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The world is our inspiration

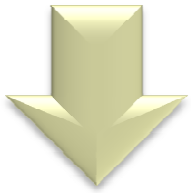
Orgasol®

ORGASOL® Ultra-Fine Powders

Carbon-Fiber Composites

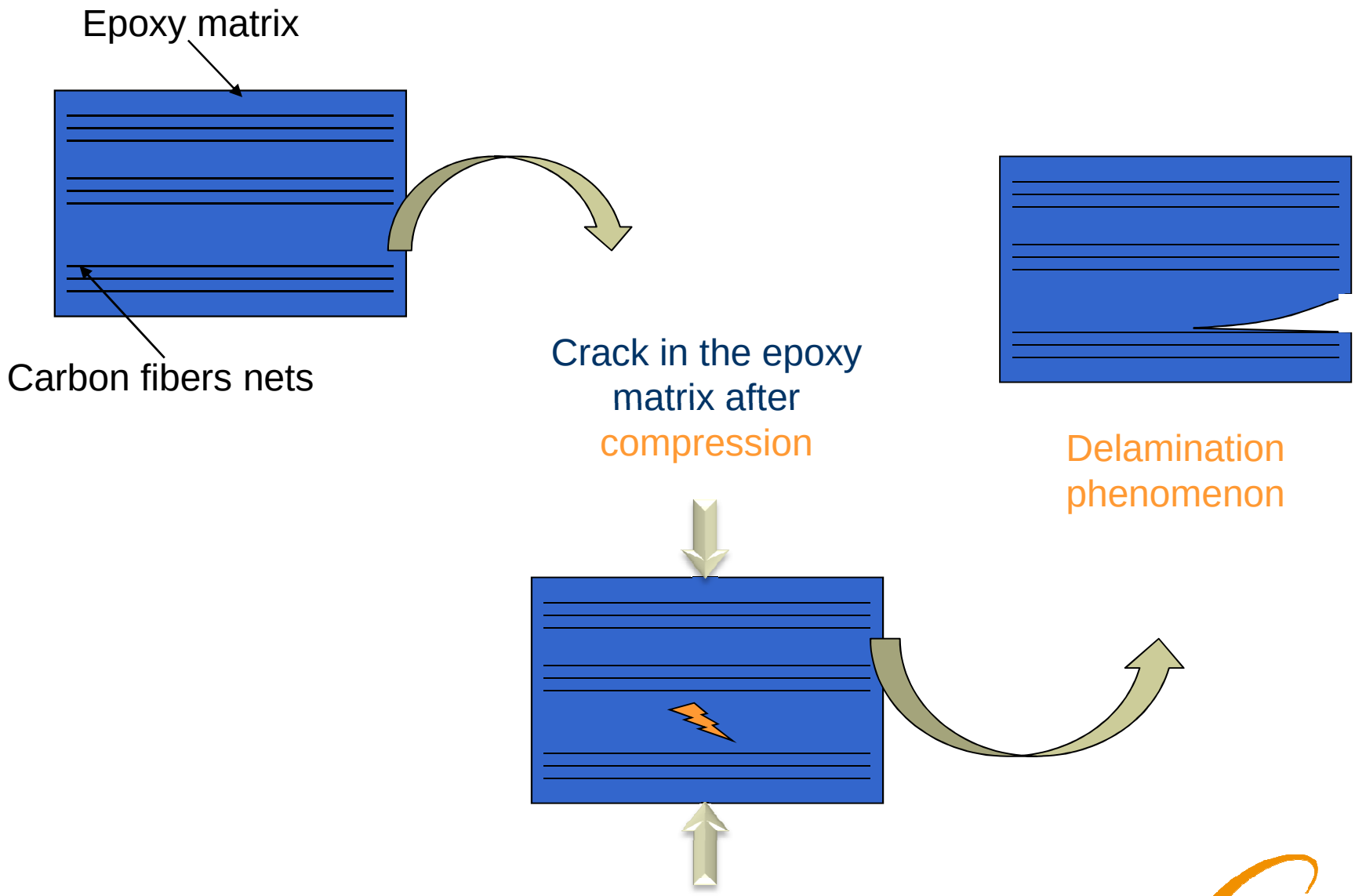
Carbon-Fiber/Epoxy Composites

One Main Issue



Crack propagation at carbon fibers/epoxy interface & low compressive strength leading to Delamination Process

Delamination Process



Interlayered Carbon-Fiber/Epoxy Composites

A solution to avoid crack propagation as a toughening agent in the interlayered carbon fiber/epoxy composites

Recommended Grades: 1002 D NAT 1 & 2002 D NAT1

Groleau and al., Composites Science and Technology, ***56*** *(1996) 1223-1240*

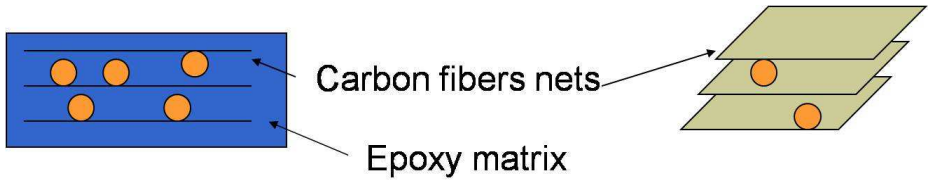
Orgasol®: Two Main Roles in Composite

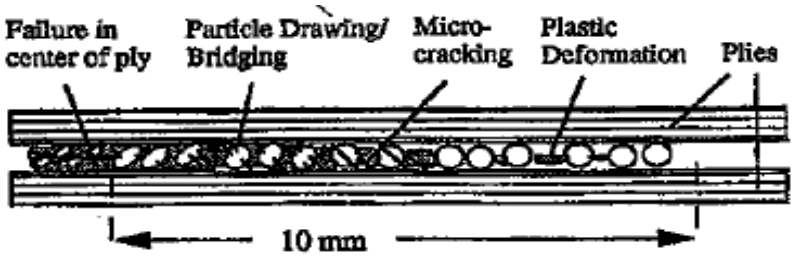
Maintaining thickness of the interlaminar region

- Narrow & Controlled Particle Size distribution
- No melting during curing process
- Essential during pre-preg processing to build the composite structure

Absorbing energy from propagating cracks

- Orgasol avoids contact between the crack and the carbon fiber → No delamination process
- Optimum Ratio « particle size/thickness » : 1

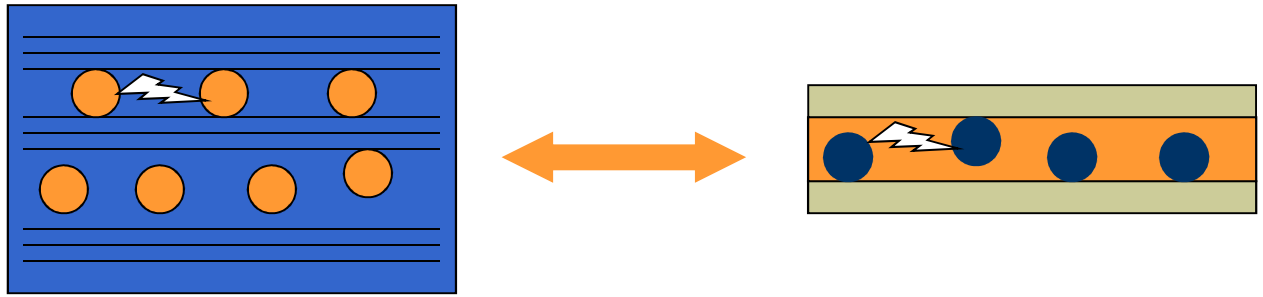




Orgasol® in Structural adhesives

- **Similar role to limit crack propagation in structural adhesives**

- **Optimum efficiency :**
  - **Adhesive thickness around 20 - 40 µm**



inter-layered carbon fiber/epoxy composites

Structural adhesives

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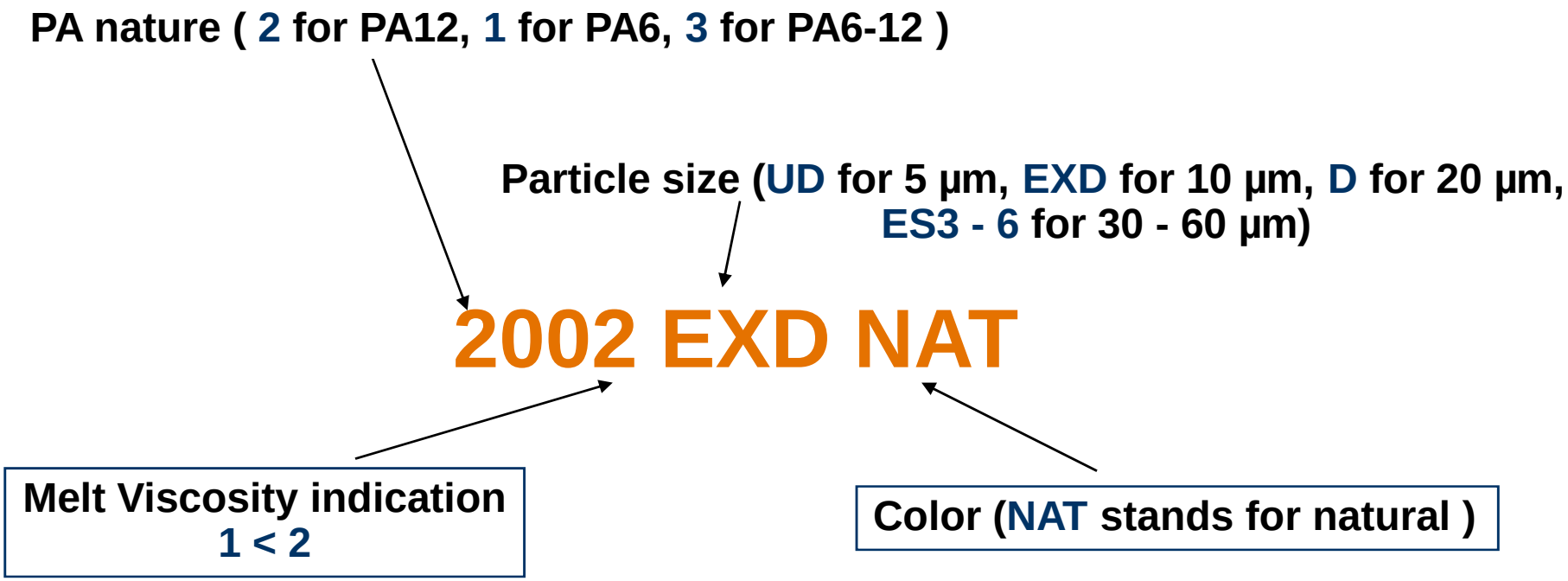
ORGASOL® ANNEX

Orgasol®: Nomenclature



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RCS Nanterre – Version 1.0 - 03 2009