AROPOL™ L 68700 T Series Resins

Overview

AROPOL L 68700 T series resins are MACT Compliant, thixed and promoted laminating resins. The enhanced fatigue life and good surface profiles are key to the finished final part. Fabrication is facilitated with a wide processing window, low gel time drift and proprietary storage stability.

Products & Applications

These resins are recommended for applications that utilize hand lay-up or spray-up operations.

- AROPOL L 68700 T products have been specifically designed to meet the demanding needs of marine applications.
- AROPOL L 68740 T products offer a lower viscosity and thixotrope level and can be utilized as is (neat) or filled up to 35%.
- AROPOL L 68740 T LSE products are available for use in general purpose applications where a suppressed styrene resin is required. Suppressed resins are not recommended for marine applications.

Typical Liquid Resin Properties

Property	Aropol L 68700 T	Aropol L 68740 T	Unit	Method
Viscosity (Brookfield)	600	425	cps	LV3 @ 60 rpm
Thix Index	3	2.7		
Filled Viscosity, 33% fill, 85°F	NA	670	cps	RV3 @ 50 rpm
Solids	63	63	%	Hot Plate
HAPs	33.6	33.6	%	
WPG	9.1	9.1	Lbs/gallon	Cup Test @ 77°F

Gel Time Variations

Product	Gel Time (minutes)	Gel to Peak Exo Time (minutes)	Peak Exotherm Temp (°F)
Aropol L 687x0 T-20*	20	7	320
Aropol L 687x0 T-25*	25	7	320
Aropol L 687x0 T-30*	30	8	315
Aropol L 687x0 T-35	35	8	310
Aropol L 687x0 T-40	40	9	310
Aropol L 687x0 T-45	45	10	305
Aropol L 687x0 T-50	50	10	305
Aropol L 687x0 T-60	60	12	300

Gel time tested @ 77°F/25°C; Initiated with 1.50 grams MEKP-9 catalyst in 100 grams of resin.

*Styrene suppressed versions of the Aropol L 68740 T products are available. They are marked with an LSE suffix, such as Aropol L 68740 T-20 LSE. Suppressed versions are not recommended for marine applications.

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Typical Cured Resin Properties

Property	Value	Unit	Test Method
Tensile Strength	8400	psi	ASTM D638
Tensile Modulus	550	ksi	ASTM D638
Tensile Elongation	1.9	%	ASTM D638
Flexural Strength	14,500	psi	ASTM D790
Flexural Modulus	550	ksi	ASTM D790
Heat Deflection Temperature	75	°C	ASTM D648

Cured Resin Properties measured using clear cast panels post cured 5 hours @ 100°C.
Initiated with 1.5% MEKP-9. Data is average of 5 replicates of 3 individual panels.

Laminate Peak Exotherm

Simulate	Modeled	Peak Exotherm Temperature	Time to Peak Exotherm
Skin Coat	35% glass, 2 ply of 1.5 oz CSM	95 °F	90 min
Bulk Laminate	35% glass, 4 ply of 1.5 oz CSM	146 °F	90 min

Run at ambient room temperature of 76°F.
Initiated with 1.50 grams MEKP-9 catalyst in 100 grams of resin.
Time measured from time of catalyst addition.

Hardness Development

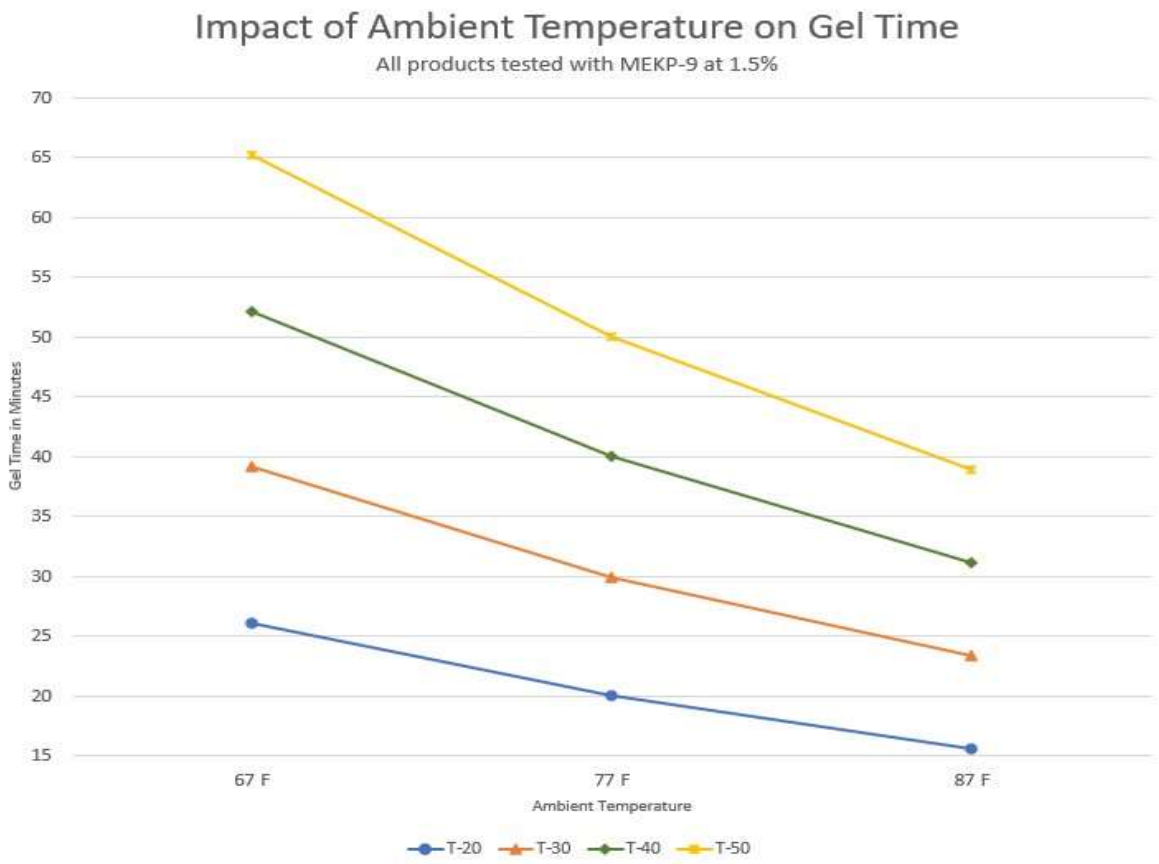
Simulate	Modeled	Time (Hours)	Barcol
Skin Coat	35% glass, 2 ply of 1.5 oz CSM	3	12
		4	20
		5	34
		24	49
Bulk Laminate	35% glass, 4 ply of 1.5 oz CSM	2.5	19
		3	23
		4	32
		24	50

Run at ambient room temperature of 76°F.
Initiated with 1.50 grams MEKP-9 catalyst in 100 grams of resin.
Time measured from time of catalyst addition.

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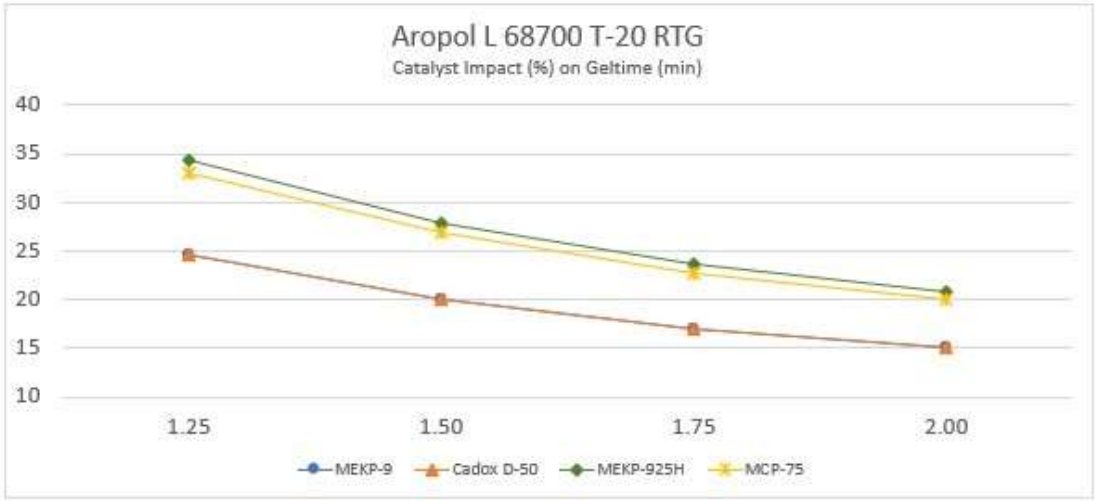
Ambient Temperature Impact on Gel Time

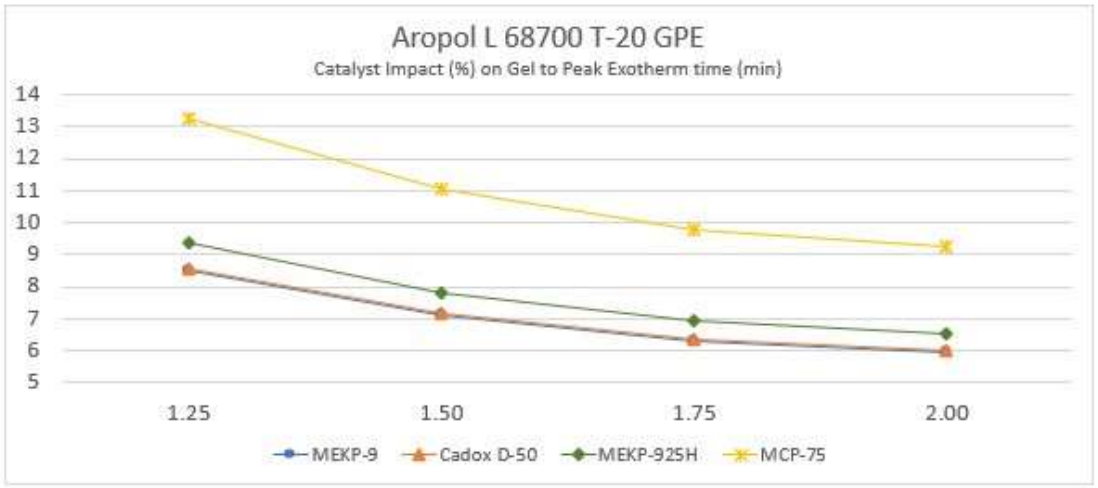


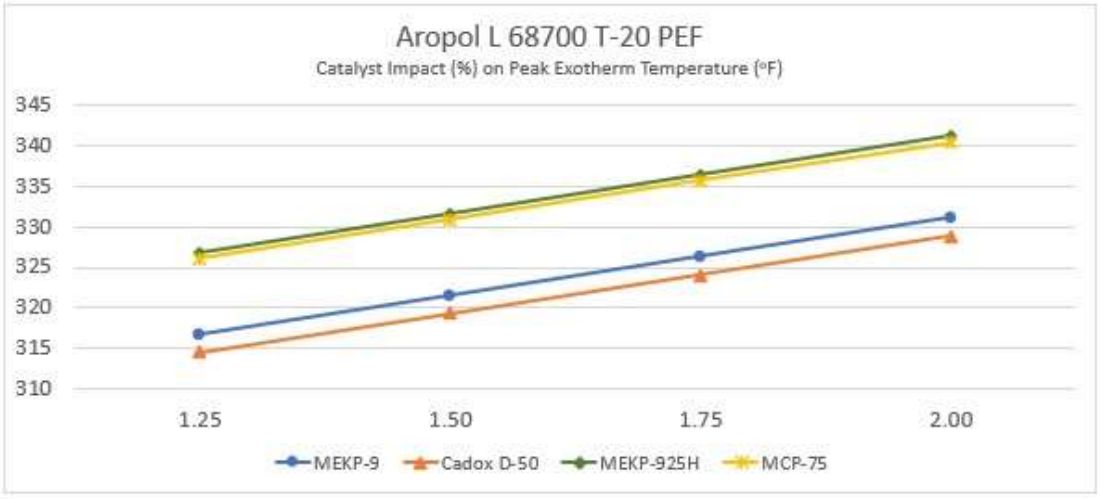
Note that as a general rule, for a T-30 and T-40 product, every 1°F in temperature change results in a 1 minute change in gel time. For shorter gel times, the temperature impact on gel time is less and for longer gel times the temperature impact on gel time is more.

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Impact of Catalyst Changes on Cure Characteristics

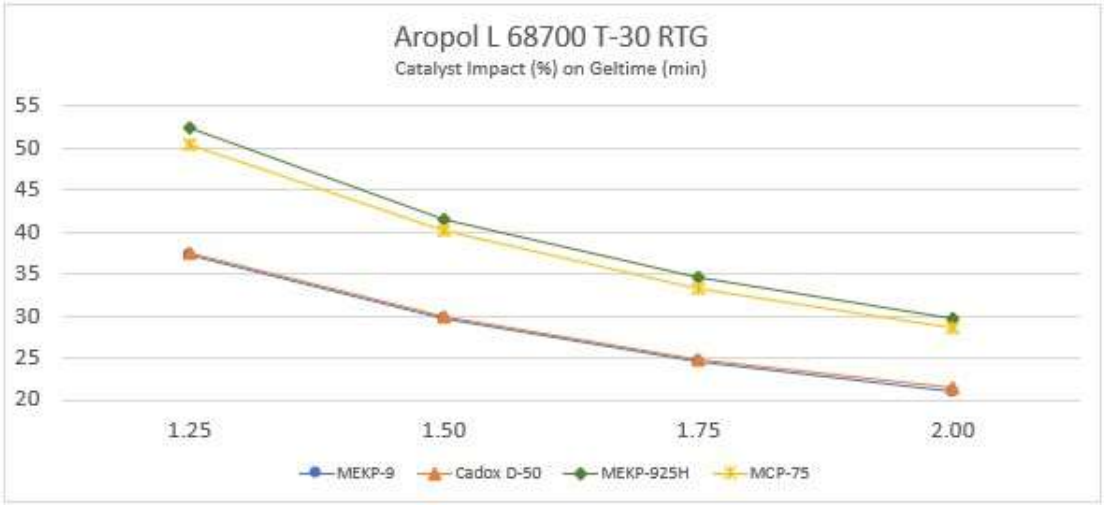


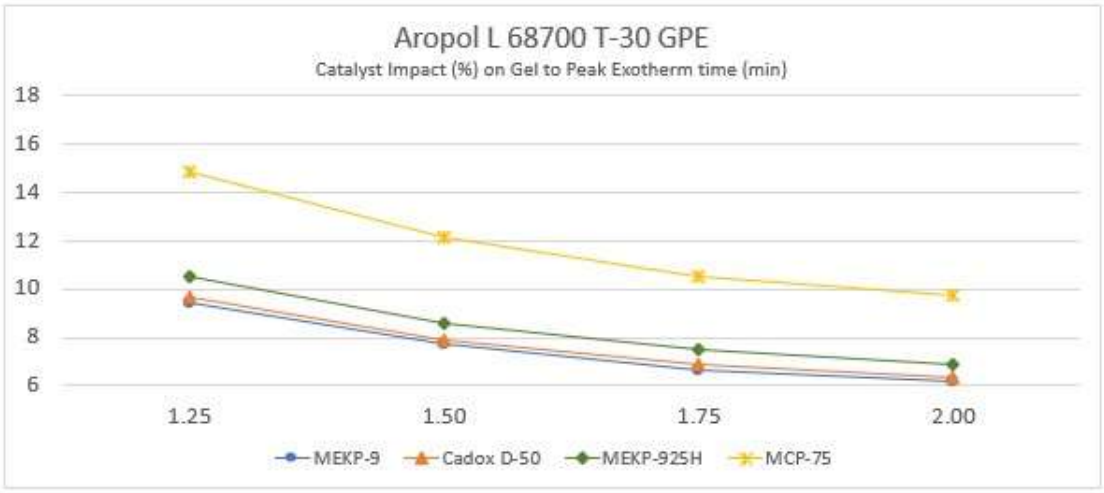


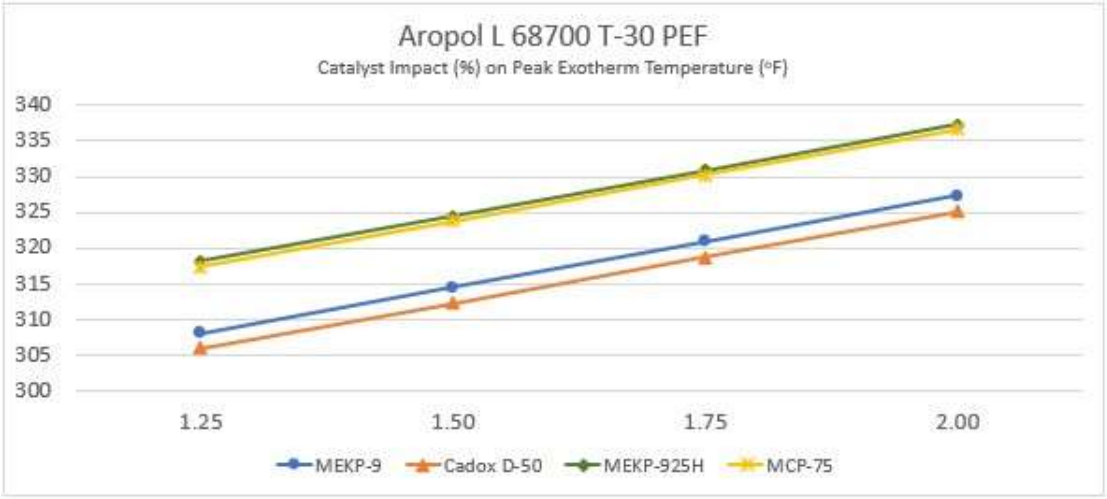


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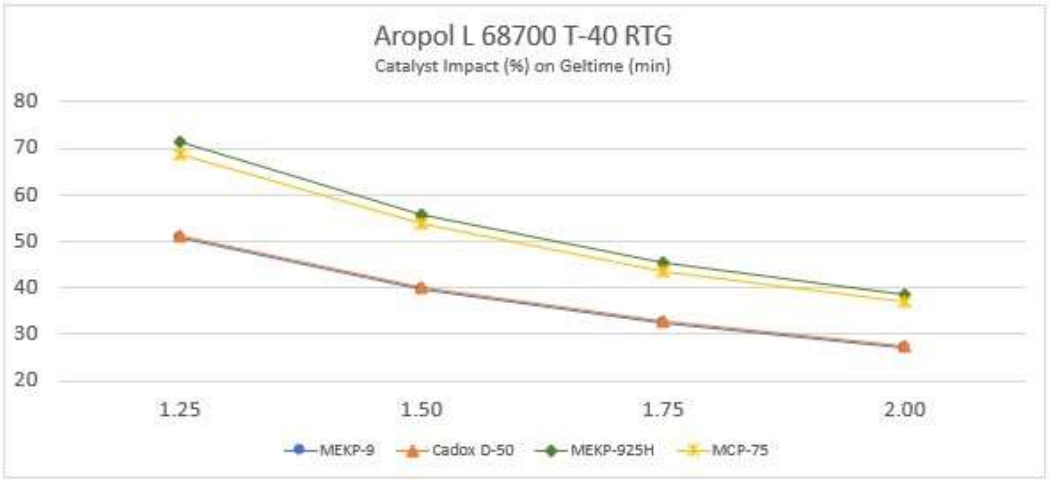


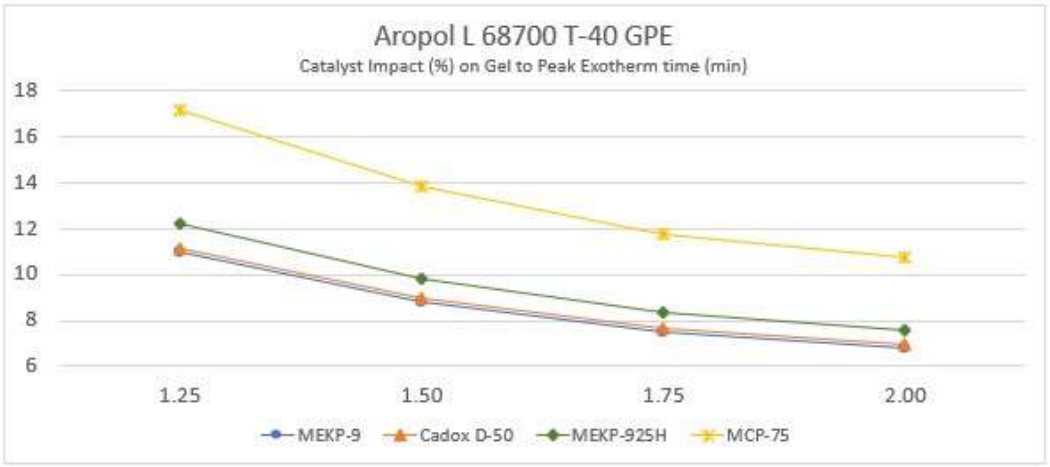


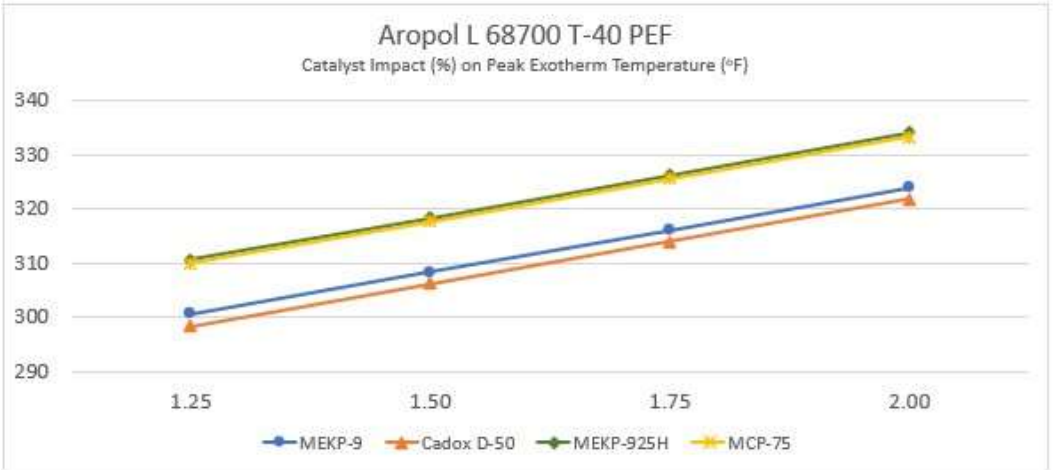


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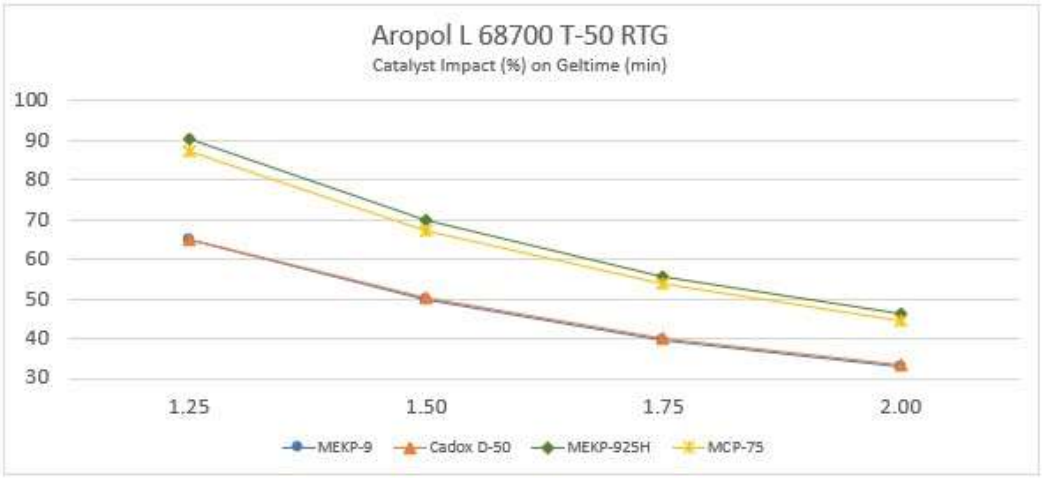


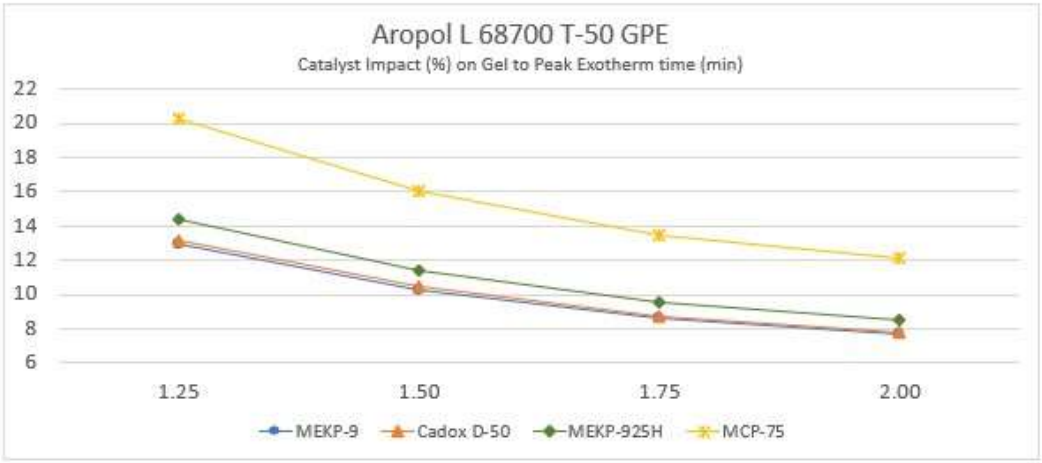


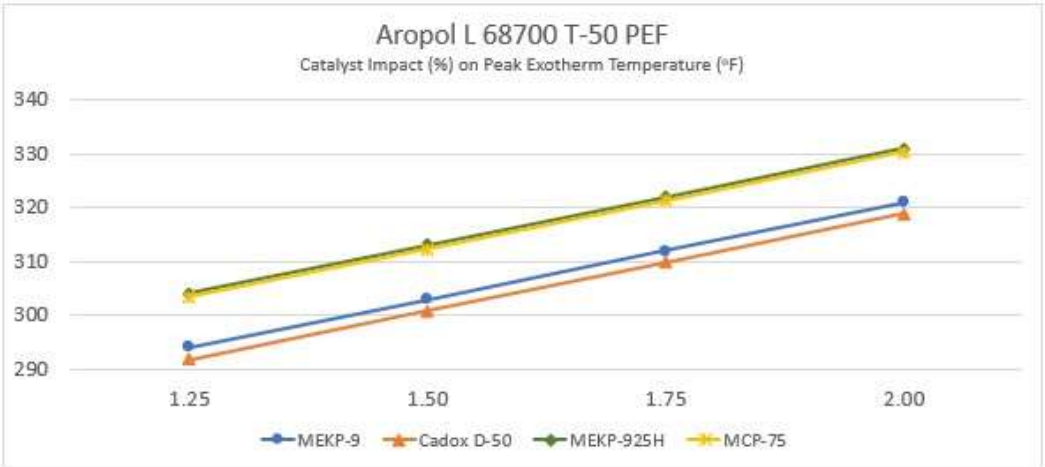


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Standard package
Steel drum with net weight of 220 kgs (485 lbs).

Commercial Warranty
Three months from date of shipment, when stored in accordance with the conditions stated below.

Storage
Drums: Store at temperatures below 25*C. Storage life decreases with increasing storage temperature. Avoid exposure to heat sources such as direct sunlight or steam pipes. To avoid contamination of product with water, do not store outdoors. Keep sealed to prevent moisture pick-up and monomer loss. Mild mixing is recommended after prolonged storage. Rotate stock.

Consult with your INEOS Composites account representative for a guide to best practices on bulk resin storage and handling.

Notice
All information presented herein is believed to be accurate and reliable, and is solely for the user's consideration, investigation and verification. The information is not to be taken as an express or implied representation or warranty for which INEOS Composites assumes legal responsibility. Any warranties, including warranties of merchantability, fitness for use or non-infringement of intellectual property rights of third parties, are herewith expressly excluded.

Since the user's product formulations, specific use applications and conditions of use are beyond the control of INEOS Composites, INEOS Composites makes no warranty or representation regarding the results which may be obtained by the user. It shall be the sole responsibility of the user to determine the suitability of any of the products mentioned for the user's specific application.

INEOS Composites requests that the user reads, understands, and complies with the information contained herein and the current Material Safety Data Sheet.

More Information
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