-house with our own measuring equipment. Others are made by external laboratories such as WTCB, CORI, Unifap, SGS, ... In this way, we continuously challenge ourselves to develop the ideal products for our customers and maximize the performances of our paints. Detailed test reports are available on request.

- Corrosion tests according to ISO 12944
- Corrosion tests according to NORSOK M-501
- Salt Spray tests on different paint systems according to ASTM B117 and ISO 7253
- Adhesion test according to ISO 2409, ASTM D3359 and NF EN 24624
- Weathering test according to NFT 34-550
- Condensation test according to ISO 6270-1
- Chemical resistance tests according to ISO 2812-1 and DIN 50017
- Impact tests according to ASTM D2794-84
- Elasticity tests according to Erichsen DIN 53156
- Immersion/Freeze/Dry-test according to ISO 2812-2

Thanks to this experience as manufacturer and our numerous references, we can recommend you this high performance paint with confidence.

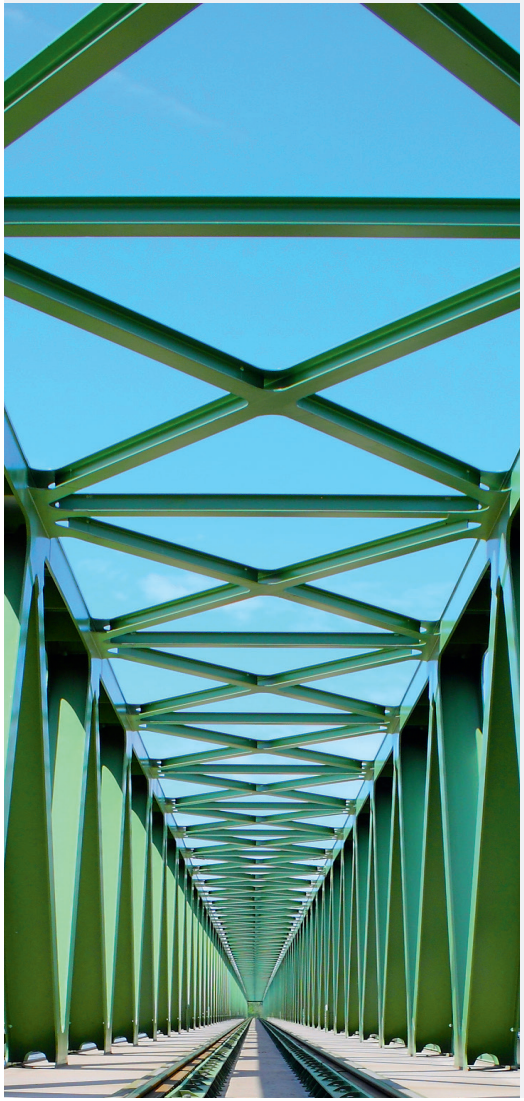
Paint systems :



MCU (Moisture Curing Urethane)

	Steel - Galvanization - Aluminium		
	Preparation sand blasting SA 2,5	Manual preparation ST2	
		Rust formation	No rust formation
Fixing	-	**Polyfix**	-
Primers	**Polyzinc**	**Polysilco HS Universal**	
Intermediate coats	**Polymicace** or **Polyguard**		
Top coats	**Polygloss** or **Cryltane DTS** or **Mixtane** or **Fixtane Finish**		

Overview of our technical specifications :



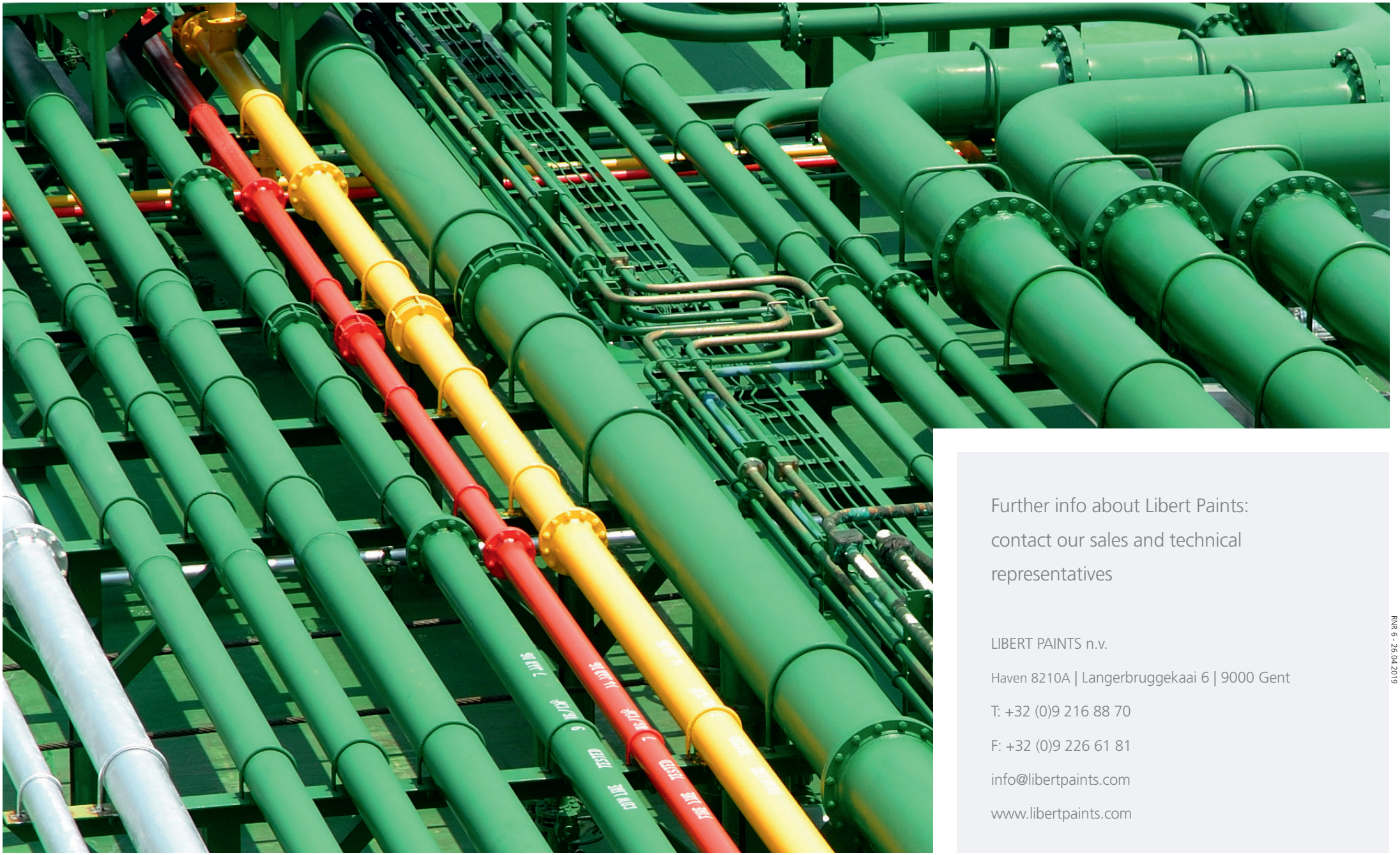
	Polysilco HS Universal	Polyfix	Polyzinc	Polymicace	Polyguard	Polygloss
Gloss Gardner 60°	Mat	Satin/Gloss	Mat	Mat	Mat	High Gloss
Density (at 20°C)	1,32 ± 0,05 g/ml	1,15 ± 0,05 g/ml	3,17 ± 0,05 g/ml	1,52 ± 0,05 g/ml	1,55 ± 0,05 g/ml	1-1,4 g/ml
Solids content • In volume • In weight	 66 ± 2% 77 ± 2%	 64 ± 2% 69 ± 2%	 61 ± 2% 89 ± 2%	 66 ± 2% 79 ± 2%	 66 ± 2% 82 ± 2%	 52-65% 58-65%
VOC • Undiluted	300 g/L	315g/L	342 g/L	< 300 g/L	< 295 g/L	370 - 430g/L
Drying times (at 20°C) • Dustfree • Tackfree • Dry	 1 h 4 h 6 h	 4 h 8 h 12-16 h	 15 mins 30 mins 4 h	 1 h 2,5 h 6 h	 1 h 2,5 h 6 h	 2 h 5 h 10 h
Recoatable times at 20°C	6 h	12-24 h	4 h	6 h	6 h	12 h
Recommende thickness (in micron)	60-80 120*	20-30	40-60	60-100 160*	60-100 160*	40
Theoretical yield (dry)	16,5 m²/L (40 micron)	16 m²/L (40 micron)	15,4 m²/L (40 micron)	7,5 m²/L (80 micron)	7,5 m²/L (80 micron)	10,5-14 m²/L

Providing that Additive MCU HB is added

For more detailed overview, please do not hesitate to ask our technical data sheets or test reports

Application areas :

- Siberic weather
- Equatorial and tropical climates
- Maritime environment
- Bridges and locks
- Cranes
- Oil and gas
- Storage tanks
- Pipelines
- Offshore and port material
- Antennas
- Steel structures
- Cooling towers and other concrete structures
- Energy: electricity pylons, lifts, lampposts, ...



Further info about Libert Paints:
contact our sales and technical representatives

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