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| **PROBLEM** | **CAUSE** | **SOLUTION** |
| Wrinkling of gel coat during lamination (alugatoring). | Uncured or thin gel coat. Gel coat swells and separates from mould surface ¡n confined area because of insufficient cure and action of styrene in lay-up resin. | Check with wet film gauge for  minimum 380 μm (15 mils) thickness. Apply gel coat evenly.  Allow adequate gel coat cure time. |
| Waviness in in gel coat. | Too long a gel time in lay-up.  Too long a gel time for lay-up resin. | Use more catalyst. Adjust catalyst to weather conditions for 1-hour cure. |
| Streaks in gel coat (particularly in pastel colours). | Draining of gel coat, causing colour separation. | Use heavier gel coat or lay moulds flat. |
| Hollow spaces below gel coat. | <blank> | <blank> |
| Rough moulded surface. | Wax build-up. | Wash off with styrene or buff with mould cleaner. |
| Glass pattern in mould. | Soft mould gel coat. | Use heat resistant resin in future moulds |
| Star crazes in mould. | Rough handling use of mallet in removing part from mould. | 1: Grind down to glass.  2: Apply mould gel coat.  3: Apply wax paper and tape.  4: Refinish. |
| Wrinkling of gel coat immediately after application. | Trapped acetone; water in gel coat: insufficient catalyst in gel coat. | Hold gun farther from mould.  Use higher atomisation.  Use more catalyst.  Drain traps. Check line. Warm moulds. |
| Dimples in gel coat (when using PVA film). | PVA-separating film not dried. | Allow more drying time.  Clean line of moisture. |
| Cracking of gel coat. | Too heavy a coat.  Back-up layer not cured.  Shrinks later and cracks gel coat. | Use 640 μm (25-mil) maximum thickness.  Use fast cure on first layer. |
| Pits in gel coat. | Foreign particles in film. | Spray film in dust free room. |
| Uneven colour in gel. | Air entrapment. Poor hiding power. Insufficient pigment. | Use styrene for good flow. Consult gel coat supplier. Use 10% minimum pigment. |
| Dull surface. | Rough mould. | Refinish mould. |
| Difficulty in removing part from mould. | Mould not broken-in. Rough mould. Undercuts in mould. Insufficient wax. | Use PVA. Repeat mould preparation process. Fill undercuts. Cover all areas. |
| Telegraphing of glass pattern in gel coat. | Gel coat too thin. Undercure. | Use 380-510 μm (15-20 mils).  Wait for full gel coat cure. |
| Patching does match gel coat. | Patch cured too fast. | Use thinned gel coat. Use low catalyst concentration. Do not add filler. |
| Gel coat sticking to mould (brushed or sprayed). | Improper release agent or application. | Apply release and let cure. If wax, allow to dry thoroughly and buff. If trouble persists, use PVA-sprayed film over wax. |
| Hazy or non-glossy surface. | Entire part prematurely removed from mould. Contamination of release prior to application of gel coat. | Permit more complete cure of gel coat and lay up. |
| Voids under gel coat. | Small or large flat blisters caused by separation of gel coat from lay-up. Gel coat should not cure tack-free in air but should remain sticky for better bond to lay-up. | Allow first lay-up application to cure prior to adding second and third (etc.). Inspect closely for blisters after lay-up. Cut out and putty mix at 1 part resin to 3 parts CaCO3 |
| Open bubbles, blisters and pinholes in gel coat surface. | Trapped air, free solvent, dirt or excessively high exotherm in gel coat or lay-up resin. | Avoid mixing air into gel coat when introducing catalyst. Let stand for short period after mixing and before spraying. Keep containers and working area clean. |
| Soft areas. | Uneven cure. | More thorough mixing of catalyst into gel coat. |
| Cratering. | Use of too high surface angle release, preventing gel coat from wetting in small spots, 1.6-6.4 mm (1/16-1/4 inch), so that lay up shows through gel coat. | More careful selection and application of release agent. |