solar gators	**Aerobody-Composites**	**Prepared by**	Valeria Niebles
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Page #	1 of 1	**Revision by**	N/A
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Standard Operating Procedure (SOP): Epoxy Resin Preparation

1. Purpose

This SOP outlines the steps taken to prepare 5:1 epoxy resin systems for their use in laminating carbon fiber or fiberglass components.

2. Scope

Materials
1. Epoxy resin
2. Epoxy curing agent

Tools
1. Mixing cups (preferably 32 oz.)
2. Mixing tool
3. Weight scale

3. Safety/ Hazards

- Epoxy resin/hardener is used. Please refer to their safety data sheets (SDS) for personal protective equipment (PPE) needed
- Fumes and dust will be produced. Work in a well-ventilated area; a dust mask provided by the University of Florida is required PPE. If any further respiration equipment is preferred a physical signed by a doctor must be provided.
- Nitrile gloves must be worn.
- Safety glasses must be worn.
- Hair must be tied back.
- Closed toe shoes and long pants must be worn.

4. Control

- Never work with epoxy resin without the appropriate PPE.
- SDSs must be read prior to working with any chemicals

5. Procedure

1. Measure out the desired amount of epoxy resin into a mixing cup.
2. Add in epoxy hardener according to 5:1 resin to hardener ratio (by volume).
3. Mix thoroughly (~ 1 minute). Do not introduce any air bubbles into the system

6. Definitions

1. **Epoxy resin**: long-chain prepolymers that are the condensation products of epichlorohydrin and bisphenol-A or other polyethers with terminal unreacted epoxy groups. Addition of a curing agent will set off a thermoset reaction.

7. References

1. Thomas, P., & Eckmann, A. (1992, August 7). SOP for Epoxy. Retrieved from http://psfcwww2.psfc.mit.edu/esh/epoxy.html