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10. The method of claim 1 wherein said applying step continues at least until said resin becomes a solid mass.

11. The method of claim 1 further comprising the step of combining said resin with a substrate to form a composite material.

12. A method for curing an epoxy resin comprising the steps of:

placing said epoxy resin into a vacuum bag, said epoxy resin including a catalyst;

placing a mold into said vacuum bag;

drawing a vacuum in said vacuum bag;

sealing said vacuum bag;

positioning said sealed vacuum bag in a gaseous coupling fluid wherein said gaseous coupling fluid is at ambient temperature and pressure; and

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applying ultrasonic energy to said gaseous coupling fluid at least until said epoxy resin becomes a solid mass.

13. The method of claim 12 wherein said gaseous coupling fluid is ambient air.

5 14. The method of claim 12 wherein said gaseous coupling fluid is an inert gas.

15. The method of claim 12 wherein said applying step includes positioning an ultrasound transducer in said gaseous coupling fluid and actuating said ultrasound transducer.

10 16. The method of claim 12 further comprising the step of combining said resin with a substrate to form a composite material.

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