

## The Pros and Cons of Countertop Materials

Contrary to what many manufacturers would have us believe, there is no perfect countertop material. Every product has its pros and cons, and it is really up to the consumer to decide how they will use their surface and the look they are going for.

Material	Pros	Cons	Sustainability Considerations
<b>Stainless Steel and Aluminum</b>	<ul style="list-style-type: none"> <li>- Durable and hygienic</li> <li>- Resists heat</li> <li>- Resists staining</li> </ul>	<ul style="list-style-type: none"> <li>- Easily scratches</li> <li>- Shows fingerprints</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Recycled</b> aluminum and steel products <b>avoid mining and manufacturing issues, prevent waste, and have much lower embodied energy</b></li> <li>- <i>If made of virgin</i> stainless steel, it is an alloy of steel, includes chromium (highly polluting and toxic) and nickel designed to resist rust. Metal mining negatively impacts land and water quality</li> </ul>
<b>Terrazzo/ Recycled glass</b> (IceStone, EnviroGLAS, EcoTerr, others)	<ul style="list-style-type: none"> <li>- Wide color choices for glass and base = many design possibilities</li> <li>- As durable as granite</li> <li>- Less porous than marble</li> <li>- Can withstand heat</li> <li>- Easy to maintain</li> </ul>	<ul style="list-style-type: none"> <li>- Priced like “higher to high-end” granite</li> <li>- Limited number of fabricators</li> <li>- IceStone requires annual sealing like granite</li> </ul>	<ul style="list-style-type: none"> <li>- Made with 50-100% <b>recycled glass</b></li> <li>- <b>Relatively local domestic production</b>, with reduced shipping and embodied energy costs</li> <li>- <b>IceStone</b> has received <b>Silver Cradle-to-Cradle MBDC certification</b></li> </ul>
<b>Paper Composite</b> (Paperstone)	<ul style="list-style-type: none"> <li>- Warm, neutral look that fits well with most decorating styles.</li> <li>- Easy to clean and durable</li> <li>- It is not hard enough to dull knives, yet it is dense enough to resist slice marks that can harbor bacteria</li> <li>- Special features (a drain board or metal rods near the stove for a built-in trivet) can be incorporated into the countertops</li> <li>- Very high environmental benefits</li> </ul>	<ul style="list-style-type: none"> <li>- Low-to-moderate sealing &amp; maintenance requirements</li> <li>- Not completely stain-proof</li> </ul>	<ul style="list-style-type: none"> <li>- Made of <b>recycled</b> paper, up to 100% post-consumer content</li> <li>- May be <b>FSC-certified</b></li> <li>- <b>No traceable formaldehyde</b></li> <li>- Very <b>little chemical offgassing</b></li> </ul>
<b>Recycled Plastic Solid Surface Countertops</b>	<ul style="list-style-type: none"> <li>- Can be obtained in a wide variety of colors, patterns and textures</li> <li>- Highly durable</li> <li>- Environmental benefits</li> <li>- Usually quite inexpensive</li> </ul>	<ul style="list-style-type: none"> <li>- May feel “plasticky”</li> </ul>	<ul style="list-style-type: none"> <li>- <b>High recycled content</b> of plastic materials, such as PET (#1, milk and detergent jugs)</li> <li>- <b>No glues or VOCs</b> are used</li> <li>- <b>Little chemical offgassing</b></li> </ul>
<b>Granite and Natural Stones</b> (limestone, slate, marble, soapstone)	<ul style="list-style-type: none"> <li>- Rich look</li> <li>- Hard surface that is very resistant to heat</li> <li>- Sinks can be undermounted</li> <li>- Surface can handle hot pans</li> <li>- Can resist most stains if properly sealed</li> <li>- Slate is nonporous; scratches can be rubbed with steel wool</li> </ul>	<ul style="list-style-type: none"> <li>- Porous</li> <li>- Must be sealed periodically</li> <li>- Granite can be scratched and leaves watermarks if not cleaned up immediately</li> <li>- Marble stains easily—not recommended for kitchen countertops</li> <li>- Seams are very evident, especially if the surface has a clear pattern</li> </ul>	<ul style="list-style-type: none"> <li>- Marble and granite are <b>mined deep out of the earth</b></li> <li>- Some stones, such as soapstone, are quarried closer to the earth's surface</li> <li>- Stones are quarried from around the planet, including China, Brazil, Norway, Africa, and North America. Depending on the location, <b>may have significant detrimental local impacts</b>, including water and air pollution, waste, ecosystem and biodiversity destruction, and threaten worker health</li> <li>- <b>Poor transparency of information</b> makes it hard to determine the sources and affects of specific products</li> <li>- <b>Significant embodied energy costs</b>, especially when coming from far distances</li> </ul>
<b>Engineered Stones</b> (Quartz combinations that resemble stone)	<ul style="list-style-type: none"> <li>- Scratch-resistant</li> <li>- Nonporous</li> <li>- Hard to stain</li> <li>- Doesn't require sealing</li> <li>- Can be more scratch and stain resistant than solid surface</li> </ul>	<ul style="list-style-type: none"> <li>- Not as hard as stone</li> <li>- Expensive</li> <li>- Some consumers feel looks are too uniform</li> <li>- Will contain seams</li> <li>- Doesn't always come with a heat-resistant guarantee</li> <li>- Can't be made with integral sink</li> </ul>	<ul style="list-style-type: none"> <li>- Depending on the location, mining of stones <b>may have significant detrimental local impacts</b>, including water and air pollution, waste, ecosystem and biodiversity destruction, and worker health</li> <li>- Transport <b>may carry high embodied energy costs</b></li> <li>- Resins in the block may offgas VOCs and other chemicals</li> <li>- <b>Poor transparency</b> of information</li> </ul>

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<b>Laminates</b>	<ul style="list-style-type: none"> <li>- Low cost</li> <li>- Easy maintenance</li> <li>- Huge range of colors and patterns, including some that imitate the look of natural and engineered stone surfaces</li> </ul>	<ul style="list-style-type: none"> <li>- Less durable</li> <li>- Can't use with undermount sinks</li> <li>- Will scratch</li> <li>- Hot pans and knives could damage the surface, which is very thin and <b>not easily repairable</b></li> <li>- Long-term moisture problems can cause the laminate layers to separate</li> </ul>	<ul style="list-style-type: none"> <li>- Plastic laminate is resin-impregnated paper bonded to a particle board core</li> <li>- High chemical <b>offgassing</b></li> <li>- Particle-board woods usually <b>not sustainably harvested</b></li> </ul>
<b>Solid Surfaces</b> (Corian, etc.)	<ul style="list-style-type: none"> <li>- Nonporous</li> <li>- Hard to stain</li> <li>- Can be made in nearly every size and shape seamlessly</li> <li>- Maintenance to repair scratches or burns can generally be repaired</li> <li>- Seamless, so it won't trap dirt</li> <li>- Fairly stain resistant</li> <li>- Can make countertop and sink one piece</li> </ul>	<ul style="list-style-type: none"> <li>- Poor heat resistance</li> <li>- Some people consider the look artificial</li> <li>- Some solid surfacing can be pricey</li> <li>- The finish may need to be rebuffed as it dulls down over time</li> </ul>	<ul style="list-style-type: none"> <li>- Can be made with <b>toxic and unhealthy binders</b></li> <li>- <b>Poor transparency</b> of information</li> </ul>
<b>Wood/Butcher Block</b>	<ul style="list-style-type: none"> <li>- Natural look for the kitchen</li> <li>- Can be easily repaired</li> <li>- Good for cutting food</li> <li>- Can be custom designed with patterns and designs with different woods for a look not available with any other materials.</li> </ul>	<ul style="list-style-type: none"> <li>- Can have problems with expansion and contraction issues around water and if not properly assembled</li> <li>- It is also just as vulnerable as most materials in regard to heat and scratches.</li> <li>- Needs regular cleaning and, with some woods, sealing to remove bacteria</li> <li>- Not typically recommended for entire countertop; try installing in 1 section, island, etc.</li> </ul>	<ul style="list-style-type: none"> <li>- Natural and renewable materials</li> <li>- Environmental impacts depend on the type of wood and where it is sourced</li> <li>- Usually natural and low-emitting binders</li> </ul>
<b>Poured-in-Place Concrete</b>	<ul style="list-style-type: none"> <li>- Can be formed into many shapes</li> <li>- Has a unique look and feel</li> <li>- Can be polished for a high shine or matted down for a dull finish</li> <li>- Hard surface that is heat resistant</li> </ul>	<ul style="list-style-type: none"> <li>- Can be pricey</li> <li>- As porous as marble and should be sealed</li> <li>- Easily stained</li> <li>- Requires high maintenance</li> <li>- With time, may chip and crack</li> <li>- Has more of a cold, industrial look</li> </ul>	<ul style="list-style-type: none"> <li>- Concrete takes a high amount of energy to produce, producing high <b>embodied energy</b> cost</li> </ul>
<b>Ceramic or Porcelain Tile</b>	<ul style="list-style-type: none"> <li>- Comes in a variety of colors and styles, generally at a lower cost than most counter materials</li> <li>- More impervious to heat than solid surfaces</li> </ul>	<ul style="list-style-type: none"> <li>- Grout areas can be hard to get completely clean</li> <li>- Requires regular maintenance to keep bacteria out</li> <li>- Grout areas can stain</li> <li>- Can chip easily</li> <li>- If not properly installed, tile may have a very uneven surface</li> <li>- Dull or scratched tiles can stand out amongst high gloss tiles</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Poor transparency of information</b> to determine source and <b>environmental impacts</b> of mining raw materials and manufacture of products</li> </ul>

Sources: *Qualified Remodeler*. <http://www.qualifiedremodeler.com/FEATURES-REMODELING-BUSINESS/PRODUCT-TRENDS/2005/05/Counter-Revolution.asp>.  
*Renovator's Place*. [http://www.renovatorsplace.com/dsp\\_articles.cfm?l\\_article\\_id=248&l\\_cat\\_id=18&catid=18](http://www.renovatorsplace.com/dsp_articles.cfm?l_article_id=248&l_cat_id=18&catid=18). Green Home Guide.