
Value Proposition for CBE JU Calls

May, 2024

Thermoset Resin Formulation	Thermoset Prepregs	Thermoplastic Prepregs	Others	Compounding	Recycling Technologies	Tire Reinforcement
<ul style="list-style-type: none"> • Bio-based or conventional resins • Epoxy Hotmelt, Cyanate Ester Hotmelt, PFA Biobased 	<ul style="list-style-type: none"> • UD, woven and multiaxial fabric forms • Natural Fibers, Carbon, aramid, UHMWPE, Quartz and E/S-glass fiber reinforced 	<ul style="list-style-type: none"> • High crystalline polypropylene (PP), Polyamide 66 • E-glass and Natural Fibers 	<ul style="list-style-type: none"> • UD Slit Tape • Towpreg • Sandwich Panels (Conventional or bio-based) • Fabrics made by carbon, glass UHMPE or aramid 	<ul style="list-style-type: none"> • Pilot line 20kg/h capacity (twin screw extruder) • Industrial Line 6kton/year • Mechanical, physical thermal, flammability and rheology test labs. • Commodity and Engineering Plastics including Bioplastics 	<ul style="list-style-type: none"> • Mechanical (Industrial scale) • Dissolution / solvent-based PP and PE (Pilot scale) 	<ul style="list-style-type: none"> • Synthesis of PA66 from HMD and Adipic (Lab. to Fab.) • Solid State Polymerization (SSP) of PET • Spinning, Twisting, Weaving and Dipping Units • Mechanical, Thermal, Physical and Chemical Test/Analysis



Modelling & Simulation

Design for Lightweighting and Crashworthiness

Thermal Modelling

Failure Analysis

Computational Mechanics

Finite Element Analysis



Material Development

Advanced Materials

New Resin Development

Nanomaterial and Polymer Synthesis

Material Characterization for CAE modelling

Flammability Tests

Material Cards



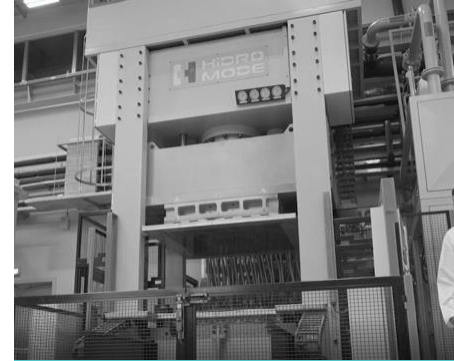
Application & Processing

Composite Material Processing

Clean Room

Automated Fiber Placement

Polymer Processing



Prototype Production

Compression molding with press

Autoclave curing

Oven curing

Additive manufacturing

Robotic machining



Mechanical Validation

Durability Testing

Static & Dynamic Tests

Thermal Tests

Structural Health Monitoring

Climate Chamber

Testing of Customized Components

Compounding Business Unit

- **Automotive,**
- **Electrical Electronics,**
- **Consumer Goods,**
- **Construction,**
- **Agriculture,**
- **Packing**

Composite Business Unit

- **Aerospace** (Aircraft interior and Urban Air Mobility, and Structural)
- **Automotive & Railway** (Interior parts: cosmetic range materials, surfacing films, adhesive films and bio composites)
- **Marine**
- **Sports & Leisure**
- **Medical & Prosthetics**
- **Life Protection**

**Thermoset /
Thermoplastic
Prepreg Production**
KORDSA

Part Production

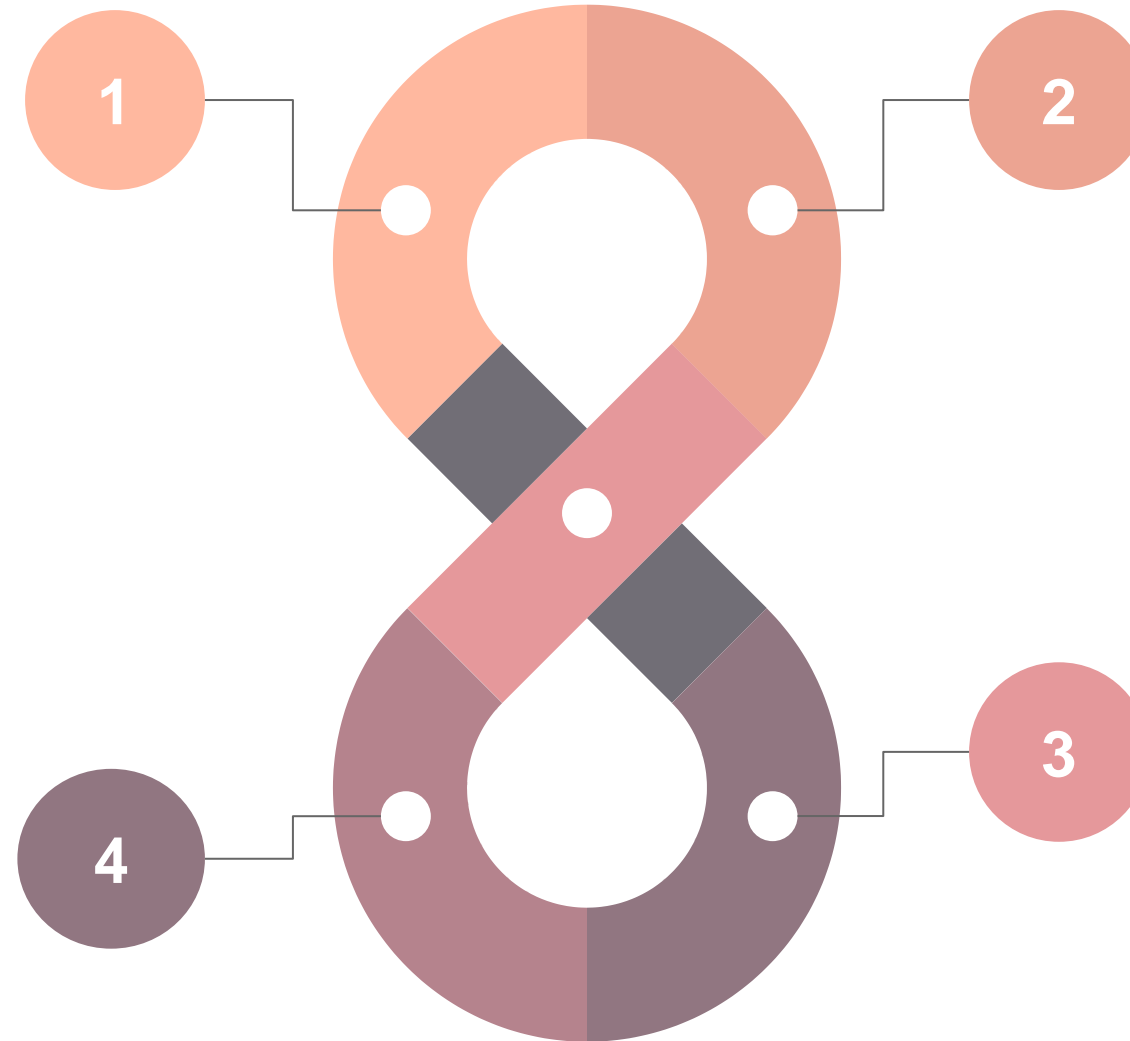
KORDSA may invite End Users
(Automotive/Transportation,
Aviation, Sports&Leisure)

Recycling

Recycling of virgin-like
PP/PE (KORDSA) or other
polymers including bio-based
(need R&D), **Natural Fiber
Recovery**

**Natural Fiber
Treatment**

KORDSA



Bio-Based PA66 Production:

- Utilizing bio-based Hexamethylene diamine and adipic acid for PA66 production.
- Targeting tire cord fabric manufacturing and diverse sector applications.
- Collaboration opportunities with major tire producers and plastic users facilitated by KORDSA.

Bio-Based PET and Alternatives:

- Utilizing bio-based PET and alternatives for technical textile applications.

Natural Fiber Reinforced Composites:

- Introducing bio-based thermoset and thermoplastic polymers for natural fiber reinforced composite applications.
- Offering lightweight, durable, and eco-friendly solutions across various sectors.
- Engaging end users in collaborative development for tailored applications.

Solvent-Based Polyolefin Recycling Technology:

- Revolutionizing polyolefin recycling with solvent-based technology.
- Enabling the recycling of hard-to-recycle materials with 100% bio-based solvents.
- Potential for recycling bio-based polyolefins and other sustainable polymers (R&D phase).

Natural Fiber Reinforced Bio-Based Polymer Composites:

- Developing composite intermediates from natural fiber reinforced bio-based polymers for interior/exterior panel applications.
- Offering eco-friendly alternatives for construction materials with enhanced functional properties.

Solvent-Based Polyolefin Recycling Technology:

- Introducing solvent-based polyolefin recycling technology for sustainable construction materials.
- Facilitating the recycling of polyolefins in construction applications with 100% bio-based solvents.
- Promoting closed-loop systems and minimizing waste in the construction industry.

Structural Reinforcement Solutions for Building Renovation:

- Providing innovative structural reinforcement solutions for the renovation of existing buildings and structures.
- Enhancing durability, safety, and sustainability in building refurbishment projects.
- Collaborating with stakeholders to address structural challenges and extend the lifespan of buildings.