

## PRODUCT DATA SHEET

# EPOX 450

## Epoxy enamel

## FEATURES

Epoxy-polyamide dual-component finishing, semi-glossy, drying at room temperature or forced air with excellent resistance to water, salts, alkalis; It is suitable for industrial and marine environments. Due to its resistance to alkalis, oils, is suitable for protection of concrete for both walls and floors in garages or warehouses.

## USE

It can be used as a finish where high mechanical resistance to impact and abrasion are required, as well as good chemical resistance in painting machine tools, chemical plants, port facilities, concrete floors. Applied on epoxy intermediates it is ideal for the protection of works such as platforms, hulls of ships, chemical plants, storage tanks in particularly severe atmosphere. It can be applied directly to galvanized supports properly treated.  
 The maximum resistance to walking can be reached after 5 days.

## PROPERTY OF THE PRODUCT

## CHEMICAL RESISTANCE, method UNI EN ISO 2812-3

Hydrochloric Acid 30%	3-4
Nitric Acid 10%	1-2
Sulphuric acid 30%	2
Ammonia 15%	4
Soda 50%	4
Bleach (<5% chlorine) 1:50 in water	3
Mineral oil, gasoline, diesel oil, vegetable oil	4
Sodium chloride 20%	4
Hydrogen peroxide 3,6% (12 vol.)	3-4
Water	4

## WORKING TEMPERATURE

<  
 +120°C

## FLASH POINT

25°C ± 2

## SOLIDS BY VOLUME

45 ± 2 %

## CHEMICAL RESISTANCE, key

- 0 = complete disintegration of the coating
- 1 = medium cracking / blistering / swelling, softening and partial detachment
- 2 = softening, pitting, flaking, light swelling
- 3 = opacification, chromatic variation, less resistant to mechanical action
- 4 = no alteration of the coating

## SPECIFICATION DATA

	VALUE	METHOD
Specific weight	1100-1300 g/l	Internal PF3
Pot-life	Min. 5h	Internal PF7
Gloss	55-65	Internal PF6
Drying Time	Overcoatable 20 h Complete 7 days	Internal PF2

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THICKNESS AND YIELD		Min.	Max	Recommended
	Thickness of dry film, $\mu\text{m}$	40	60	50
	Thickness of wet film, $\mu\text{m}$	88	133	111
	Theoretical yield, $\text{m}^2/\text{l}$	11	7,5	9
	Theoretical yield, $\text{m}^2/\text{kg}$	9,2	6,3	7,5

**SHELF LIFE** Product is stable till one year as long as it is kept in original and unopened buckets at temperature between  $+5^\circ\text{C}$  e  $+30^\circ\text{C}$ .

**COLOUR RANGE** The range of colors can be chosen in shades of RAL. Between one production and the other, tint may be slightly different, it is therefore important to finish the job with the same batch.

**PREPARATION OF SURFACE** **General observation:** Surface must be dry and clean from any kind of oil, grease and salts.

**Coated surface**

*With primer:* it can be painted if the substrate is clean and free of dirt, oil, grease, and the application falls within the maximum re-coat time of the primer. If cleaning is required, perform pressure washing grade Wa 2 (surface free of oil, grease, salt, dirt).

*With complete finishing coat:* if undamaged compatible and non-chalky perform cleaning from any oil and grease with detergent, then run sanding surface followed by pressure washing to remove dust and salts.

*Rusty coating:* perform mechanical preparation St2 or St3 followed by pressure washing to remove oil, grease, dust and salt or sand blasting Sa2 or Sa2½; then restore the thickness of primer.

*Localized maintenance:* perform mechanical preparation St2 or St3 followed by pressure washing to remove oil, grease, dust and salt or sand blasting Sa2 or Sa2½. Round off the edges of the well anchored painting and restore the system in the original layers and thicknesses.

**General considerations for the application of floorings:** for the success of the work the surface must be free from previous treatments and cleaned from pollutants of various nature such as dirt, oil, grease and salts by the use of alkaline detergents of industrial type (washing rinse water rinsing and collection). It's necessary to carry out a test of about  $1 \text{ m}^2$  of surface to be treated to ensure adhesion of the coating.

**New concrete**

The surface must be finished, fine and cured (100 days), humidity 5%, shall present a surface free of dust and imperfections, must not emerge any cement grout.

Compression resistance  $> 250 \text{ kg/cm}^2$

Tensile strength:  $> 150 \text{ kg/cm}^2$

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**Porosity:** treat the surface with descaling Concrete Capgel and after a few minutes rinse thoroughly and carefully, taking care to collect the water. Treatment with Capgel Concrete can also be run on just clean wet surfaces with alkaline detergent. After the operation wait until the surface is dry. You can proceed with the application of the enamel after minimum 24 hours prior measuring humidity of the floor that shall be less than 5%.

Alternatively you can create a porous surface by means of mechanical abrasion or shot-peening carried out with the cutter ensuring that the surface is free of machining dust (aspiration).

**Cracks:** widen with grinding stones and fill with epoxy filler loaded with sand and / or cement.

## TOOLS

Conventional spray or airless (with high temperature and humidity <40% is possible the formation of "dusting"), roller, brush (for small surfaces and profiles).

## APPLICATION

Mixing ratio by weight	100:40 by Induritore Multi Epox 100:50 by Induritore C300
Mixing ratio by volume	100:60 by Induritore Multi Epox 100:75 by Induritore C300
Thinning	0-5% by Diluente S800 35% with Diluente S800 on the first coat for concrete flooring
Application time at 23°C	Max 5 h
Application condition	+5°C +40°C >3°C at dew point Relative humidity: <70%
Application by airless	Nozzle pressure: 15 MPa (150 kp/cm², 2100 psi). Nozzle: 0,28 - 0,38 mm (0,011 - 0,018") Angle range: 40 - 80° Air pressure: Compression ratio 30:1 (pressure 150-180 kg/cm²)
Application by conventional spray	Nozzle: 1,6 - 1,8 mm Angle range: 30 - 50° Air pressure: 3,5-4 kg/cm²
Thinner for washing	Nitro NV5000

## DRYING TIME

Dry time are purely indicative as it might be longer or shorter by keeping in consideration ventilation, humidity, thickness of the applied film. In over coating, best adhesion can be obtained when next application is done before catalysis is completed.

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Surface temperature	5°C	10°C	23°C	30°C
Out touch	2h	1h	45'	30'
Dry to touch	16h	8h	6h	4h
Full catalysis	10 days	9 days	7 days	5 days
Minimum time of over application	36h	30h	20h	16h

**RECOMMENDED  
PRIMER**

Epoxy

**RECOMMENDED  
SYSTEM**

 On steel  
 Industrial and marine environment.

Product	Coat	Wet Thickness	Dry thickness
Epoxy Zinc 2K	1	83	50
Epoxy 450	1	111	50
Epoxy 450	1	111	50
<b>Total</b>	<b>3</b>	<b>305</b>	<b>150</b>

**ALTERNATIVE  
SYSTEM**

Product	Coat	Wet Thickness	Dry thickness
Epoxy 40	1	109	60
Epoxy 61	1	111	50
<b>Total</b>	<b>2</b>	<b>220</b>	<b>110</b>

On CLS

Product	Coat	Wet Thickness	Dry thickness
Cement block	1	111	50
Epoxy 450	1	111	50
Epoxy 450	1	111	50
<b>Total</b>	<b>3</b>	<b>333</b>	<b>150</b>

**INSTRUCTIONS**

To carry out the work in a proper way, it is needed to strictly follow the instructions for the preparation of the surfaces contained in the CAP Arreghini Books. The specification data and technical information have been calculated at +23°C with relative ambient humidity of 65%. In different conditions the data and the time intervals between the two phases of the above reported coating system may vary.

This technical information is intended as a rough guide. However, because of the enormous variety of media and application conditions, it is essential to check the suitability of the product and test the effectiveness on a sample.