

## Prepreg

Optimizing mechanical performance and weight for dynamic, structural and exterior parts.

### EPIKOTE™ / EPONOL™ Resin Systems and EPIKURE™ Curing Agents and Catalysts



Hexion Inc. (Hexion) offers a wide range of resin systems for use in prepreg applications for industries as diverse as aerospace, automotive, general construction, wind energy, ballistic safety and sporting goods. These include solvent-containing epoxy, hot-melt epoxy and fire-resistant phenolic resin systems.

#### An Overview of Prepreg

##### ■ Aeronautics and Aerospace

These composite structures incorporate a wide range of reinforcement materials such as glass, carbon and aramid fibers, which may be found in the form of unidirectional (roving) materials, fabrics, layered products (including multiaxial layers) or stitched preforms.

##### ■ Automotive and Building/Construction

For structural components and applications, glass or carbon fiber fabrics are incorporated into epoxy resin based laminates. Honeycomb materials may be used to manufacture extra high-strength structures.

##### ■ General industrial applications and ballistic safety

Epoxy resins used for these categories typically feature a high viscoelasticity. In addition to traditional solvent-based systems, an extensive range of hot-melt resin systems is available (e.g. for in-house prepregging).

##### ■ Wind Energy

Epoxy resin prepreg systems are often used in the production of large scale wind turbine blades to achieve the optimal compromise between mechanical strength and blade component weight.

##### ■ Sporting Goods

Our resin systems combined with glass and carbon fiber result in materials able to withstand the extreme dynamic-mechanical demands on today's high performance sporting equipment.

All of our prepreg systems provide the highest possible processing efficacy thanks to short, low temperature curing cycles. Excellent adhesion to materials such as wood, metal, foam and plastics yields final products of the highest quality.

With sixty years of innovation and success in a wide variety of markets and end-use applications, it's no surprise that Hexion's products are so highly regarded. In fact, for Aeronautics and Aerospace they are considered the industry standard.

Whichever system you choose, Hexion backs it with ongoing R&D at our world-class technology centers in the U.S., Europe and Asia; an experienced technical support team; and the global production infrastructure of one of the world's leading specialty chemical companies, assuring consistent supply.

EPIKOTE™ Epoxy Resin Systems / EPIKURE™ Curing Agents and Catalysts / EPONOL™ Phenolic Resin Systems										
	Curing conditions		Use-temp. [°C]	Notes	EINECS (Europe)	TSCA (USA)	DSL / NDSL	ECL (Korea)	ENCS (Japan)	IECSC (China)
	Time [min]	Temp. [°C]								
<b>Solvent containing Epoxy Resin Systems</b>										
EPIKOTE Resin 03859/5 EPIKURE Curing Agent 03859/5 EPIKURE Catalyst 03859/5	60 v 75	140 v 135	80	Interior applications such as flooring, in combination with EPONOL Resin 3501 Phenolic co-curing resin.	• • •	+ + +	+ + +	+ + +	- + +	+ + +
EPIKOTE Resin 05430 EPIKOTE Resin 05429 EPIKURE Curing Agent 05428 EPIKURE Catalyst 05431	30 +30 +60	120 140 170	80	Epoxy prepreg system with outstanding FST properties. Used for floor, wall and side panels.	• • • •	+ + + +	+ + + +	+ + + +	- + + +	+ + + +
<b>Epoxy Resin Systems</b>										
EPIKOTE Resin 06425 EPIKURE Curing Agent 06425 EPIKURE Catalyst 06825	10	150	135	Fast cure - short cycle time, good surface quality	• • •	+ + +	+ + +	+ + +	+ + +	+ + +
EPIKOTE Resin 485 EPIKURE Curing Agent Cure 385 HELOXY Additive 575	60 + 240	80 180	200	Hot melt prepreg for high temperature structural applications	• • •	+ + +	+ + +	+ + +	+ + +	+ + +
EPIKOTE Resin 496 EPIKURE Curing Agent 778 EPIKURE Catalyst 120	45 +30 +80 +60	90 100 100->180 180	180	Primary structural parts, 350 F cure, excellent hot / wet performance.	• • •	+ + +	+ + +	+ + -	+ + -	+ + +
EPIKOTE Resin 05495 EPIKURE Curing Agent 778 EPIKURE Catalyst 120	60	120	100	Inhouse prepreg system for suspensions / spring systems, good dynamic mechanical properties.	• • •	+ + +	+ + +	+ + -	- + +	+ + +
EPIKOTE Resin 04332 EPIKURE Curing Agent 04332 EPIKURE Catalyst 04332	60 v 75	140 v 135	80	Interior parts and panels for aeronautical usage.	• • •	+ + +	+ + +	+ + +	- + +	- + +
EPIKOTE Resin 834 EPIKURE Curing Agent 3280	90	90 – 100	100	Accelerated form of liquid Dicy, B-stageable with a long prepreg shelf life and excellent fiber wetting characteristics.	• •	+ +	+ +	+ +	+ +	+ +
<b>Phenolic Resin Systems</b>										
EPONOL Resin 2489	10	160	80	Aircraft interior: crushed-core construction elements.	•	+	+	+	+	+
EPONOL Resin 2493	10	160	80	Aeronautical interior panels, airducting, airlining.	•	-	-	-	-	-
EPONOL Resin 3501/A EPONOL Resin 3501/B	60 v 75	140 v 135	80	Aircraft interior flooring, co-curing with epoxy resin in combination with Epikote 03859/5.	• •	+ +	+ +	+ +	+ +	+ +
EPONOL Resin 2485	75 v 60	135 v 140	80	Aircraft interior: side panels / baggage rack.	•	+	+	+	+	+

• listed, non-excluding polymers, + listed, - not listed



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