

STORAGE, HANDLING AND MIXING - LMK656EN ENHANCED RESIN SYSTEM

Storage and Handling:

PROMOTED LMK656EN RESIN

- The promoted thermoset polyester resin should be stored in a cool, dry area.
- **Prior to use, chill resin to a temperature between 35°F (1.7°C) to 40°F (4.4°C).**
- **DO NOT FREEZE THE RESIN.**
- Avoid excessive heating and cooling of the resin prior to use. Keep the thermoset resin out of direct sunlight, away from sparks and open flame.
- Shelf life of LMK656EN Polyester resin is 6 months.
- Personal Protective Equipment (PPE) should be worn when handling this product. See SDS sheet for further information.

CATALYST

- The catalyst should be stored in a cool, dry area.
- **DO NOT FREEZE THE CATALYST.**
- Keep out of direct sunlight.
- Keep catalyst away from excessive heat, sparks and open flames.
- Protective gear should be worn when handling this product. See SDS sheet for further information.

Mixing Resin:

1. **IMPORTANT** – LMK656EN Resin must be mixed prior to dispensing, pouring off or adding catalyst. LMK656EN resin is a filled and pre-promoted mixture and natural settling and separation will occur. Mix thoroughly before adding catalyst and/or dispensing into smaller containers.

Failure to mix the resin as directed will cause premature curing and negatively affect physical properties.

5-Gallon Pail: MIX CHILLED RESIN FOR 2 – 3 MINUTES PRIOR TO ADDING CATALYST.

55-Gallon Drum: MIX BULK RESIN FOR 1 HOUR PRIOR TO DISPENSING WITH PROPER MIXING EQUIPMENT.

2. Add pre-measured catalyst received with kit or measure catalyst per charts on page 2.
3. Mix resin immediately and thoroughly after adding catalyst.

MIX RESIN AND CATALYST FOR 2 – 3 MINUTES.

TECHNICAL DATA SHEET

AMBIENT CURE SYSTEM

CATALYST % AND CURE TIME

Resin Pre-Promoted at 0.2% Level

Initial Resin Temperature Should be **35°F (1.7°C) to 40°F (4.4°C)**

Liner Length in Feet	Ambient Temperature	Catalyst %	Cure Time
0-30 ft.	< 50°F (10°C)	4.00%	2.5 - 3.0 hours
0-30 ft.	50°F to 75°F (10°C to 23.9°C)	4.00%	2.0 - 2.5 hours
0-30 ft.	above 75°F (23.9°C)	3.75%	2.0 - 2.5 hours
31 ft. to 60 ft.	< 50°F (10°C)	4.00%	2.5 - 3.0 hours
31 ft. to 60 ft.	50°F to 75°F (10°C to 23.9°C)	3.75%	2.0 - 2.5 hours
31 ft. to 60 ft.	above 75°F (23.9°C)	3.50%	2.0 - 2.5 hours
over 60 ft.	< 50°F (10°C)	3.75%	2.5 - 3.0 hours
over 60 ft.	50°F to 75°F (10°C to 23.9°C)	3.50%	2.0 - 2.5 hours
over 60 ft.	above 75°F (23.9°C)	3.50%	2.5 - 3.0 hours

STEAM CURE SYSTEM

CATALYST % AND CURE TIME

Resin Pre-Promoted at 0.2% Level

Initial Resin Temperature Should be **35°F (1.7°C) to 40°F (4.4°C)**

Liner Length in Feet	Ambient Temperature	Catalyst %	Steam Time*	Cool Down
All Lengths	50°F to 90°F (15.5°C to 32°C)	2.50%	Steam for approximately 30 minutes after reaching 150°F (65.5°C) at cleanout. If infiltration is present, increase the steam time.	T-Liner - Cool down for a minimum of 1/2 of the amount of steam time and the temperature reaches 100°F (37.8°C) temperature at the cleanout.
	30°F to 50°F (-1°C to 15.5°C)	3.00%		Lateral - Cool down for 1/2 the steam time.
	0°F to 30°F (-17°C to -1°C)	3.25%		

RESIN CONSUMPTION

Lateral Tube SKV2¹ (diameter - resin usage per foot of liner)	T-Liner® Mainline Sheet Lined Pipe^{2,3} (mainline diameter - resin usage per liner)	T-Liner® Mainline Sheet Unlined Pipe^{2,3} (mainline diameter - resin usage per liner)	Sectional Spot Repair^{1,3} (diameter - resin usage per foot of liner)
3.75" - 1.37 lbs./ft.	6" - 2.50 lbs.	6" - 3.00 lbs.	6" - 2.00 lbs./ft.
4" - 1.47 lbs./ft.	8" - 3.50 lbs.	8" - 4.00 lbs.	8" - 3.50 lbs./ft.
5" - 1.86 lbs./ft.	10" - 4.50 lbs.	10" - 5.00 lbs.	10" - 4.00 lbs./ft.
5.75" - 2.15 lbs./ft.	12" - 5.50 lbs.	12" - 6.00 lbs.	12" - 5.50 lbs./ft.
6" - 2.24 lbs./ft.	15" - 9.00 lbs.	15" - 13.50 lbs.	15" - 11.50 lbs./ft.
8" - 3.02 lbs./ft.	18" - 10.50 lbs.	18" - 22.00 lbs.	18" - 18.50 lbs./ft.
	21" - 12.50 lbs.	21" - 25.50 lbs.	21" - 21.75 lbs./ft.
	24" - 14.50 lbs.	24" - 29.00 lbs.	24" - 25.00 lbs./ft.
			27" - 28.00 lbs./ft.
			30" - 41.50 lbs./ft.
			36" - 50.00 lbs./ft.

1. Determine total length of liner and multiply by lbs./ft.
2. For T-Liner - determine the lateral length and multiply by the lbs./ft. and then add the appropriate amount for the Mainline Sheet.
3. To facilitate measuring, all usage requirements have been rounded to the nearest half pound.

To calculate catalyst usage multiply the total amount of resin by 454 to convert lbs. to grams. Multiply the result by the catalyst percent [i.e. total x .03(3.00%)] and add 5 grams to the total.

Resin Disposal Instructions:

- With large quantities of unused poly resin, LMK recommends that you contact a state licensed hazardous material disposal company.
- Small quantities (1-2 pails) may be disposed of by adding catalyst (4% of resin weight) to the resin. Mix thoroughly in a well ventilated outside area. Allow the resin to cure and harden completely. Cool completely which will take approximately 24 hours. When the resin is cured and cooled the chemicals are now in an inert state and are no longer hazardous and may be disposed of in the trash.
- Always use appropriate Personal Protection Equipment (PPE), when handling resin and catalyst.
- Refer to the SDS sheet available at www.lmktechnologies.com for more information.