# NANOPREG SERIES – Epoxy Based Prepregs (NKP1981)

NKP1981 is a epoxy based prepreg product produced from an adhesive epoxy matrix and different types of plain weave tapes. The material is designed to meet and/or exceed the requirements of the aerospace and commercial applications where ease of processing and cost are key considerations.

***Where to use:***

- Aircraft interiors
- Industrial composites

***Properties:***

| **Reinforcement Type** | **E-Glass** | **Carbon** |
|---|---|---|
| Fabric Area Weight (g/m$^2$) | 180 - 600 | 180 - 600 |
| Prepreg Resin Content (%) | 29 - 33 | 29 - 33 |
| Resin Flow (50 psi) (%) | 6 - 15 | 6 - 15 |
| Volatiles (275°F, 8 min) (%) | max. 2 | max. 2 |
| Filler Content (%) | 1 - 3 | 1 - 3 |
| Per Ply Widths (cm) | 2.5 - 20 | 2.5 - 20 |
| Tg (°C) (by DSC, 10K/min) | 140 -150 | 140 -150 |

***Storage and Shelf Life:***

Do not expose direct sunlight.
Prepreg shelf life max. 6 weeks at room temperature

**Cure Schedule:**

25 min 125 °C
or 20 min 140 °C
or 15 min 150 °C
or 6 h 110 °C

Istanbul Technical University Technopark, Student Automation Building, -1 Floor, No.2-2, Sarıyer, 34469, Istanbul / TURKEY

**Tel:** +90 533 433 75 48 **Fax:** +90 212 285 34 27 **E-mail:** info@nanokomp.com.tr

***Mechanical properties of NKP1983 laminates***

The following results are representative of laboratory data on 3 mm laminates which were made using bi-directional carbon fabric tapes at laminating pressure of 14-21 kgf/cm$^2$.

| | NKP1983 | |
|---|---|---|
| | Strength | Modulus of Elasticity |
| FLEXURAL, FLATWISE (lbf/in$^2$) | 130.000 | 2.9 x 10$^6$ |
| ULTIMATE TENSILE STRENGTH (lbf/in$^2$) | 125.000 | 6.7 x 10$^6$ |
| ULTIMATE COMPRESSIVE STRENGTH EDGEWISE (lbf/in$^2$) | 109.000 | - |

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