	Aerobody-Composites	Prepared by	Valeria Niebles
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Owner	Solar Gators	Last Reviewed/Update Date	N/A

Standard Operating Procedure (SOP): Polyester Resin Preparation

1. Purpose

This SOP outlines the steps taken to prepare polyester resin systems for use in laminating carbon fiber or fiberglass components.

2. Scope

Materials

1. Polyester resin
2. MEKP hardener

Tools

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

3. Safety/ Hazards

- Polyester resin/ MEKP hardeners are 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 polyester resin without the appropriate PPE.
- SDSs must be read prior to working with any chemicals

5. Procedure


1. Measure out the desired amount of polyester resin into a mixing cup.
2. Add in 1-2% resin weight of MEKP hardener.
3. Mix thoroughly. Do not introduce air bubbles into the mixture

6. Definitions

1. **Polyester resin:** viscous, pale coloured liquids consisting of a solution of a polyester in a monomer. Addition of catalyst will cause resin to thermoset (1).
2. **MEKP hardener:** short for methyl-oxide ketone peroxide. Catalyzes thermosetting reaction in polyester and vinyl ester resins (2).

7. References

1. Cripps, D. (2019, January 24). Polyester Resins. Retrieved from <https://netcomposites.com/guide/resin-systems/polyester-resins/>
2. <https://www.fibreglass-resin-sales.com.au/wp-content/uploads/MEKP-sheet1.pdf>

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