



a

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Customer Need

Product Attribute

Engineering Specification

Is not too heavy to bring onto airplane as a carry-on bag	Weight	Less than 10 pounds
Fits onto domestic overhead baggage compartment	Size	Three sides are equal to or less than 22" x 14" x 9"
Modules will remain connected while you are traveling	Module Detachment Force	> 5 Newtons to separate modules
Compartments are easily accessible	Time to attach/detach modules	< 3 seconds to attach/detach modules
Easy to put together/ take apart	Ease of Assembly	< 3 minutes to fully assemble or disassemble suitcase
Bag remains intact when dropped	Durability	> 10 drops from 3 meters
Easy to pull along the ground	Force to pull forward	< 2 Newtons

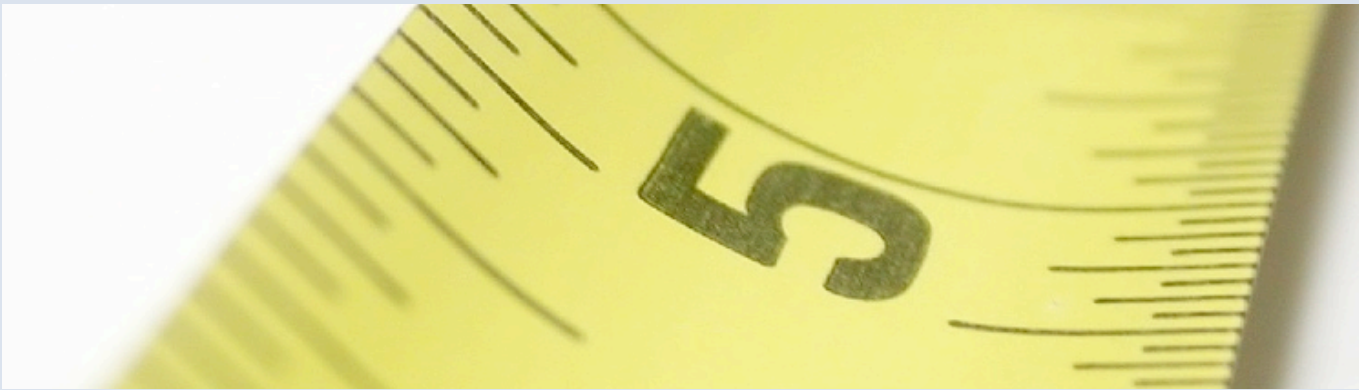
Intended Market | Luggage/ Travel Accessories

Target audience | Frequent Flyers

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Weight



Size

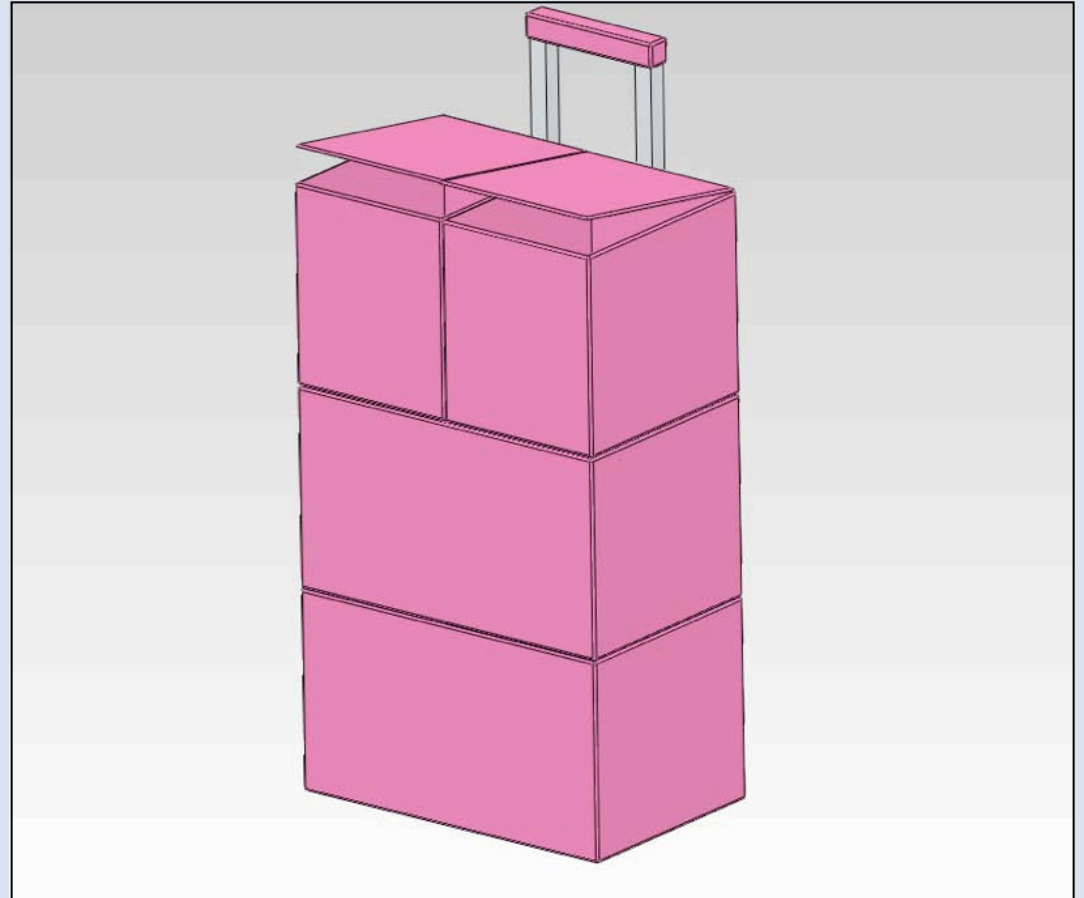


Attachments

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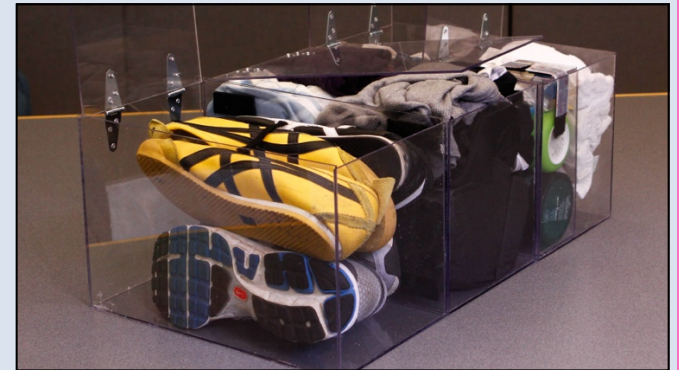
ABS
Polycarbonate
Ballistic Nylon
Aluminum
Titanium
Carbon Fiber

Weight



Volume: 235.42 in³
Surface Area: 3937.5 in²

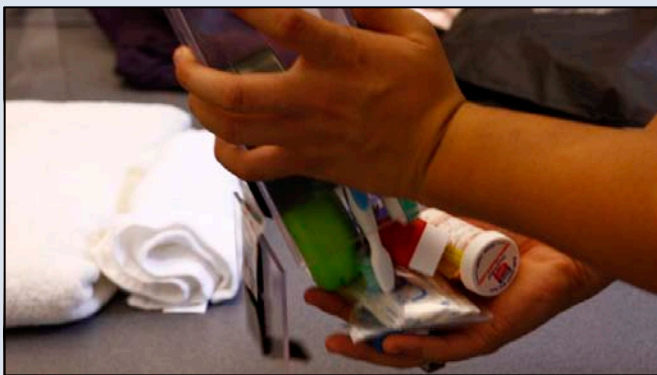
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Size

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Effective Volume **modul**air | modular suitcase



Attachments

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Attachments

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Modular
Concept



Weight



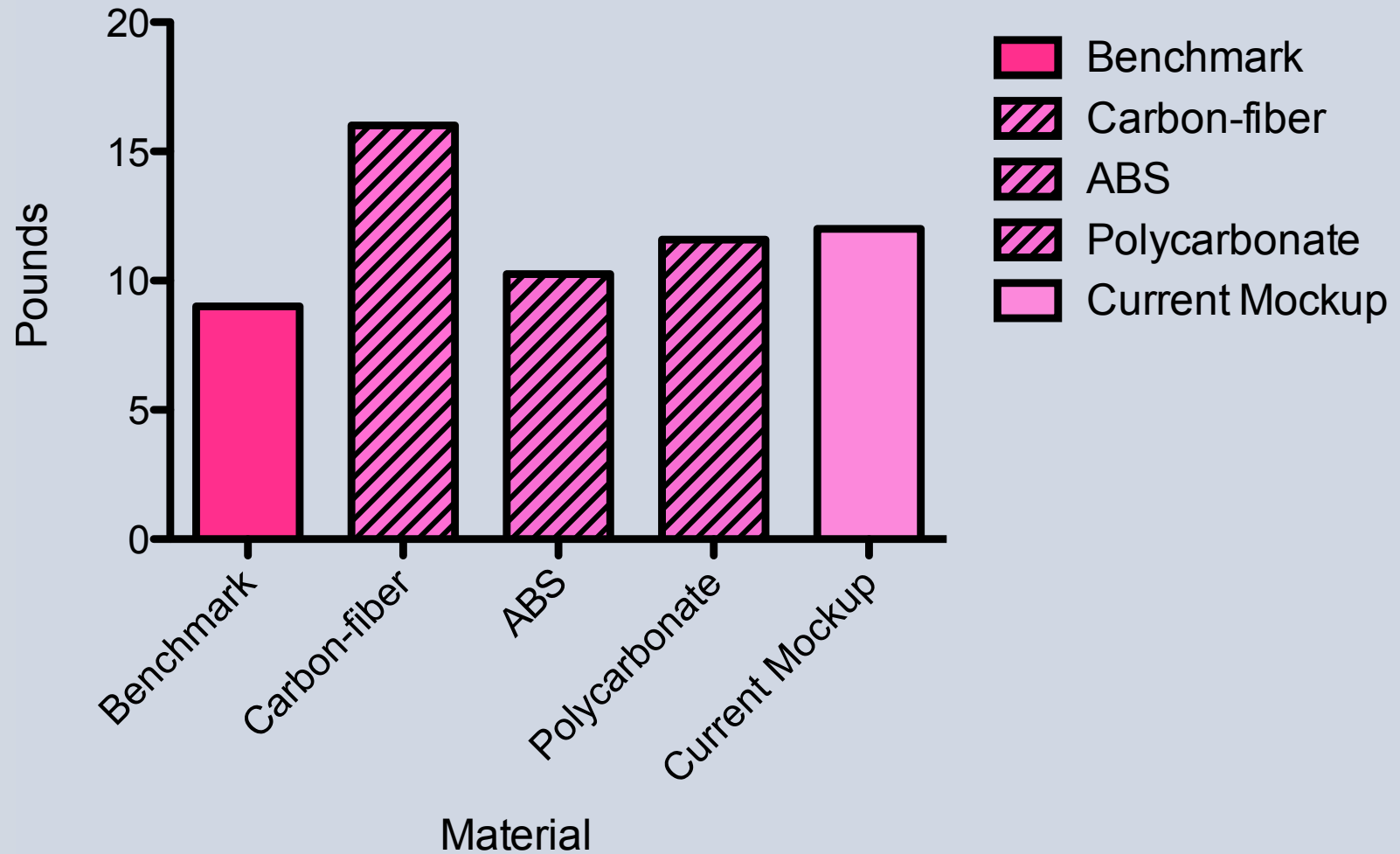
Volume



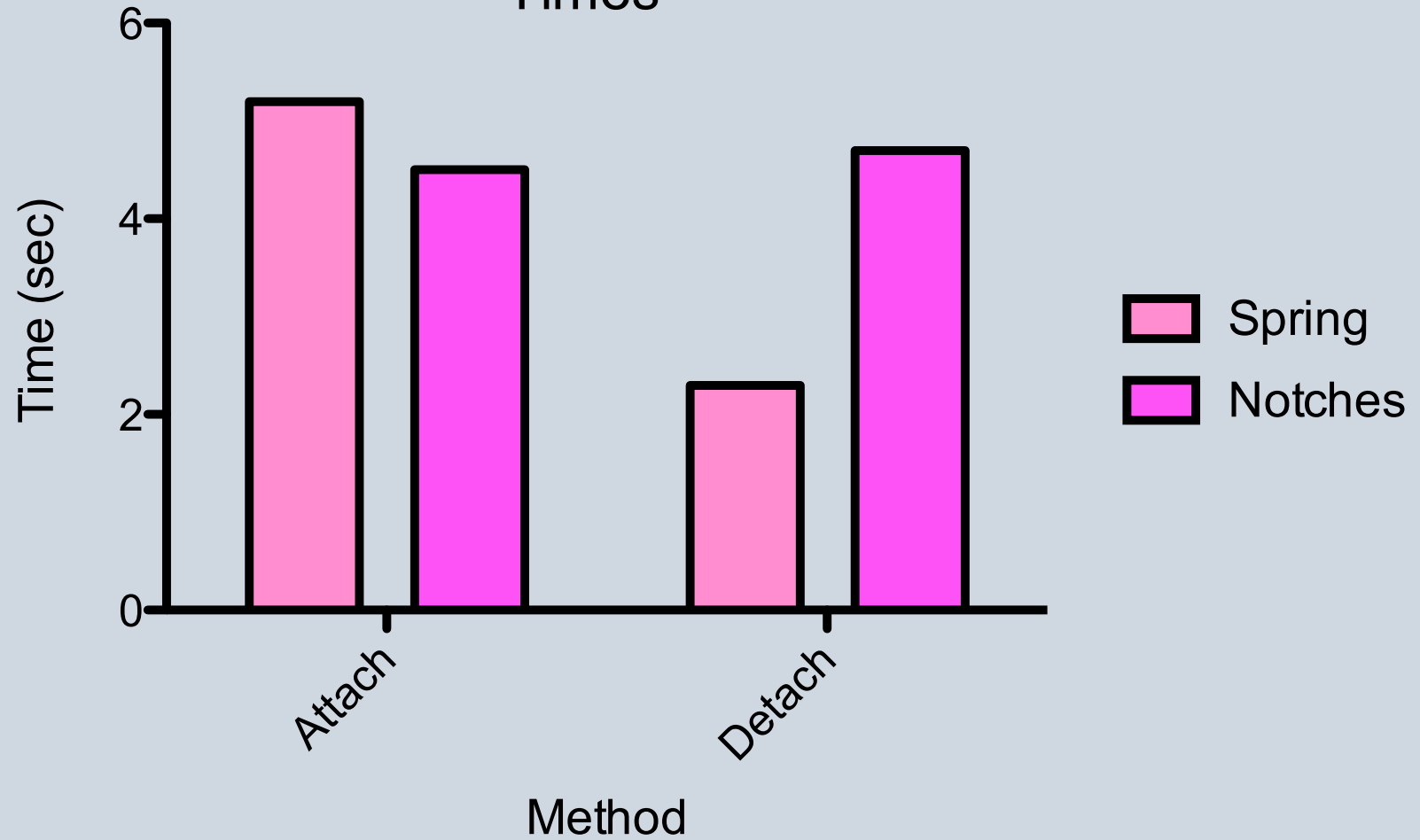
Attachments

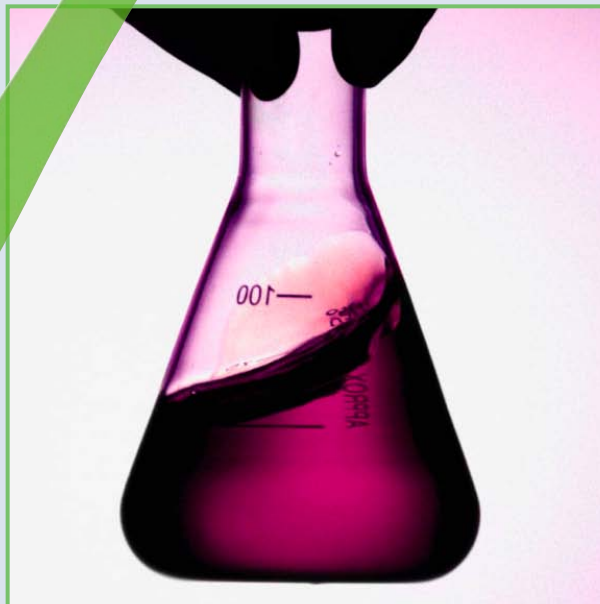


Weight of Various Materials



Attachment/Detachment Times





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<http://www2.hiren.info/desktopwallpapers/3d/the-cubes-cubed.jpg>
http://i00.i.aliimg.com/photo/v0/262719438/Body_weight_scale_bathroom_scale_health_scale.jpg
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<http://upload.wikimedia.org/wikipedia/commons/4/4d/Carabiner.jpg>



Questions?