



# TECHNICAL DATA SHEET

## VIPEPOX PE-202 impregnating varnish

**Description:** VILEPOX PE-202 is a one-component polyester impregnating varnish based on unsaturated polyester resin in diallylphtalate

### Field of application:

Vilepox 202 is recommended for impregnation of all types of mechanically and thermally stressed windings such as stators, rotors, low and high speed rotating machines, transformers, inductors, refrigeration motors, brake coils, ferro resonant transformers, etc. The most typical application is impregnation in dip-and-bake-and-vacuum cycles.

### Features:

- Thermal- class H, thermal index: 180 °C.
- According to UL it can be used for windings and equipments of 130, 155, 180 °C thermal class
- Very good processibility
- Low viscosity, excellent penetration into windings
- Does not contain volatile ingredients, so it is adapted for vacuum -processing
- High flash point (145 °C.). Reduced fire hazards, lower insurance rates
- Excellent mechanical and dielectrical properties after baking
- Very good chemical resistance, i.e. to water, transformer oils, refrigerator liquids, etc.
- Freon resistance
- Very good storage stability, min. one year at room temperature

### Properties of liquid :

	A lakknál
Appearance	yellowish-brown liquid
Density (at 25 °C), g/cm3	1,13-1,18
Viszkozity (at 25°C), mPas	600-800
Viszkozity (at 40°C), mPas	150-200
Outflow (at 25 °C, Mp-4), s	110-150
Outflow (at 40 °C, Mp-4), s	40-50
Open-cup flashpoint, °C	145
Non-volatile matter content, %	47-53
Gel-time at 130°C, min	7-9
Gel-time at 140°C, min	4-5
Gel-time at 150°C, min	3-4
Effect on enamelled wires	none
Potflife at 50°C, (untill reaching double viscosity) days	50
Shelf-life	in tightly closed, original containers at 23°C, in a dry place far from heaters 1 year*
Packaging	metallic can
Inflammability	grade III.



# TECHNICAL DATA SHEET

\*Shelf-life may lengthen very much due to refilling. Therefore for safety sake outflow time and geltime should be checked occasionally e.g. every 6 months. In case of a change in parameters higher 20% please, contact Korax Ltd.

**Setting the viscosity:** Viscosity of VILEPOX PE-202 meets the requirements of its application, so there is no need for further diluting. As long as viscosity increases more than 20% (because of storage for too long or in high temperature), please contact Korax Ltd.

## **Properties of the hardened material**

	<b><u>Properties of the hardened material*</u></b>
<b>Suggested curing circumstances at 110 °C</b>	10-14 hours
<b>Suggested curing circumstances at 120 °C</b>	4-6 hours
<b>Suggested curing circumstances at 135 °C</b>	3,5 hours
<b>Suggested curing circumstances at 150 °C</b>	1-1,5 hours
<b>Suggested curing circumstances at 160 °C</b>	45-50 min
<b>Helical coil test acc.to IEC 61033 at 23°C, N</b>	350-400
<b>Helical coil test acc.to IEC 61033 at 155°C, N</b>	120-150
<b>Helical coil test acc.to IEC 61033 at 180°C, N</b>	80-100
<b>Electric strength at 23 °C, kV/mm</b>	120-150
<b>Glass transition temperature, Tg, °C</b>	140

\*Tests made at baking cycle of 150°C 4 hours

## **Information on application:**

VILEPOX PE-202 can be applied for vacuum-, vacuum-pressure and dipping impregnation.

In the case of **vacuum-pressure impregnation** the following technology is suggested:

1. Dry the pieces at 105°C before impregnation.
2. Afterwards put them into the autoclave and cool down to 40-50°C.
3. Turn on the vacuum-pump.
4. Flood the pieces with the resin and keep them in vacuum for appr. 30 minutes.
5. Stop the vacuum and put pressure (appr. 6 bars) on the autoclave.
6. Stop the pressure and pump back the resin to the container. Leave the pieces to drip for 30 minutes.

**Baking:** Baking time mainly depends on temperature based on the above values. The technological baking time is actually longer. Time needed for warming up the pieces has to be added, which depends on the size, weight and quantity of the pieces, the power and type of the oven. Actual baking time has to be calculated considering all this.



# TECHNICAL DATA SHEET

---

## **Personal hygiene:**

**At workplace:** protective clothing as overall, gloves, arm protectors, goggles are essential. Wash hands during breaks and at the end of work. Avoid contact with the eyes and skin.

**Ventilation:** Give adequate ventilation to the premises where the product is stored and/or handled. Respiratory protection required in insufficiently ventilated working areas and during spraying.

**Cleansing of contaminated skin:** Prolonged contact with skin or breathing of vapours can cause irritation

## **First aid:**

- **General information:** Remove and discard contaminated clothing.
- **After skin contact:** Wash affected areas with copious amounts of clean lukewarm water and soap. Do not use solvents, thinners or inhibitor solutions. If irritation recurs or persists, seek medical attention.
- **After eye contact:** Irrigate with clean running water, holding eyelids apart, for at least 10 minutes. Remove any contact lenses. OBTAIN MEDICAL AID.
- **After inhalation:** Remove affected person to fresh air, keep warm and at rest. If unconscious put into recovery position. If breathing is irregular or stops apply artificial respiration. Give nothing by mouth. Obtain medical aid immediately.
- **After swallowing:** Do not induce vomiting. Rinse out mouth and then drink plenty of water. Keep patient warm and at rest. OBTAIN MEDICAL AID IMMEDIATELY.

**Labour safety and environmental information is detailed in the „Safety data sheets” of the product.**

This brochure was compiled according to our best knowledge, but no legal obligation can be based on its content.

Januar, 2009.

Vilepox PE-202 ENG 3.