

# Sheet Material Selection Reference Guide

Xometry's unprecedented capacity to source standard and custom materials empowers you with the ability to get creative with material selections. **But where to begin?** With so many processes to choose from, selecting the right material can be one of the most challenging parts of sheet metal cutting and forming.

Luckily, material selection can be simplified to three excellent and common choices. It is often the case that one of these three materials satisfies the unique needs of your project.

## Material Characteristics

Ranking Key: 4 = Best, 1 = Worst	Cost	Appearance	Specific Strength
Aluminium 6061 / 3.3211	2	2	4
Stainless Steel 304 / 1.4301	1	4	2
Steel 1.0038 / S235JR	3	1	3

### Ranking determinations:

**Cost:** Based on typical costs for a project; though this can vary depending on the project's complexity and quantity.

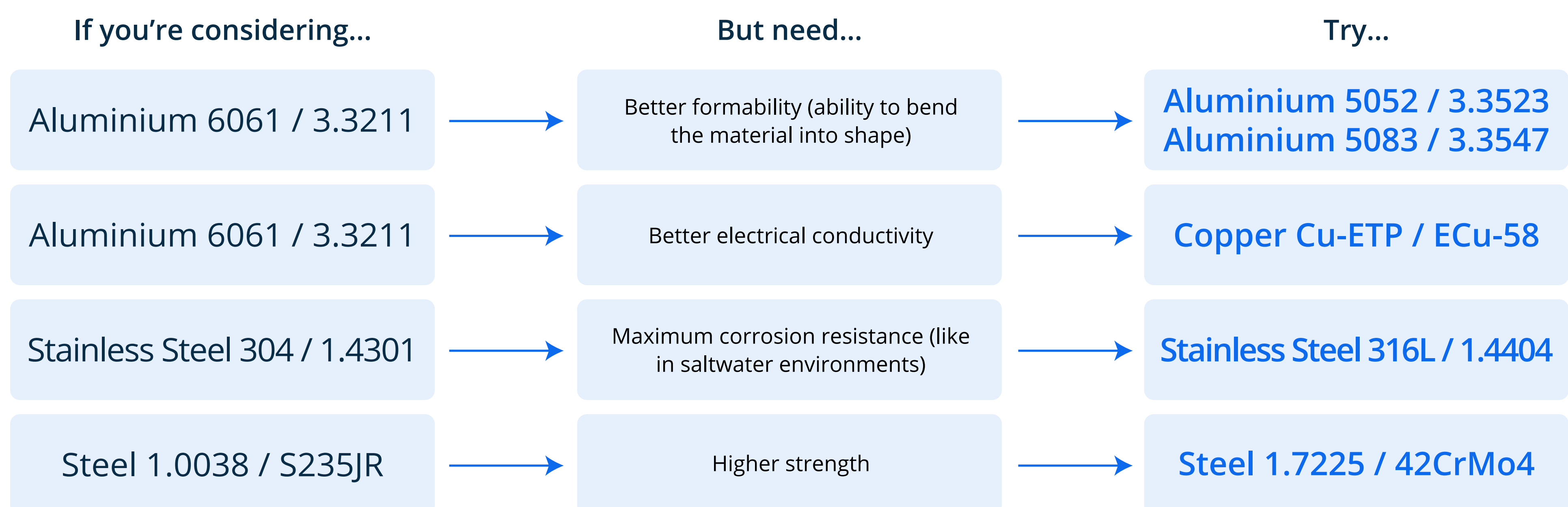
**Appearance:** As determined by Xometry's sheet metal experts, though this ranking is admittedly subjective; when it matters, it was agreed that Stainless Steel offered the best finishing results due to its durability, though none of these materials will look bad.

**Specific Strength:** Determined by tensile strength divided by the density.

### Notes about this chart:

Steel 1.0038 / S235JR (or any other standard Carbon steel) doesn't win across any of the three options, but it's still useful for its hardness (good for sliding or wearing parts) and density. It is magnetic and can also be welded more easily than the other materials.

## Additional Selection Considerations



**Xometry offers multitudes of materials that do not appear on these charts. If you're considering other materials from our standard list or custom materials, select this option in the Instant Quoting Engine or contact your sales manager.**

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