

Regional Headquarters

North America

Ashland Inc.
5200 Blazer Parkway
Dublin, Ohio 43017
United States
T: +1-614-790-3361
PMamericasales@ashland.com

Europe

Ashland Chemicals Hispania S.L.
Carretera Reial 137 - 139
08960 Sant Just Desvern
T: +34-93-206-5120
F: +34-93-470-6858
PMeuropesales@ashland.com

Asia Pacific

Ashland (China) Holding Co., Ltd.
18th Floor, 1809 Zhongshan No. 2 Rd.
(S.) Xuhuiyuan Building Shanghai, 200030
P.R. China
T: +86 21-2402-4888
F: +86 21-2402-4850
PMasiasales@ashland.com

India

Ashland India Private Limited
306, Devavrata Building,
83, Sector-17, Vashi,
Navi Mumbai, Maharashtra,
India 400 705
T: +91-226-148-9696
F: +91-226-721-4055
india@ashland.com
ashland.com



Responsible Care®

* Trademark owned by a third party
* Registered trademark, Ashland or its subsidiaries
© 2010, Ashland
PC-10065-NA

Ashland Inc. and its subsidiaries ("Ashland") believe that all information provided with respect to its products is accurate at the time such information is provided. All statements, information, and data presented herein are believed to be accurate and reliable, but are not to be taken as a guarantee, an express warranty, or an implied warranty of merchantability or fitness for a particular purpose, or representation, express or implied, for which Ashland assumes legal responsibility. They are offered solely for your consideration, investigation, and verification. All recommendations or suggestions contained herein must be evaluated by the user to determine their applicability or suitability for a particular application. Users are encouraged to read and understand the Material Safety Data Sheet (MSDS) and to abide by all use and safety recommendations detailed therein and on all product labeling. No freedom to use any patent owned by Ashland is to be inferred.



High-performance Champion* Chase 600 test boat using Envirez® resin

Ashland Inc.

Ashland Performance Materials is the global leader in unsaturated polyester resins and vinyl ester resins. In addition, it provides customers with leading technologies in gelcoats, pressure-sensitive and structural adhesives, metal casting consumables and design services.

Ashland Inc. provides specialty chemical products, services and solutions for many of the world's most essential needs and industries. Serving customers in more than 100 countries, it operates through five commercial units: Ashland Aqualon Functional Ingredients, Ashland Hercules Water Technologies, Ashland Performance Materials, Ashland Consumer Markets (Valvoline) and Ashland Distribution.



ENVIREZ®

John Deere®, the world's leading manufacturer of farm equipment, uses Envirez resin in exterior body panels (SMC) for many of its tractors and combines.

The first step to sustainable composites

Envirez® Unsaturated Polyester Resins from Renewable and Recycled Resources



ENVIREZ®

ASHLAND

ASHLAND

Envirez® Product Line and Properties

Ashland's award winning Envirez resin is the first commercially available unsaturated polyester resin (UPR) comprised of rapidly renewable materials. Envirez resins are manufactured using an innovative patented process. The Envirez technology incorporates a variety of renewably sourced raw materials in the formulation. The product line has been expanded to include resins with recycled content to provide for a larger number of more sustainable resin options.

Envirez resins meet the same performance and processing requirements of 100% petroleum-based UPR products and are used in a wide variety of processes and applications within the construction, marine and transportation markets. The Envirez line illustrates both Ashland's leadership in UPR technology and its commitment to introducing new products and services that reduce waste and promote sustainable business practices.



Product	Process	Description	Bio Content	Recycled Content	CO ₂ Savings	Energy Savings	Gel Time	Peak Exotherm	Viscosity	Solids Content
			wt %	wt %	Lb CO ₂ / Lb Resin	BTU / Lb Resin	Min	°F	cps	%
Envirez 1807 Resin	SMC & BMC	The first commercially available UPR based on renewably-sourced raw materials. Envirez 1807 resin is designed for use in SMC and BMC applications.	18	0	0.91	2600	7.5 (SPI)	415	850	70
Envirez 50483 Resin	Pultrusion	A pigmentable, un-promoted polyester for use in pultrusion processes. The high reactivity allows for fast line speeds. A high viscosity version, Envirez 50380 (47% recycle) is also available and is ideally suited for thin parts.	0	44	0.36	6900	4 (SPI)	455	1700	63
Envirez 70301 Resin	Multi Purpose	Reactive, un-promoted isophthalic polyester. For use in Pultrusion and SMC/BMC processes. The clear color also allows this resin to be used in blended casting applications.	22	0	0.36	3900	4	370	2200	72
Envirez SS 70419 Resin	Solid Surface	An acrylic modified isophthalic polyester with UV stabilizer ideal for the production of solid surface and other cast components. This product exceeds ANSI Z 124.6 testing standards for stain testing and thermal shock.	20	0	0.31	3300	20	380	500	60
Envirez MR 80220 Resin	Marble Casting	Versatile, low color marble/onyx casting resin. Exceeds ANSI Z 124.3 thermal cycling test requirements. Accepts filler well. Gel time at 62% filler loading is 23 minutes.	18	0	0.29	3100	16	340	1200	72
Envirez 86400 INF Resin	Infusion	For production of general purpose infused parts, use the Envirez® 86400 INF resin. Like the Envirez® open molding resin, this promoted infusion resin has excellent physical properties and HDT.	12	0	0.19	2100	10 & 22	340	150	62
Envirez Q 11500 INF Resin	Infusion	Specifically designed for infusion of small marine parts where premium surface quality is required, Envirez Q 11500 INF-16 resin combines Ashland's low profile expertise and Envirez patented process technology.	8	0	0.40	1100	16	380	150	50
Envirez L 86300 Resin	Open Mold Laminating	Designed to meet the processing needs of open mold laminating processes, the Envirez L 86300 T-25 resin is a promoted, thixotropic laminating resin. It has excellent physical properties, including high HDT and elongation.	12	0	0.20	2100	25	290	550	65
Envirez 7241 T-15 Resin	Iso Laminating Resin	A thixotropic, promoted resin ideal for fabrication of high strength, corrosion resistant parts such as fume hoods, tanks and pipes.	0	24	0.40	7800	14	380	450	54
Envirez LF 60380 Resin	Filled Laminating	Filled laminating resin designed specifically for tub and shower type applications with heated lines. Filled viscosity at 55% Calcium Sulfate and 90F is 1500 cps.	20	0	0.62	5300	10 (filled at 90F)	230 (filled at 90F)	350	63
Enguard® DSZ Series Gelcoat	Gelcoat	Semi-resilient low HAP sanitary gelcoat that is water and wear resistant with excellent application properties	13	0	0.22	2300	9	—	5500	69