

Composite Materials for

# **Automotive Applications**

COMPOSITE MATERIALS

An established world-leader in composite materials for automotive applications, Solvay proactively develops next-generation material solutions.







Lightweighting



Vehicle dynamics such as strength and stiffness



Part count reduction / function integration



Design freedom: Aesthetics and flexibility



Corrosion resistance and resilience



Connectivity integration



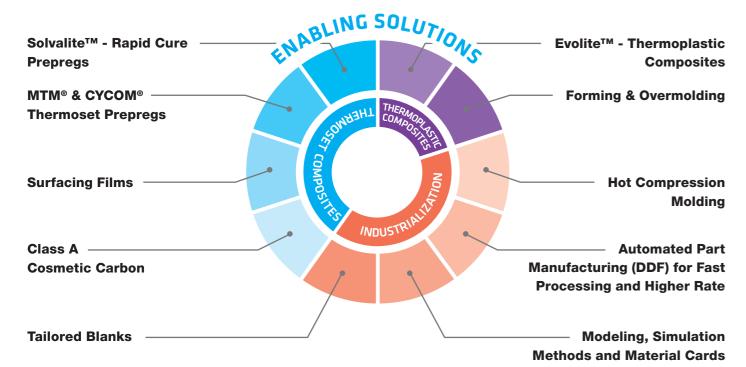
Enabler of electrification



## **What Solvay brings**

With experience from Formula One and other motorsports to high-end supercars and mainstream high volume production cars, we build on our know-how to develop materials and processes that meet the needs of the OEMs and their supply chain whatever the application.

- We are a leader in material science including thermoset and thermoplastic composites and functional films. Solvay group combines engineered thermoplastics with composite technologies enabling us to offer multi material solutions.
- We develop next-generation large volume processing technologies from hot compression molding to forming and overmolding.
- We have an advanced application engineering function that combines materials, design and process expertise to enable the cost-effective adoption of composites.
- We offer unmatched industrialization support where we focus on improving affordability and maximizing the value of composites through automation developments.





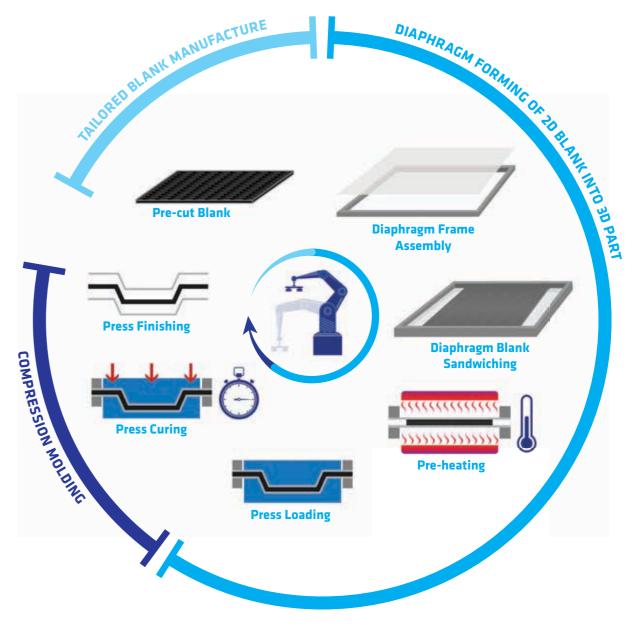
All underpinned by creating the right Automotive Quality Foundation (IATF 16949 in 2021 and Automatic Inspection System)



## **Double Diaphragm forming**

DDF is a highly automatable press forming technology, very similar to metal stamping, which enables the creation of complex geometries from a flat blank during a single step process cure.

Solvay has demonstrated that it is possible to fully automate the manufacturing process and go from raw material to cured parts, using DDF, in less than 3 minutes within a closed loop.



A demonstration line is now fully operational in Solvay's Heanor (UK) Application Center. For more details, please contact your Business Development manager.

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# **Product selector guide**

	Technical Data					Applications			Benefits			
	Tg	Cure Temp (Capability)	Cure time (capability)	Shelf Life	Mechanical Performance	Trim	Body Panels	Functional and Structural Parts	Fit for Industrialization	Surface Quality	Processing	Part Volume
roducts				1* low 2* N	Med 3* High				1* low 2* Me	d 3* High	P - Press A - Autoclave D - DDF Compatible	L - Low M - Med H - High
TM <sup>®</sup> 45EL	180°C (356°F)	60°C (140°F)	9 hours	*	**			•	*		А	L
TM <sup>®</sup> 26ELB	125°C (257°F)	60°C (140°F)	5 hours	*	*	•	•		**	***	А	L
1TM® 28B	100°C (212°F)	120°C (248°F)	1 hour	**	***			•	*	**	P - A	L
ЛТМ® 57	125°C (257°F)	120°C (248°F)	1 hour	**	**	•	•	•	**	***	P - A - D	L - M
ЛТМ <sup>©</sup> 228	120°C (248°F)	120°C (248°F)	1 hour	**	***			•	*	**	А	L
/ITM® 58B and FRB	140°C (284°F)	120°C (248°F)	1 hour	**	**	•	•	•	**	***	P - A - D	L - M
ЛТМ® 49-3	190°C (374°F)	135°C (275°F)	1 hour	**	***			•	**	**	P - A	L
YCOM® 997	220°C (428°F)	177°C (350°F)	2 hours	**	***			•	*	*	P - A	L
TF® 266 (surface film)	155°C (311°F)	150°C (302°F)	6 minutes	**	n/a		•		**	***	P - A - D	L - M
3PS240 format 1/2	163°C (325°F)	120°C (248°F)	1 hour	*	*		•		**	***	А	L - M
olvaLite™ 760 Гwo part resin)	135°C (275°F)	140°C (284°F)	5 minutes	*	**		•	•	***	***	P - D	L - M
olvaLite™ 730-2	130°C (266°F)	150°C (302°F)	2 minute	***	**			•	★★★	*	P - D	Н
olvaLite™ 710-1	150°C (302°F)	150°C (302°F)	3 minutes	*	**	•	•	•	★★★	***	P - D	M - H
olvaLite™ 712	170°C (338°F)	165°C (329°F)	3 minutes	**	**	•	•	•	★★★	***	P - D	M - H
volite™ PPA	115°C (239°F)	n/a	n/a	***	**			With	***	**	Р	Н

#### Notes

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<sup>•</sup> Alternative cure cycles are available. Please refer to our technical datasheets or contact your solvay representative.

<sup>•</sup> Please refer to our Motorsport brochure for more information on our dedicated range of products.



### Solvay

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