

## Technical Information

# Polimal® VE EPN

DATE: 20.09.2023

## Polimal® VE EPN

This is an unaccelerated, epoxidized novolac-based vinyl ester resin dissolved in styrene.

## APPLICATION

**Polimal® VE EPN** is designed for production glass fiber reinforced compositions and/or mineral fillers with high chemical and thermal resistance.

## PACKAGING

220 kg, 1100 kg

## SHELF LIFE

3 months from the date of manufacture.

## PROCESSING CONDITIONS

**The resin should be mixed before use.** Good curing requires ambient temperature above 18°C and low air humidity. The curing system under productions conditions should be tested. The best curing conditions are obtained using 1,2% Co1%, 1% DMA-10, amine accelerator and 1% MEKP as hardener. Finally, curing could be optimized by post-curing at elevated temperatures.

## STORAGE

**Polimal® VE EPN** should be stored in closed packaging in a dry, cool place, protected from sunlight and suitable for storage of flammable materials at temperatures not exceeding 25°C.

## SPECIFICATION

| Parameter                                                  | Unit  | Value     |
|------------------------------------------------------------|-------|-----------|
| <b>Viscosity at 25°C</b><br>acc. to ISO 3219               | mPa s | 300 ÷ 400 |
| <b>Gel time at 25°C</b><br>acc. to ISO 2535                | min   | 15 ÷ 30   |
| <b>Flexural strenght</b><br>acc. to ISO 178                | MPa   | 140       |
| <b>Tensile strength</b><br>acc. to ISO 527                 | MPa   | 85        |
| <b>Tensile modulus</b><br>acc. to ISO 527                  | MPa   | 3500      |
| <b>Elongation at break</b><br>acc. to ISO 527              | %     | 3         |
| <b>Heat deflection temperature (HDT)</b><br>acc. to ISO 75 | °C    | 140       |
| <b>Barcol hardness</b><br>acc. to ASTM D 2583              | °B    | 40        |

Gel time with 1,2% Co1% + 1% DMA10 + 1% Luperox® K-1S (MEKP)

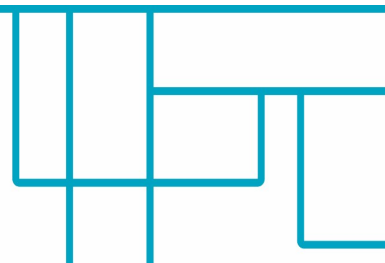
Mechanical parameters refer to unreinforced resin cured for 24 hours at room temperature and post-cured for 3 hours at 100 °C and 1 hours at 150 °C.

**Luperox®** is the trade name registered for products of **ARKEMA** company.

**Polimal®** is the trade name reserved for unsaturated polyester resins produced by **Sarzyna Chemical sp. z o.o.**

*The data and suggestions contained in this material are based on our own research and considered by us to be reliable. However, we cannot accept any liability for actions and losses resulting directly or indirectly from the use of the products. The user should check the quality, safety and features of the product before applying it.*

**ATTENTION:** This information does not replace the Safety Data Sheet or the Technical Sheet which are master documents available upon request.



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## CHEMICAL RESISTANCE TABLE

| Chemical             | Concentration | Temperature, °C                    |
|----------------------|---------------|------------------------------------|
| Nitric acid          | 25%           | 55                                 |
| Phosphoric acid      | 75%           | 100                                |
| Hydrochloric acid    | 20%           | 100                                |
| Hydrochloric acid    | 38%           | 65                                 |
| Sulphuric acid       | 10%           | 100                                |
| Sulphuric acid       | 70%           | 80                                 |
| Formic acid          | 30%           | 80                                 |
| Acetic acid          | 15%           | 100                                |
| Acetic acid          | 25%           | 100                                |
| Acetic acid          | 50%           | 80                                 |
| Acetic acid          | 80%           | 45                                 |
| Hydrogen peroxide    | 30%           | 40                                 |
| Sodium hydroxide     | 1%            | 40                                 |
| Sodium hydroxide     | 5%            | 40                                 |
| Sodium hydroxide     | 25%           | 40                                 |
| Sodium hydroxide     | 40%           | 40                                 |
| Sodium hypochlorite  | 1-20%         | 50                                 |
| Sodium chloride      | All           | 100                                |
| Ethyl alcohol        | 96%           | 40                                 |
| Ethyl alcohol        | 50%           | 50                                 |
| Carbon tetrachloride | 100%          | 65                                 |
| Styrene              | 100%          | 45                                 |
| Acetone              | 100%          | Not recommended at any temperature |
| Benzene              | 100%          |                                    |
| Benzyl alcohol       | All           |                                    |

Assessment of chemical resistance of non-reinforced resin to undermentioned chemicals was carried out under laboratory conditions according to PN-78/C 89067 standard. Test specimens have seasoned for 24 hours at temperature 23°C and the for 4 hours at temperature 80°C.

