

PRODUCT DATA SHEET  
**EPOX 450**  
**Epoxy enamel**

**FEATURES**

Two-component, epoxy-polyamide, semi-glossy, room-temperature or forced-air drying primer with excellent resistance to salts, water, alkalis; it is therefore suitable for corrosive industrial and marine environments. Given its resistance to alkalis and oils, it is suitable for protecting concrete as well as walls and floors in machine shops or warehouses.

**USE**

It is used as a topcoat where high mechanical, impact and abrasion resistance and good chemical resistance are required, in the painting of machine tools, chemical plants, port equipment, concrete floors. Applied on epoxy primers and intermediates, it is the ideal coating for the protection of works such as platforms, ship hulls, chemical plants, storage tanks placed in particularly severe atmospheres. It can be applied directly onto suitably treated galvanised substrates and concrete floors.

Maximum resistance to foot traffic is reached after 7 days.

**PROPERTY OF THE PRODUCT**
**CHEMICAL RESISTANCE**
**Valore**
**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	
Pot-life	5 h	Interior PF7
Essiccazione	Removable 20 h Completa 7 giorni	Interno PF2
WORKING TEMPERATURE	< +120°C	
FLASH POINT	25°C ± 2	
SOLIDS BY VOLUME	45 ± 2 %	

**CHEMICAL RESISTANCE, legend**

- 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

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4 = no alteration of the coating

SPECIFICATION DATA

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

THICKNESS AND YIELD

	Min.	Max	Recommended
Thickness of dry film, µm	40	60	50
Thickness of wet film, µm	88	133	111
Theoretical yield, m <sup>2</sup> /l	11	7,5	9
Theoretical yield, m <sup>2</sup> /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°C e +30°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

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alkaline detergents of industrial type (washing rinse water rinsing and collection). It's necessary to carry out a test of about 1 m<sup>2</sup> 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 kg/cm<sup>2</sup>

Tensile strength: > 150 kg/cm<sup>2</sup>

Porosity: treat the surface with descaling Concrete Cappel and after a few minutes rinse thoroughly and carefully, taking care to collect the water. Treatment with Cappel 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).

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**APPLICATION**

Mixing ratio by weight	100:30 by Induritore Multi Epox 100:50 by Induritore C300
Mixing ratio by volume	100:45 by Induritore Multi Epox 100:75 by Induritore C300
Thinning	25-30% by Diluente S800 5-10% with Thinner S800 for all other applications
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/cm <sup>2</sup> , 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/cm <sup>2</sup> )
Application by conventional spray	Nozzle: 1,6 - 1,8 mm Angle range: 30 - 50° Air pressure: 3,5-4 kg/cm <sup>2</sup>
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.

**DTF 50 micron**

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 on Steel

Direct on Concrete

On particularly absorbent concrete substrates or those requiring consolidation, a layer of Cement Block can be applied beforehand.



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RECOMMENDED SYSTEM

On steel  
Industrial and marine environment.

Product	Coat	Wet Thickness	Dry thickness micron
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

On steel

Product	Coat	Wet Thickness	Dry thickness micron
Epoxy 40	1	109	60
Epoxy 450	1	111	50
<b>Total</b>	<b>2</b>	<b>220</b>	<b>110</b>

CLS Flooring

Processing warehouses, logistics and storage areas - pigmented system - for indoor use:

Product	Coat	Wet Thickness(µm)	Dry thickness (µm)
Epoxy 450	1	80	35
Epoxy 450	1	111	50
Epoxy 450	1	111	50
<b>Total</b>	<b>3</b>	<b>302</b>	<b>135</b>

Public, residential and commercial buildings - pigmented system - also for outdoor use:

Product	Coat	Wet Thickness(µm)	Dry thickness (µm)
Epoxy 450	1	80	35
Epoxy 450	1	111	50
Pur Top 52/ Pur Ind 57	1	125	60
<b>Totale</b>	<b>3</b>	<b>316</b>	<b>145</b>

Pavimentazioni sportive – anche per esterno:

Product	Coat	Wet Thickness(µm)	Dry thickness (µm)
Epoxy 450	1	80	35
Epoxy 450	1	111	50
Pur Top 52/ Pur Ind 57	1	100	50
<b>Totale</b>	<b>3</b>	<b>291</b>	<b>135</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

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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.