

## Numerous errors in gelcoat surfaces – we have the answers

The quality of the finished laminate mostly is judged by the appearance of the surface. For this purpose a correct application as well as correct hardening are absolutely necessary. Also when you cared very much for the application sometimes problems can arise. Therefore, it's very important that the reason can be identified most quickly.

Error description gelcoat	Possible reasons
craters	<ul style="list-style-type: none"> <li>• separating agent application too thick</li> <li>• water drops</li> <li>• separating agent contains silicone</li> <li>• oil drops</li> </ul>
orange peel or crazing effect	<ul style="list-style-type: none"> <li>• too low layer thickness</li> <li>• introduced acetone</li> <li>• irregular hardening</li> <li>• too less hardener</li> <li>• too less acceleration</li> <li>• gel time of the following resin</li> </ul>
fiber marks	<ul style="list-style-type: none"> <li>• layer applied too thin</li> <li>• too less hardening</li> </ul>
bubbling	<ul style="list-style-type: none"> <li>• included air</li> <li>• pollution by solvents</li> <li>• catalyst hasn't reacted.</li> </ul>
cracks	<ul style="list-style-type: none"> <li>• top layer too thick</li> <li>• too less separating agent</li> <li>• first laminate layer too highly resinous</li> <li>• back facing force effect</li> </ul>

Error description gelcoat	Possible reasons
Pore formation	<ul style="list-style-type: none"> <li>• gelcoat too viscous, saves air</li> <li>• gelcoat and/or mold too cold</li> <li>• insufficient mixing</li> <li>• air inclusion by too fast gelling</li> </ul>
„fish eyes“	<ul style="list-style-type: none"> <li>• gelcoat application too thin</li> <li>• viscosity too low</li> <li>• separating wax or other separating agents</li> <li>• pollutions (water, oil or silicone) hardened resin particles</li> </ul>
irregularities in thickness	<ul style="list-style-type: none"> <li>• too much gelcoat injected</li> <li>• dry laminate</li> <li>• high binder concentration of the glass mat</li> </ul>
soft gelcoat	<ul style="list-style-type: none"> <li>• not completely hardened</li> <li>• too much/not suitable fillers or pigments</li> <li>• temperature too low / too high</li> </ul>
top layer doesn't harden	<ul style="list-style-type: none"> <li>• too low mold resp. surroundings temperature</li> <li>• too less hardener</li> </ul>
separating of the top layer from the laminate	<ul style="list-style-type: none"> <li>• laminate applied too late</li> </ul>
expired gelcoat	<ul style="list-style-type: none"> <li>• too low thixotropic</li> </ul>