[**FilaFind.com**](http://filafind.com) **- Material Supplier Database Submission Process**

Thank you for your interest in helping produce the first global consumer 3D printing filament database application where consumers can discover and purchase filaments around the world. My goal is to make this tool useful to consumers and producers alike, pushing the industry forward and bringing awareness to the immediate tangible potential of 3D printing today.

The database is stored in a human-readable format, which is then parsed using software to produce a datastructure more suitable to the application's needs for filtering and sorting. It is currently a simple database, but as it grows there is potential to include more material properties that consumers could use to make better educated material choices for their next project.

Below I will outline the material property specification, as well as some detailed sections on available parameters for three special ranges (**tags**, **bed\_material,** and **color**). I have also included **example\_materials.zip** which contains a **.xls** and a **.csv** version of the data input I need to input into the system for it to parse properly and display on the web application. Finally, I share with you options currently available for submitting the data for review/verification/and inclusion in the database.

If you have any questions please reach out to me at [contact@markedmethod](mailto:contact@markedmethod). Thank you for your interest in helping build this platform. I hope it at least gets the word out for all the hard work suppliers around the world are doing to bring cutting edge materials to the consumer level.

**Material Property Specification:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Range** | **Description** |
| version | integer | 1 - 10 | revision of material |
| name | string | 40 chars | unique name of material |
| technology | string | FDM, etc. | type of technology [FDM, DLP, SLA, etc.] |
| composition | string | ABS, etc. | abbreviated polymer components |
| cost | float | 1.00 - 200.00 | price expressed in USD $ / kg net material |
| manufacturer | string | e.g. "Dremel" | supplier brand name |
| website | string | e.g. "http://... | root url for your filament store |
| color | string | see details | see detail in **section AA** |
| opacity | integer | see details | 1 = opaque; 2 = translucent; 3 = transparent |
| tags | string | see details | see detail in **section BB** |
| filament\_diameter | float | 1.75, 2.85, etc. | nominal mean filament diameter |
| filament\_extrusion\_to\_flow\_multiplier | float | 0.50 - 2.00 | multiplier to apply to filament\_diameter to ensure a 1:1 filament volume in to volume out |
| temp\_extrude\_default | float | 100 - 400 | default most reliable extrusion temp in degC |
| temp\_min\_extrude | float | 100 - 400 | lowest extrusion temp in degC for normal print speeds |
| temp\_max\_extrude | float | 100 - 400 | highest extrusion temp in degC for normal print speeds |
| temp\_bed | float | 25 - 140 | ideal heated bed temp in degC to promote maximum surface adhesion strength |
| min\_nozzle\_diameter | float | 0.25 - 1.00 | minimum nozzle diameter in mm allowable for driving material through without clogs |
| extruder\_fan\_speed | integer | 0 - 255 | pwm value for driving extruder cooling fan |
| bed\_material | string | see details | see detail in **section CC** |
| buy\_now | string | e.g. "http://... | url of specific material purchase page |

**Section AA - Color Specification**

Color should be specified in the form of an HTML color code expressed in lower-case hexadecimal characters. e.g. "red" becomes "ff0000" I recommend using a color-picker utility [like this for chrome](mailto:https://chrome.google.com/webstore/detail/colorpick-eyedropper/ohcpnigalekghcmgcdcenkpelffpdolg?hl=en) to get a color from your images that most represents your product's appearance. I have plans to include transparency and texture in the future for the button preview, but not yet.

**Section BB - Tag Specification**

Tags are specifications that highlight why a particular material is special or unique. I allow up to 3 tags per material, separated by commas. Since I have to reign in the variability in the market I have currently restricted the acceptable tags to below options. If you believe you need a different tag please notify me and see if it is meaningful to add at this point in time. Currently available tags are:

|  |  |  |  |
| --- | --- | --- | --- |
| bulk | heat-resistant | flexible | food-safe |
| composite | metal | strong | organic |
| wood | dissolvable in D-limonene | stiff | odor-neutral |
| ceramic | dissolvable in water | impact-strength | glow-in-the-dark |
| carbon-fiber | ductile | resilient | magnetic |
| hydrophillic | tough | stretchy | transparent |
| translucent | sparkly | neon | black-light |
| photochromatic | thermosensitive | low-friction |  |

**Section CC - Bed Material Specification**

One of the most significant problems with consumer 3D printing is the difficulty in getting materials to initially stick, and then continue to stick properly to a build surface. This specification is like tags in that I allow up to 3 bed materials to be listed, separated by commas. If you believe you need a different bed material please notify me and see if it is meaningful to add at this point in time.

|  |  |  |  |
| --- | --- | --- | --- |
| blue tape | glass | glue stick | kapton tape |
| abs slurry | acrylic | hair spray | buildTak |

**Section DD - Submitting Data for Specification**

Please note, it may take some time before your materials get added. The benefit of this is it allows you to potentially catch some errors before they are added to the database. If you submit an error and would like it updated please include the material spec in question in a reply email to me. Don't forget to bump the version up if you make such changes so keeping track of modifications is possible. This will be important if you release new formulations or other changes that affect the end product the consumer will be working with.

**Please send data in either .xls, .xlsx, or .csv format to** [**contact@markedmethod.com**](contact@markedmethod.com)