



Customer Information Bulletin

CIB

CIB #: 0111
 Date: 22 June 2011
 Status: non-confidential

Subject: Accura[®] CastPro[™] Tips & Information

1. **Software version:** It is best to use the most current software version, to ensure compatibility with newly-created build styles.
2. **Buildstation[™] software entries:** Each material on a SLA system uses a specific material entry in the Buildstation and 3D Print software. The entries contain the values for Dp and Ec used for each material. See the Buildstation and 3D Print Users' Guide for details. The values for Dp and Ec are shown below.

Recommended Starting Parameters

	Viper [™] SLA System	SLA [™] 5000 System	SLA [™] 7000 System	iPro [™] 8/9000 SLA System
Dp (mils)	6.2	6.2	6.2	6.2
Ec (mJ/cm ²)	8.7	8.7	8.7	8.7
Baseline Scale Factors (x, y, z)	1.0006/1.0006/1.0000	1.0023/1.0023/1.0000	1.0012/1.0012/1.0000	1.0017/1.0017/1.0000
Baseline Linewidth Compensation Value	0.1250 mm (0.005")	0.1000mm (0.004")	0.1000mm (0.004")	0.1000 mm (0.004")
Recommended vat temp.	28 °C	28 °C	28 °C	28 °C

3. **QuickCast[™] part building:** To achieve a good balance of part quality, strength, and drainage, the QuickCast build style has been set up to use 2 additional borders. If you find that finishers tend to break through the skin when removing supports, you may wish to increase to 3 additional borders. This may negatively affect drainage, but may increase part yield, depending on part geometry and skill of the part finishers.
4. **QuickCast part recoating:** Default parameters work well for the majority of parts. However, large flat areas and thin walls may require some blade gap tuning. Large flats may exhibit mounding on the surface. Reduce blade gap as much as possible to eliminate the mounding. Default BG% is 200%, initially lower to 150% for large flats. If thin wall parts have dry surfaces (no liquid resin on top of the previously cured layer), increase the blade gap percent by 100% (200% default change to 300%) to achieve good recoat thickness. Similar improvements may be achieved using increased z-wait times.



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5. **QuickCast part cleaning:** Parts should be cleaned ONLY with IPA. When cleaning QuickCast parts, use paper towels with IPA to wipe off the remaining wet resin prior to UV post cure. Use of other solvents is not recommended, as they may cause surface gumminess or tackiness.
6. **Support parameters and editing:** CastPro supports have been described as “hard and crisp.” The default parameters are optimum for successful build. Modifying support parameters may cause builds to crash. Therefore, proceed with caution if you change support parameters. Depending on part geometry, if supports get crowded, you may want to carefully edit the supports. This is because due the high green strength of the material, supports may get difficult to remove without damaging the part surface, especially if they are crowded.
7. **Support removal:** It is preferable that supports are removed prior to UV post cure, to avoid damaging the part surface.
8. **Resin Stabilization:** Like the other resin types, CastPro needs to be stabilized. Please follow 3D Systems Resin Stabilization guidelines to maintain the best performance and prolong resin life.
9. **Building solid parts**
 - 9.1. **Occasional solid builds:** CastPro has recommended baseline styles for solid part building. These are not fully tested styles, as this resin is intended primarily for QuickCast part building.
 - 9.2. **Hatch overcure for solid parts:** Hatch overcure has been optimized for part clarity and build speed. It is highly recommended that the hatch overcure values not be reduced from default. However, if necessary, hatch overcure may be increased to increase part hardness, and can be decreased to improve build speed. These changes will come at the cost of decreased part clarity.
 - 9.3. **Bubbles:** Due to the nature of this resin, micro bubbles may be seen in some thin wall parts. Bubbles can be reduced by using a different recoating style. For each supported system, a special recoat style to reduce bubble formation is provided. This uses a 3-sweep recoat method, and does come at the expense of build speed. The style will have the format: Part_Accura~CastPro_EXCT_0040in_BUBL.rcs
 - 9.4. **Solid part cleaning:** Parts should be cleaned ONLY with IPA. Use of other solvents is not recommended, as they may cause increased surface tack and/or leave residue. Follow this procedure:
 - Carefully remove parts and supports from the platform.
 - Place parts in the IPA bath for 5 minutes
 - If needed, brush downfacing surfaces/features with a soft toothbrush to remove residual resin.
 - Rinse again with fresh clean IPA
 - Air dry to complete cleaning.

Note: care should be taken to ensure that the parts are not left in IPA for more than 15 minutes total time.

May be distributed

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