

APSELIV 31

1 TO 3 MM THICK, SELF-LEVELLING
TWO-COMPONENT EPOXY COATING
FOR FLOORS IN THE FOOD INDUSTRY



DESCRIPTION

APSELIV 31 is a two-component epoxy formulation suitable for resinous coatings of the self-levelling and/or multi-layer type and/or as a coating with a smooth or non-slip surface appearance, with thicknesses from 1 to 3 mm.

FIELDS OF APPLICATION

APSELIV 31 is used for floor coverings with the following applications:

- Coatings for dairies, oil mills, etc;
- Chemical and pharmaceutical industries;
- Coatings for the food industry;
- Coatings for laboratories, sterile rooms and hospitals;
- Coatings for aseptic rooms.

PACKAGING

Coloured :

Comp. A + B = 19 + 4.8 kg metal cans

Converter:

Comp. A + B = 17.4 + 4.8 kg metal cans

CONSUMPTION

Self-levelling coating (2 mm thick)

0.5 kg/m² APSEPRIMER NS 125

1.5 kg/m² Quartz dusting

1.5 kg/m² APSELIV 31 (A+B)

1.3-1.5 kg/m² Quartz Livel (Charge)

As it is a self-levelling composition, the flatness conditions of the substrate greatly influence consumption.

2. Multilayer coating (1.5 mm thick)

0.7 kg/m² APSEPRIMER NS 125

1.5 kg/m² Quartz dusting

0.8 kg/m² APSELIV 31 (A+B) (ROUGH)

1.4 kg/m² APSELIV 31 (A+B) (SMOOTH)

MIXING RATIO

The mixing ratio by weight is:

Comp. A : B = 100 : 25,25

Binder ratio

Binder (A+B) : inert = 12.6 : 6

CHARACTERISTICS AND ADVANTAGES

APSELIV 31 is a two-component, fillerised formulation based on epoxy resins. It is particularly suitable for the food industry. APSELIV 31 can be applied in thicknesses up to 3 mm. APSELIV31 is recommended for environments with medium chemical aggression and severe mechanical stress. Due to its aesthetically pleasing appearance, APSELIV 31 can also be used as a civil or decorative flooring.

APSELIV 31 has the following advantages:

- Good resistance to chemical aggression
- Good resistance to mechanical stress Aesthetically pleasing appearance for use also in civil engineering;
- Operating temperature from -20°C to +60°C.

CERTIFICATIONS

APSELIV 31 complies with UNI EN 13813: materials for screeds (DoP No. 423).

ISO 9001 certified quality management system (Certificate No. IT.17.0227.01.QMS).

APSE S.r.l is an active member of CONPAVIPER



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SUBSTRATE PREPARATION

Surfaces must be flat, clean, free of dust, oil, grease, mud, crumbling parts, paintwork and anything that may impair adhesion. Any cracks must be repaired with AP300 FIX filler.

If necessary, heat the room before applying APSELIV 31 so that the substrate also reaches a temperature of 10°C. Before applying APSELIV 31, thoroughly vacuum the dust on the substrate.

Application of the primer APSEPRIMER NS 125

Pour all component B into component A and mix thoroughly until a uniform colour is obtained.

Load the product with QUARTZ LIVEL

(0.1-0.5 mm) in a weight ratio of 1:0.8.

Spread the mixture obtained on the surface of the suitably prepared substrate and smooth with a smooth trowel, making sure that the surface is perfectly covered.

Immediately after primer application, it is recommended to dust the surface with fine quartz (0.1-0.5 mm) to improve the adhesion of APSELIV 31.

When the APSEPRIMER NS 125 primer has cured, proceed with the application of APSELIV 31.

PRODUCT PREPARATION

Mix the individual components separately.

Pour component B (hardener) into component A (coloured resin) and mix for a few minutes with a drill at low speed until a lump-free and homogeneously coloured mixture is obtained. Still under slow agitation, add the required quantity of QUARZO LIVEL aggregate (0.1-0.5 mm) and mix until a homogeneous mixture is obtained.

METHOD OF APPLICATION

APSELIV 30 can be used as a self-levelling and multi-layer coating.

1. Self-levelling coating (thickness 2-3 mm)

- Properly prepare the substrate by shot-peening and subsequent cleaning of the surface;
- Prime the substrate with APSEPRIMER NS 125, according to the instructions in the paragraph 'Substrate preparation';
- Pour APSELIV 31 over the hardened primer and distribute it evenly with a notched trowel;
- It may be necessary to mark off the areas where APSELIV 31 is to be applied with rulers and self-adhesive strips of suitable thickness;
- It is recommended to spread and level the mortar, and to even it out with a bubble break roller in criss-cross passes to facilitate the escape of air.

2. Multilayer coating (1-2 mm thick)

- Properly prepare the substrate by shot-peening and subsequent cleaning of the surface.
- Prime the substrate with APSEPRIMER NS 125, according to the instructions in the previous paragraph 'Substrate preparation'. When the primer has hardened, apply the layer of APSELIV 31 with a smooth or notched trowel.
- Sow the surface with suitable quartz according to the thickness to be achieved;
- Remove excess quartz that is not anchored;
- Apply the finishing coat of APSELIV 31 with a smooth or notched trowel;
- If necessary, seed again and apply a further finishing coat of APSELIV 31 until the desired thickness is obtained.

Apply the product at temperatures between +5°C and +35°C.

CURING TIME

The curing time of a layer of APSELIV 31 is influenced by the ambient temperature.

For drying and curing times (at 20°C), please refer to the table below.

Pot-life	35 min
Setting time	60 min
Dust off	2-4 hours
Walkability	24-48 hours
Heavy carriageability	7 days
Complete hardening	7-10 days

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WARNINGS

- The temperature of the substrate and the uncured product must be at least 3°C above the dew point to reduce the risk of condensation or white bloom on the finish.
- Low temperatures and high humidity levels increase the likelihood of white bloom;
- Do not apply APSELIV 31 on dusty or crumbling substrates;
- Do not apply APSELIV 31 on substrates soiled by oils, grease, etc;
- Do not apply APSELIV 31 on substrates not properly prepared and not treated with APSEPRIMER NS 125;
- Do not expose the mixed product to heat sources;
- Do not apply APSELIV 31 on damp substrates or subject to capillary rising damp;
- Do not dilute APSELIV 31 with solvents or water;
- Do not apply APSELIV 31 outdoors.

CLEANING OF TOOLS

The tools used for the preparation and application of APSELIV 31 (A+B) must be cleaned immediately after use with the epoxy solvent DILUEPOX, after hardening of the product, removal can only be done mechanically.

HEALTH AND SAFETY WARNINGS

For information on safety regulations, hazard statements and precautionary advice, please refer to the latest safety data sheet, by requesting it at: ufficiotecnico@apsebg.it

STORAGE

Shelf life more than 12 months if stored in original packaging, in a dry place and free of moisture. Store at temperatures between +5°C and +35°C. Heat plastic containers in a bain-marie if frost or crystals form.

DISPOSAL

Dispose of contents and/or container in accordance with local regulations.



PRODUCT TECHNICAL DATA

PHYSICAL CHARACTERISTICS (at +20°C)

FEATURE	STANDARD	RESULT	
		COMP. A	COMP. B
Appearance	-	Liquid	Liquid
Colour	-	Colored	Transparent
Specific weight	EN ISO 2811-1	1,50 g/cm ³	1,00 g/cm ³
Viscosity	EN 8490	2150 cps	300 cps

PHYSICAL CHARACTERISTICS OF THE MIXTURE (at +20°C)

FEATURE	STANDARD	RESULT
Colour	-	Coloured to RAL scale
Mixture consistency	-	Dense fluid
Specific weight of mixture (A+B)	EN ISO 2811-1	1,35 g/cm ³
Specific weight of loaded mixture (A+B+QUARTZ)	EN ISO 2811-1	1,50 g/cm ³
Non-volatile substances	EN ISO 3251	Ca. 99%

PRODUCT PERFORMANCE ACCORDING TO UNI EN 13813

FEATURE	STANDARD	RESULT
Compressive strength at 28 days	EN 13892-2	≥ 47 N/mm ²
Flexural strength at 28 days	EN 13892-2	≥ 16 N/mm ²
TABER abrasion resistance	EN ISO 5470-1	< 50 mg
(Grinding wheel H22, 1000g, 1000 rpm)	EN ISO 6272	20 N.m
Impact resistance	EN 13892-8	>3,1 N/mm ²
Grip strength	EN 13036-4	66
Slip resistance (dry surface)	UNI 8298-10	0,1-1,0 MO 0,03-0,5 MO
Surface electrical resistance	EN 13501-1	0,002 kg/m ² h ^{0,5}
Capillary absorption and water permeability	EN ISO 868	>85
Shore D hardness	EN 13501-1	F _{fl}

CHEMICAL RESISTANCE OF THE PRODUCT IN OPERATION ACCORDING TO EN 13529

FEATURE	STANDARD	RESULT
Hydrocarbon mixture	EN 13529	Class I
Sulphuric acid 20		Class I and II
Sodium hydroxide 20%		Class I and II
Lactic acid		Class I and II
Surfactants		Class I and II

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