LESSON GUIDE

Starting and monitoring a material test

Prepare, preview and export a compact material-test recipe without running a machine.

Software practice

Stay **disconnected**. Native learner copies open with **No Machine**. For Material Test Preview, select your own configured profile without connecting. Example speeds, powers and intervals are for software comparison, not tested material recipes.

Power columns	Speed rows	Practice grid
15 / 25 / 35%	1500 / 2100	Six Fill samples

Practice recipe values. The corrected native preview shows six Fill samples with labels outside the grid.

1. Open **material-test-start.lzrproj** and stay disconnected. Material Test Preview needs your own configured machine profile selected; it does not need a connection.

2. In **Laser Tools > Material Test**, set X to Power: three columns, 10 to 30%. Set Y to Speed: two rows, 1200 to 1800 mm/min.

3. Choose Fill, a **1 mm interval**, 8 x 8 mm cells and 3 mm spacing. Keep Text labels and Border on; inspect their own speed/power settings.

4. Enable **Use absolute center** and set X 100 / Y 100. Preview the cells, labels, travel and overscan. This centers the complete generated job, including labels.

5. To save separately, choose **Custom test recipe**, enter a descriptive name, then **Save Recipe** and **Export**. A name change alone does not create a separate selected recipe.

6. Keep the JSON export with the project. Offline work ends here. The project is context; the generator uses the recipe's own settings.

INDEPENDENT PRACTICE

Independent practice

Import **material-test-practice-recipe.json**, select **Material test practice start** and click Load. Set the practice targets below, then save/export a new recipe and compare its settings with **material-test-practice-answer.json**.

☐ X Power: 3 columns, 15 to 35%. Y Speed: 2 rows, 1500 to 2100 mm/min.

☐ Fill; 6 x 6 mm cells; 4 mm spacing; 1 mm interval; labels and border on; absolute center X 120 / Y 100.

☐ Choose Custom test recipe before Save Recipe. Compare settings, not recipe names or generated IDs.

Which power values belong to the three columns?

Why does opening the project alone not load the test settings?

What does Show Overscan change in Preview?

Keep the comparison meaningful

Preserve the supplied starter. Save your own result separately before opening the answer.

EXPLAINED ANSWERS AND FILES

Explained answers and files

Practice grid
Columns are 15%, 25% and 35%; rows are 1500 and 2100 mm/min. Six Fill cells are expected.

Recipe versus project
The JSON contains generator settings. The native project supplies context; it is not the generated grid.

Display and results
Show Overscan controls the display of raster acceleration motion. Fill paths remain. Colors are planned toolpaths, not observed burn quality.

material-test-finished.lzrproj
Saved demonstration setup, not a completed physical result.

material-test-practice-context.lzrproj
Project context for the recipe; not the generated test grid.

material-test-practice.lzrproj
Independent starter for this lesson.

material-test-start.lzrproj
Follow the demonstrated setup.

material-test-demo-recipe.json
Editable recipe with its own generator settings.

material-test-practice-answer.json
Editable recipe with its own generator settings.

material-test-practice-recipe.json
Editable recipe with its own generator settings.

practice-preview.png
Existing corrected native Preview screenshot for comparison.

For a later physical test, choose ranges appropriate to your machine/material. Check stock, focus, ventilation, eye protection and clearance. Set Finish position to Don't move, frame and wait for Idle before Start. Stay with the laser.

Matches the corrected 0.2.38 material-test demonstration. Preview colors show planned paths, not burn quality.