

Polynate 100

PA-100

100% Solids, Hand-Applied Polyaspartic Coating, UV Stable

Description

PA-100 is a two-component, slow reacting polyaspartic system that, opposite to usual polyurea systems, has a gel time and a curing speed slow enough to allow manual application, while retaining a curing time still shorter than usual two-component polyurethane systems.

PA-100 is delivered colourless or pigmented. Main applications includes flooring and multilayer combinations.

Coverage

Coverage varies widely due to the porosity and profile of different substrates.

PA-100 may be applied in 200 g/m² thick coats in 2 to 3 coats, depending on the chosen pigmentation

* Coverage figures given are theoretical. Practical coverage rates may vary due to wastage factors and the type, condition, profile and porosity of the substrate.

Features & Benefits

- UV Stable Resin
- Fast cure even at low temperatures.
- Good adhesions strength
- Hard and resistant, in one-coat application.
- Excellent gloss retention. Aliphatic polyisocyanate base. Does not yellow upon exposure to sunlight.
- Good weathering resistance.
- Thick layers possible in a single application.
- Improves corrosion resistance. Several studies show that these coatings exhibit a corrosioninhibition potential in metal surfaces. Suitable for operating freezing rooms.
- Ideal for new construction and refurbishment. Easier and time-saving solution in contrast with classical epoxy and polyurethane systems,

Mixing

Pour part B into part A, stir and completely blend both components using a low-speed mixer using paddle mixer for a minimum of 3 minutes @ 300-400 rpm. Transfer mixed resin into a clean new bucket and mix for a 1 further minute.

Product Application

Apply by roller or spreader, when needed. Airless equipment is not recommended due to safety reasons.

Reaction rate increases with the size of the mixtures; therefore it is advised not to mix more amount of product than that can be easily applied in a **15 minutes period**. Otherwise, application could be difficult or the final appearance could be affected.

Reapplication

Usually desired thickness is achieved in a single coat

Moisture & Humidity

Recommended air temperature: 10°C to 30°C

Recommended humidity: 30% to 80%.

Environmental Conditions

PA-100 should not be used or applied at temperatures outside of at range of <10°C to >25°C

*temperature control will be required if below this range, otherwise, this will effect the cure period, surface finish and strengths. Surface temperature must be at least 3°C above the dew point. Air temperature should be above 5°C and relative humidity at less than 70%.

Maximum application temperature is 40°C. Best conditions are 15°C to 25°C, these conditions should be maintained during all the curing time. Application should be carried out with plenty of air ventilation.

Substrate Requirements

Inadequate preparation will lead to loss of adhesion and failure. In coatings, there is a tendency for the finish to mirror imperfections in the substrate. Grinding or light self-contained shot blasting is therefore preferred. If in doubt, apply a test area first.

Requirements as follows:

- Flat and Smooth.
- Compact and Cohesive (Pull off test must show a minimum resistance of 1.4N/mm²).
- Minimum compressive strength of 25N/mm².
- Even and regular surface.
- Free from cracks and fissures. If any, they must be previously repaired (we recommend using Sindec Epoxy Crack Filler).
- Clean and dry, free of dust, loose particles, oils, organic residues, laitance and contaminants.

Oil & Grease

Isolated contamination should be removed using an appropriate degreaser, rinsed thoroughly, and allowed to completely dry.

A coat of **OT-235 (Oil Tolerant Primer)** should then be applied (see separate datasheet)

Tool Cleaning

Tools and equipment should be cleaned whilst the resin is still wet using **Sindec Tool Cleaning Solution**

Return To Service

One hour after touch-dry, light traffic is usually allowed.



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General Maintenance

A daily water scrubbing is allowed. Solvents may seriously damage the surface.

Curing Times

Curing time depends strongly on the local conditions. Curing speed will increase with temperature and humidity. The following table gives approximate values for 500 g/m² applications. Thicker coats will give longer curing times. Thinner coats will cure faster

Conditions	Touch Dry (h)	Total (h)
20°C, 40% rh	1,5	3
20°C, 10% rh	2	4
20°C, 80% rh	1	2
5°C, 60% rh	2,5	4
5°C, 10% rh	6	10
5°C, 80% rh	1	2
35°C, 30% rh	1,5	3
35°C, 80% rh	1	3
35°C, 15% rh	2	4

Technical Information

PRODUCT INFO BEFORE APPLICATION

	Component A	Component B
Chemical Description	Polyamine	Solventless aliphatic polyisocyanate
Physical State	Liquid	Liquid
Packaging Kits	Clear: 7 kg 2.3 kg Pigmented 8,0 kg 2,7 kg	Clear: 7 kg 2.3 kg Pigmented 7,0 kg 2,3 kg
Non-volatile content (%) approximate	100%	100%
Colour	Slightly Amber	Colourless
Mixing Ratio	A = 100 by weight	B = 100 by weight
Mixture Properties	1·10 g/cm ³ at 23°C 1000 mPa.s at 23°C	
Use Before	12 months after manufacturing date	
Pot Life (High temperature and humidity reduce pot life)	Temp 18°C, 40%hr 5°C, 60% rh	Pot Life (100 g, min) 90 100
Storage	Keep between 15°C an 30°C. Component A may crystallize if stored for protracted periods under certain conditions. If this occurs, it can be restored to its original conditions by heating it to 70-80°C and stirring it thoroughly.	
	Shelf Life 12 Months (if unopened)	

FINAL PRODUCT INFORMATION

Final State	Polyurethane/polyaspartic solid film
Colour	Colourless / Pigmented
Hardness (Shore)	60 Shore D hardness after 7 day > 23°C
UV Resistance	Colour Stable under sunlight
Chemical Resistance	Contact Sindec Chemicals for information
Mechanical Properties	Maximum elongation: 7% Tensile strength: 16 MPa
Gloss	80-85% (at 60°, 1 mm thick)

Disposal of Containers

Empty containers must be handled with the same precautions as if they were full. Treat empty containers as hazardous waste, and transfer them to an authorized waste manager. If the containers still have some material left, do not mix with other product before considering the risk of potential dangerous reactions.

Technical Advice

For further information on this or any other Sindec product, please contact our office.

Health & Safety

Before using this product, please ensure that you have received and read the product Safety Data Sheet. Refer to hazard labelling on the product. Wear gloves and avoid contact with skin and eyes.

Additional Information

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