

DGEL SYSTEM II

LAMINATING INSTRUCTIONS



MIX RATIO: 3:1 by weight (3 Resin to 1 Promoter)
STIR TIME: Approximately 1 to 2 minutes
WORKING TIME: Up to 10 minutes
FULL CURE: 45 minutes



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DGEL SYSTEM II LAMINATING INSTRUCTIONS

DIRECTIONS

Mix DGEL Resin II with DGEL promoter. The mix ratio is 3:1 by weight, three parts DGEL Resin II to one part DGEL Promoter. For optimum results, we recommend using DAW Digital Scale (DGEL-DS). DO NOT ALTER MIXING RATIO.

Example: 90 grams of DGEL Resin requires 30 grams of DGEL Promoter.

WARNING

Altering the mixing ratio by more than 5% will generate the release of Ammonia gasses that can cause nausea & respiratory irritation.

BE SURE TO MIX THOROUGHLY! Stir from bottom to top. Scrape sides occasionally. Larger batches need longer mixing. Use immediately after mixing.

1. Prepare PVA bags in a well wrung-out towel for 6 minutes. Use a heat gun to briefly dry the inner bag after it has been stretched over the mold. Use the heat gun again to briefly dry the inside of the outer PVA bag before applying it over the laminating materials. This will minimize moisture from being introduced into the lamination which can delay polymerization and limit cross linking.

Remember that DGEL Resins are so strong that you can reduce your lay-up and achieve the same strength. For the most cost-efficient and strongest lay-up, use in conjunction with DGEL Tubular Braid. Two layers of DGEL Tubular Braid will be sufficient for 75% of your BK patients. To increase strength, separate braid with a layer of DGEL Fiber Beam (DGEL-FIBTB5/7/9). For extremely active or high force patients, four layers of DAW Tubular Braid will provide an almost indestructible socket.

A 1" (2.5 cm) strip of DGEL felt (DGEL-FLT) at the superior trim line increases thickness, so that a nice rounded edge can be obtained. WARNING! Dacron felt is not compatible with this epoxy resin.

2. Measure the desired weight of resin into a clean unwaxed cup. Again, due to the resin's strength and thinner lay-up, you will require much less than other resins. A typical BK should require 100 to 175 grams. An AK should require 150 to 300 grams.
3. Measure into the same cup a weight of DGEL Promoter that is 1/3 of the weight of resin. The ratio is 3:1. BE ACCURATE!
1 to 1.5% DGEL Pigment (FPP-PC) caucasian, (FPP-PN) negroid, can be used. Do not exceed 1.5%. Two layers of DAW Black-out Braid (DGEL-BFTB25-5/6) will be needed to completely cover Carbon Braid.
4. As you stir the mixture with a clean wood tongue depressor (approximately 1 - 2 minutes) the mixture will warm up. When the mixture becomes warm, you will have up to 25 minutes working time. You will notice the resin reservoir heats up faster than the thinner areas of the lamination.
5. DGEL Resin II is formulated to saturate DAW's DGEL tubular braid quickly and efficiently. To assist this process, you will want to work the resin down and string it up keeping even thickness throughout lamination.

IMPORTANT: Maintain very light string pressure.

Contrary to "standard" stringing procedure, we do not recommend you wrap the string around your fingers but instead "pinch" the string between thumb and index finger. This will ensure you do not "starve" the DGEL lamination as very little force is required to work the DGEL lamination.

6. When you are finished stringing, apply heat evenly over the lamination with a heat gun for 2 to 3 minutes (high setting). You may release vacuum once the "gelling" of lamination has reached a stage when a thumb print will not mark the lamination.
7. With proper heating, the lamination can be fully set within 45 minutes of initial mixing (*without heat the lamination would fully set after 90 minutes*).

DGEL - EDGER: FOR AN EDGE THAT IS AS SMOOTH AS POLISHED GLASS

1. Cut out with a cast saw the rough trim lines of the socket - break out plaster.
2. Using a rough cone, on the router, grind down to the desired trim line.
3. Proceed with a fine cone until a smooth edge is obtained.
4. Using a one inch square (2.5 cm) of 400 grit wet/dry sand paper and a few drops of DGEL-EDGER Finishing polish by hand the trim lines of the socket, (use enough DGEL-EDGER to keep the trim line wet while polishing).
5. Apply a few drops of DGEL-EDGER to a piece of cotton and rub it on the brim of the socket.
6. Allow 2-3 minutes to dry. The finished product will be as smooth as glass.



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RECOMMENDED LAMINATING LAY-UPS

WHICH ADULT FUNCTIONAL LEVEL

LEVEL 1	Fixed Cadence • Transfer on Level Surfaces • Household Ambulator
LEVEL 2	Transversing Low Level Barriers, Curbs, Stairs, Uneven Surfaces • Limited Community Ambulator
LEVEL 3	Variable Cadence • Transversing Environmental Barriers • Activity Demands Beyond Simple Location
LEVEL 4	Exceeding Basic Ambulation Skills • High Impact, Stress or Energy Levels, Typical of Child

Activity Level	Patient Weight	Recommended Connectors	DGEL™ SYSTEM			Other Generic Carbon Brands on the Market		
			Lay-up with DGEL Tubular Braid	Resin Used DGEL-RR2	Approx. Final Socket Weight*	Lay-up with Generic Braid	Resin Used DGEL-RR2	Approx. Final Socket Weight*
LEVELS 1 & 2	36-54 kg (80-120 lbs)	RSC-TLAM TSC-A GUPS-FLAM3PRROT	② DGEL-TB	175-250 g (6.2-7 oz)	529 g (18.8 oz)	① FTB-GENERIC ① FTB-GENFIB ① FTB-GENERIC	275-325 g (9.8-11.5 oz)	605 g (21.5 oz)
	54-75 kg (120-165 lbs)	RSC-TLAM TSC-A GUPS-FLAM3PRROT	① DGEL-TB ① DGEL-FIBTB ① DGEL-TB	225-300 g (8-10.7 oz)	658 g (23.3 oz)	② FTB-GENERIC ① FTB-GENFIB ② FTB-GENERIC	325-400 g (11.5-14.2 oz)	875 g (31 oz)
	75-100 kg (165-220 lbs)	RSC-TLAM TSC-A GUPS-FLAM3PRROT	① DGEL-TB ① DGEL-FIBTB ① DGEL-TB	225-300 g (8-10.7 oz)	658 g (23.3 oz)	③ FTB-GENERIC ① FTB-GENFIB ③ FTB-GENERIC	400-475 g (14.2-16.8 oz)	1,263 g (44.8 oz)
	100-113 kg (220-250 lbs)	TSC-A GUPS-FLAM3PRROT	① DGEL-TB	250-325 g (9-11.5 oz)	983 g (35 oz)	Not Recommended	N/A	N/A
	113 kg+ (250 lbs)	EXO-SKELETAL OR CALL TECH HOTLINE	④ DGEL-TB	250-325 g (9-11.5 oz)	983 g (35 oz)	Not Recommended	N/A	N/A

① = 1 Layer ② = 2 Layers ③ = 3 Layers ④ = 4 Layers

* Socket weight based on an average weight patient with 20 cm (8 in) long socket from Ischium

DGEL

DGEL-TB = DGEL Tubular Braid (Available in 3, 4, 5, 6, 7, & 8 inch wide)

DGEL-FIBTB = DGEL Tubular FiberBeam Braid (Available in 5, 7, & 9 inch wide)

DGEL-RR2 = DGEL Rigid Resin

For a perfectly smooth socket edge without carbon fibers sticking out: DGEL-EDGER™



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			Lay-up with DGEL Tubular Braid	Resin Used DGEL-RR2	Approx. Final Socket Weight*	Lay-up with Generic Braid	Resin Used DGEL-RR2	Approx. Final Socket Weight*
LEVELS 1 & 2	36-54 kg (80-120 lbs)	GUPA-MLAM RSC-TLAM GUPA-MLAMSTAR	Not Recommended	N/A	N/A	① FTB-GENERIC ① FTB-GENFIB ① FTB-GENERIC	150-200 g (5.3-7 oz)	357 g (12.7 oz)
	54-75 kg (120-165 lbs)	GUPA-MLAM RSC-TLAM GUPA-MLAMSTAR	② DGEL-TB	75-125 g (2.7-4.4 oz)	216 g (7.7 oz)	① FTB-GENERIC ① FTB-GENFIB ① FTB-GENERIC	150-200 g (5.3-7 oz)	357 g (12.7 oz)
	75-100 kg (165-220 lbs)	GUPA-MLAM TSC-BX RSC-TLAM	② DGEL-TB	75-125 g (2.7-4.4 oz)	216 g (7.7 oz)	② FTB-GENERIC ① FTB-GENFIB ② FTB-GENERIC	175-225 g (6.2-8 oz)	509 g (18 oz)
	100-113 kg (220-250 lbs)	GUPA-MLAM TSC-BX RSC-TLAM	① DGEL-TB ① DGEL-FIBTB ① DGEL-TB	100-150 g (3.5-5.3 oz)	348 g (12.3 oz)	② FTB-GENERIC ② FTB-GENFIB ② FTB-GENFIB	200-250 g (7-9 oz)	589 g (20.8 oz)
	113 kg+ (250 lbs)	EXO-SKELETAL OR CALL TECH HOTLINE	④ DGEL-TB	125-200 g (4.4-7 oz)	336 g (12 oz)	③ FTB-GENERIC ① FTB-GENFIB ③ FTB-GENERIC	250-350 g (9-12.4 oz)	614 g (21.8 oz)

① = 1 Layer ② = 2 Layers ③ = 3 Layers ④ = 4 Layers

★ Socket weight based on an average weight patient with 20 cm (8 in) long socket from Ischium

DGEL

DGEL-TB = **DGEL Tubular Braid** (Available in 3, 4, 5, 6, 7, & 8 inch wide)
 DGEL-FIBTB = **DGEL Tubular FiberBeam Braid** (Available in 5, 7, & 9 inch wide)
 DGEL-RR2 = **DGEL Rigid Resin**

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			DGEL™ SYSTEM			Other Generic Carbon Brands on the Market		
Activity Level	Patient Weight	Recommended Connectors	Lay-up with DGEL Tubular Braid	Resin Used DGEL-RR2	Approx. Final Socket Weight*	Lay-up with Generic Braid	Resin Used DGEL-RR2	Approx. Final Socket Weight*
LEVEL 3	36-54 kg (80-120 lbs)	RSC-TLAM TSC-A GUPS-FLAM3PRROT	② DGEL-TB	175-250 g (6.2-7 oz)	529 g (18.8 oz)	② FTB-GENERIC ① FTB-GENFIB ② FTB-GENERIC	325-400 g (11.5-14.2 oz)	875 g (31 oz)
	54-75 kg (120-165 lbs)	RSC-TLAM TSC-A GUPS-FLAM3PRROT	① DGEL-TB ① DGEL-FIBTB ① DGEL-TB	250-325 g (9-11.5 oz)	658 g (23.3 oz)	② FTB-GENERIC ② FTB-GENFIB ② FTB-GENFIB	400-475 g (14.2-16.8 oz)	950 g (33.7 oz)
	75-100 kg (165-220 lbs)	RSC-TLAM TSC-A GUPS-FLAM3PRROT	① DGEL-TB ① DGEL-FIBTB ① DGEL-TB	250-325 g (9-11.5 oz)	658 g (23.3 oz)	③ FTB-GENERIC ② FTB-GENFIB ③ FTB-GENFIB	450-525 g (16-18.6 oz)	1,026 g (37 oz)
	100-113 kg (220-250 lbs)	RSC-TLAM TSC-A	④ DGEL-TB	275-350 G (9.8-12.4 oz)	938 g (35 oz)	Not Recommended	N/A	N/A
	113 kg+ (250 lb+)	EXO-SKELETAL OR CALL TECH HOTLINE	② DGEL-TB ① DGEL-FIBTB ② DGEL-TB	350-400 g (12.4-14.2 oz)	1,213 g (43 oz)	Not Recommended	N/A	N/A
LEVEL 4	36-54 kg (80-120 lbs)	RSC-TLAM TSC-A GUPS-FLAM3PRROT	① DGEL-TB ① DGEL-FIBTB ① DGEL-TB	225-300 g (8-10.7 oz)	658 g (23.3 oz)	③ FTB-GENERIC ② FTB-GENFIB ③ FTB-GENERIC	400-475 g (14.2-16.8 oz)	1,026 g (37 oz)
	54-75 kg (120-165 lbs)	RSC-TLAM TSC-A GUPS-FLAM3PRROT	① DGEL-TB ① DGEL-FIBTB ① DGEL-TB	250-325 G (9-11.5 oz)	658 g (23.3 oz)	Not Recommended	N/A	N/A
	75-100 kg (165-220 lbs)	RSC-TLAM TSC-A GUPS-FLAM3PRROT	④ DGEL-TB	275-350 G (9.8-12.4 oz)	938 g (33.3 oz)	Not Recommended	N/A	N/A
	100-113 kg (220-250 lbs)	TSC-A OR CALL TECH HOTLINE	④ DGEL-TB	275-350 G (9.8-12.4 oz)	938 g (35 oz)	Not Recommended	N/A	N/A
	113 kg+ (250 lb+)	EXO-SKELETAL OR CALL TECH HOTLINE	② DGEL-TB ① DGEL-FIBTB ② DGEL-TB	350-400 g (12.4-14.2 oz)	1,213 g (43 oz)	Not Recommended	N/A	N/A

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* Socket weight based on an average weight patient with 20 cm (8 in) long socket from Ischium

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LEVEL 3	36-54 kg (80-120 lbs)	GUPTA-MLAM GUPTA-MLAMSTAR RSC-TLAM-P	② DGEL-TB	75-125 g (2.7-4.4 oz)	216 g (7.7 oz)	① FTB-GENERIC ① FTB-GENFIB ① FTB-GENERIC	150-200 g (5.3-7 oz)	357 g (12.7 oz)
	54-75 kg (120-165 lbs)	GUPT-MLAMSLIDE GUPTA-MLAMSTAR GUPT-MLAMSTAR	② DGEL-TB	75-125 g (2.7-4.4 oz)	216 g (7.7 oz)	② FTB-GENERIC ① FTB-GENFIB ② FTB-GENFIB	175-225 g (6.2-8 oz)	484 g (17.2 oz)
	75-100 kg (165-220 lbs)	GUPT-MLAMSLIDE GUPT-MLAM RSC-TLAM	① DGEL-TB ① DGEL-FIBTB ① DGEL-TB	100-150 g (3.5-5.3 oz)	348 g (12.3 oz)	② FTB-GENERIC ② FTB-GENFIB ② FTB-GENERIC	200-250 g (7-9 oz)	589 g (20.8 oz)
	100-113 kg (220-250 lbs)	GUPT-MLAM TSC-BX RSC-TLAM	④ DGEL-TB	125-200 g (4.4-7 oz)	336 g (12 oz)	③ FTB-GENERIC ① FTB-GENFIB ③ FTB-GENERIC	250-350 g (9-12.4 oz)	614 g (21.8 oz)
	113 kg+ (250 lb+)	EXO-SKELETAL OR CALL TECH HOTLINE	② DGEL-TB ① DGEL-FIBTB ② DGEL-TB	150-200 g (5.3-7 oz)	451 g (16 oz)	③ FTB-GENERIC ① FTB-GENFIB ③ FTB-GENERIC	275-375 g (9.8-13.3 oz)	669 g (23.7 oz)
LEVEL 4	36-54 kg (80-120 lbs)	GUPT-MLAM GUPT-MLAMSLIDE RSC-TLAM-P	② DGEL-TB	75-125 g (2.7-4.4 oz)	216 g (7.7 oz)	FTB-GENERIC FTB-GENFIB FTB-GENERIC	150-200 g (5.3-7 oz)	357 g (12.7 oz)
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	113 kg+ (250 lb+)	EXO-SKELETAL OR CALL TECH HOTLINE	② DGEL-TB ① DGEL-FIBTB ② DGEL-TB	150-200 g (5.3-7 oz)	451 g (16 oz)	N/A	N/A	N/A

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