Characteristics of Resins

Neither coating is a "paint"
Both use same pigments: 1oz./qt. or 4oz./gal. in clear or neutral resins

POLYESTER	EPOXY
Adjustable percentage mix with catalyst MEKP	Ratio mix only - should be measured as accurately as possible
Sets faster in bulk. Will crack or smoke in mixing bucket if too hot. Mix smaller quantities in shallow containers.	Sets faster in bulk. Will crack or smoke in mixing bucket if too hot. Mix smaller quantities in shallow containers.
Ignitable - keep away from flame	Ignitable - keep away from flame
Stir well, but thoroughness not as critical. If finished product is soft or sticky, apply another coat with additional catalyst, sometimes called a "hot coat." This topcoat will cure what's underneath. Avoid waxed containers. Glass, metal and polyethylene plastic containers OK.	Thorough stirring critical - scrape sides and bottom while stirring. Best to pour into another container and stir again before use. Soft or sticky spots on the finished product are caused by poor stirring. Cannot be fixed with additional coats. Avoid waxed containers. Glass, metal and polyethylene plastic containers OK.
Adjust to ambient temperature with more or less catalyst, but don't work under 50 degrees.	Very temperature sensitive -cannot adjust catalyst. Maintain min. 70 degrees while working AND curing. Final coat should cure 24 hours before handling.
Brush or roll out of a shallow pan or pour on large level surface area and disburse. Use throwaway application tools or cleanup with acetone or lacquer thinner while resin is still wet.	Brush or roll out of a shallow pan or pour on large level surface area and disburse. Cure will be slower in thin coats. Use throwaway application tools or cleanup with acetone, lacquer thinner or xylene while resin is still wet.
Wear gloves and respirator. Keep skin covered.	Wear gloves and respirator. Keep skin covered.
Reduce with 5% styrene to spray. Use large spray orifice: 1.8mm to 2.5mm. Remember that it sets quicker in bulk. Clean equipment immediately. Reduction with acetone not recommended.	Reduce with 5% xylene to spray. However spraying not recommended - dilution weakens the product. If you must spray, use large spray orifice: 1.8mm to 2.5mm. Keep ambient temperature elevated more than normal in order to drive out solvent. Remember that it sets quicker in bulk. Clean equipment immediately.

Apply subsequent coats while previous coat has reached the gel stage and is still tacky. If hard, must sand before applying next coat.	Apply subsequent coats while previous coat has reached the gel stage and is still tacky. If hard, must sand before applying next coat. Time between coats usually much longer. When applying table top resin to wood, brush on coats and let sit approx. 24 hrs. Sand between coats, until wood no longer saturates 2-3 coats). Then build up with pour on coats. At room temp., epoxies will cure about 80% in 24 hrs. Full cure is about 7 days.
"Exterior" resins and gelcoat contain no wax and should be used in molds. Side not contacting mold surface remains tacky. "Interior" versions contain wax in order to surface cure. Wax additive available to add to exterior resins to allow surface cure.	Molecular contact cure only - no wax involved. Thin coats should be kept warmer than normal - 80 degrees min.
Poor UV resistance, except gelcoats. Sand, prime and paint after 1 week cure. Epoxy or polyester primers best.	Poor UV resistance. Sand, prime and paint after 1 week cure. Epoxy primer best. When used as a clear coating, keep item indoors. Table top version available. Remove air bubbles with heat gun or ethyl alcohol. Brush embedments with resin first.
Use with all forms of fiberglas. Also use Cab-O-Sil, Microballoons, chopped fibers, etc. to change resin for desired properties. Use with Kevlar and other materials for desired end product.	Can use with fiberglas as an embedment. Does not saturate as well as polyester. Also use Cab-O-Sil, Microballoons, etc. to change resin for desired properties. Use with Kevlar and other materials for desired end product. Keep wet curing resin warmer than normal when using fillers.
Harsher chemical attack to substrate - cannot use on styrofoam. Urethane foam OK.	OK on most substrates - mild chemical attack. Styrofoam OK.
More shrinkage - especially "kicked hot"	Less shrinkage, higher solids
Finished product not as chemical resistant. Especially brittle without fiberglas or another material that is resin-enveloped. Use gelcoat for outer layers that do not contain fiberglas.	More chemical resistant coating. Tougher coating, even without fiberglas or other material. No special outer layer needed.
Do not use polyester fillers to repair an epoxy finish.	OK to use epoxy fillers to repair cured polyester or epoxy finishes.
Short shelf life - store in a cool dry area.	Long shelf life, especially in metal containers
About 1/3 the price of epoxy resins	About 3 times the price of polyester resins
SPECIAL NOTE: MEKP catalyst is a harsh alkaline material. Avoid direct contact with	

skin; wash immediately with water if contacted. Keep catalyst out of sunlight - UV destroys it quickly.