B9Captivate
Creativity Unleashed

Glossary of

Terms

PROFESSIONAL LEVEL

B9Creations

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Material

Color

Material color to be used when displaying a printer preview in the user interface.

Description

Description is not currently visible on the printer. It is recommended that Description contains a concise, meaningful explanation about the material and its usage.

The usage of **Description** may be extended in the future.

Example: *A high-strength, fast-curing resin for durable models and vulcanized mold-making. Flexible printing parameters suit a wide variety of applications. Slice thick for quick results or thin for fine details.*

Name

Name is currently visible on the printer. It is recommended that **Name** is the same as the file name.

Example: **B9R 2 – Black**

Version

Developer-controlled version that can be set to a desired value to differentiate between different versions of this material settings file.

Range: 0.1 or greater

Quality

Quality settings control the desired thickness and the exposure values associated with them. Exposure has a drastic effect on some fields, such as bleed, and so they are included with this section.

Exposure (millijoules)

The base exposure to be used for each layer. Measured in millijoules per square centimeters.

Range 0.1 to 100.0 mJ

Foundation Exposure (millijoules)

Sets the exposure to use on the first layer. Higher values create a stronger attachment to the build table. Measured in millijoules per square centimeters.

Range: 0.1-300.0 mJ

Default: 6 x Thickness

Over Exposure Factor

Exposure for each pixel is multiplied by this factor depending on the number of pixels surrounding it. A pixel that is completely surrounded by other lit pixels will receive the base exposure, while a pixel with no lit pixels around it will receive the base exposure multiplied by the exposure factor. The radius to check for surrounding pixels is determined by the **XY Bleed** value.

Range 0.0 to 5.0

Thickness (micrometers, microns)

Layer thickness to be used. Measured in micrometers (microns).

Range: 20 µm – 100 µm

Time Multiplier

The internally estimated print time is multiplied by this number before displaying the result to the user.

Range: 0.1 to 5.0

Example: *If the print is estimated to take 25 minutes and the **Time Multiplier** is set to 1.5, the user will see an estimated print time of 36 minutes.*

XY Bleed (millimeters)

Sets the radius to check for surrounding pixels for the **Over Exposure Factor**. Measured in millimeters.

Range 0.0 to 3.0 mm

Z Bleed Depth (millimeters)

Light always penetrates further than the current layer being printed. This results in excess resin on previously cured layers being cured. Quantify the amount of excess resin cured in the Z direction. This is the amount you enter to have the printer compensate for this effect. Measured in millimeters.

Range: 0.0 to 3.0 mm

Cycle

Cycle settings control the movement of the mechanical arm while printing. These settings substantially affect the speed and success of the print.

The minimum and maximum values are utilized by the printer to optimize results, actual times will vary but fall within this range.

Foundation – Settings Affect Initial Layers Only

Initial Settle Time (milliseconds)

Settle Min value to be used for the initial layers. Amount of time to wait for resin to stop moving before exposing the next layer. Measured in milliseconds.

Range: 0 to 60,000 ms

Release Max (milliseconds)

Maximum amount of time to wait for the build table to separate the newly finished layer from the vat window. Measured in milliseconds.

Range: 0 to 60,000 ms

Release Min (milliseconds)

Minimum amount of time to wait for the build table to separate the newly finished layer from the vat window. Measured in milliseconds.

Range: 0 to 60,000 ms

Release Raise Max (millimeters)

Maximum distance to lift the build table to separate the newly finished layer from the vat window. Measured in millimeters.

Range: 0.0 to 10.0 mm

Release Raise Min (millimeters)

Minimum distance to lift the build table to separate the newly finished layer from the vat window. Measured in millimeters.

Range: 0.0 to 10.0 mm

Settle Max (milliseconds)

Maximum amount of time to wait for resin to stop moving after the build table moves down for the next layer. Measured in milliseconds.

Range: 0 to 60,000 ms

Settle Min (milliseconds)

Minimum amount of time to wait for resin to stop moving after the build table moves down for the next layer. Measured in milliseconds.

Range: 0 to 60,000 ms