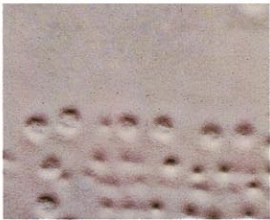


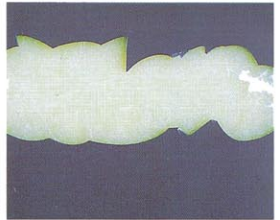
POLYESTER GELCOAT TROUBLE SHOOTING GUIDE



- FISHEYES - Cause:**
- Contamination of Mould Surface
 - Gelcoat Film too thin • Viscosity too low
 - Low atomization pressure
 - Excessive wax on mould
 - Worn tip • Pump pressure too low (airless)
 - Inadequate mixing of gelcoat
 - Type of wax/release agent



- ORANGE PEEL - Cause:**
- Viscosity too high
 - Gun held too close to surface or at improper angle
 - Atomization pressure too low (air support systems)
 - Low fluid pressure (airless systems)



- POOR ADHESION - Cause:**
- Contamination
 - Unevenly applied or wrong type of wax/release agent migrating to gel surface
 - Over-cured gelcoat. Peroxide level too high or too long time before back-up lamination was done
 - Laminating resins containing too much wax



- TRIPLE/-WRINKLING - Cause:**
- Insufficient cure of the gelcoat film prior to application of back-up resin.
 - Insufficient film thickness to resist attack of styrene in gelcoat/back-up resin.
 - Too long gel time.



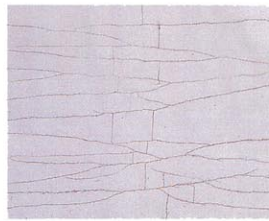
- BLISTERS**
Spot after sun/heat exposure
- Cause:**
- Poorly rolled laminate (air pockets)
 - Peroxide droplets on gelcoat or in the glass fibre
 - Solvent, water or oil present on gelcoat or glass fibre



- BLISTERS - Observed on boats, tanks & spas after water exposure**
- Cause:**
- Type of gelcoat (see data sheets)
 - Undercured gelcoat
 - Gelcoat film too thin
 - Wrong type of laminating resin
 - Wrong type of glass fibre



- PIGMENT/COLOUR**
SEPARATION -Cause:
- Possible water or oil contamination
 - Too thick gelcoat film causing sagging
 - Flooding gelcoat onto the mould surface



- CRACKING - Cause:**
- Stress on the gelcoat surface from bending, impact or excessive force used to demould part
 - Gelcoat film too thick
 - Water or solvent contamination
 - Improper curing times or curing cycle
 - Weak laminate • Defect in mould



- FADING OR BLEACHING**
- Cause:**
- Undercured gelcoat film
 - Water exposure to dark colours
 - Exposure to harsh chemicals
 - Wrong type of gelcoat used.



- PRINT THROUGH - Cause:**
- Insufficient cure of product
 - Pattern transferred from mould surface
 - Glass texture too thin
 - Gelcoat film too thin
 - Wrong laminating/demoulding cycle



- POROSITY - Cause:**
- Gun too close to mould • Gelcoat viscosity too high
 - Wrong type or contaminated peroxide
 - Peroxide level too high
 - Gelcoat film too thick • Gel time too fast
 - Water or solvent contamination
 - Too high spraying capacity (too big a tip) compared to shape of mould



- PRE-RELEASE - Cause:**
- Peroxide level too high • Gelcoat film too thick
 - Uneven film-thickness around radius causing uneven cure and shrinkage
 - Uneven cure due to styrene vapour in deep areas of the mould
 - Gelcoat film allowed to stand too long before laminating
 - Wrong type/application of mould release agent
 - Contamination on mould surface
 - Too resin rich laminate



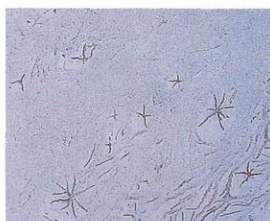
- SAGGING**
- Cause:**
- Too high gelcoat film thickness
 - Gelcoat viscosity too low
 - Wrong spray tip
 - Too long gel time



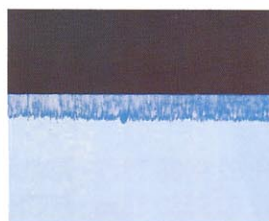
- YELLOWING-EXPOSED TO SUNLIGHT**
- Cause:**
- Too high gelcoating film in deep areas
 - undercured gelcoat • Uneven gelcoat film
 - Film cure inhibited by styrene vapours
 - Type of gelcoat (see data sheets)
 - Polystyrene/wax build-up in the mould which sticks to the product when demoulded



- DULL SURFACES**
- Cause:**
- Dull spots in mould
 - Insufficient preparation of mould
 - Undercured gelcoat film
 - Pre-released film (will be dull released areas)
 - Too early demoulding



- DUST IN MOULD**
- Cause:**
- Dust and dirt on mould prior to gelcoat application, in some case due to static electricity



- BLEEDING**
- Cause:**
- Poor film cure of (striping) gel coat
 - The 2nd coating (dissolving) back of strip coating



- POOR COVERAGE**
- Cause:**
- Can see through gelcoat film due to poor covering because of unevenly applied or too thin gelcoat film