Subject: 3D Max Shapeways Calculator v1.1
Posted by virtox on Wed, 04 Mar 2009 09:09:08 GMT
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The purpose of this tool is to calculate the price of your object, in the same way the site does it for you, but without the hassle of uploading, waiting etc
The interface, except volume/area calculation, is updated in real time.

Please be aware, that the calculation times grow exponentially with polygon count.
You can abort execution any time by pressing the ESC key.

Not sure which MAX versions work, just try it and let me know.
Please treat this code with respect. Suggestions and modification are welcome, but please keep the main repository here.
Questions, request, bugs etc are all very welcome in this topic or through Private Messaging.

Cheers,

Stijn

3D Max Shapeways Calculator v1.1!
New screenshot will follow later.

DOWNLOAD LATEST
This version got a major overhaul, please let me know if I broke something

How to

Start 3d Max
Load your favorite object
Goto menu : MAXScript->Run script...
Find and open "ShapewaysCalculator.ms"
Click "Calculate" !
Play with all the options, try materials, markups, scaling etc
Please give feedback here

The floater interface should speak for itself, I tried to keep it as intuitive as possible, and in line with the Shapeways website.

Known Bugs and Limitations

It only works with single object meshes, not with groups, or multiple selected. Please use utilities -> collapse.
NO built-in meshmedic So overlapping or non-manifold meshes might produce different values than shapeways.

V1.1 New features

Major update to config, incompatible with old version.
SO OLD CONFIG WILL BE OVERWRITTEN ON FIRST RUN
Layout changes/condensing
Added object density
Added bounding total
Added link to (selected) material page
Time to loose beta label

TODO (maybe)

Export and Upload interface to Shapeways API (any help for this module?)
Save/sync some more settings to ini, not everything sticks yet.

Todone

Updateable configuration Beta8
Remember settings Beta8
Currency calculator/Pricing in Euros Beta5
Try to make it more compatible with older max versions Beta4
Unit flexibility - currently the script sets all units to mm where possible Beta5
Manifold check/STL/Other model checks Beta4
Add boundary checks for a given material Beta2

Beta11 New features

Crash fix

Beta10 New features

Docking now configurable via ini file (default=left) (Try the "EDIT" button under config to see ini)
Improved config handling, script will now create default config if none exists.

Updated ini file now part of script itself. Click restore once to update/restore your ini.
Added restore function for config (overwrites config with default)

Beta9 New features

Area calculation for Glazed Ceramics (still testing)
Density discount for WSF (still testing)
Unencrypted source
Many bugs squashed

Beta8 New features

Material and other settings in ini/settings file !
All object values are now saved with the Max file !
Plenty of other stuff, nothing major
Dockable

Beta7 New features :

Updated dollar2euro
Added Stainless Steel
Added New WSF Pricing

Beta6 unpublished

Beta5 New features :

More compatible with other unit systems (no more forced mm units)
Speed and code optimizations
Euro selection
Showing of error-object optional and only on error
Inverted volume correction now optional

Beta4 New features :

Compatible with R8 and up (hopefully)
Crude manifold check (slow, but effective)
Status window
Lots of roll ups, to allow custom interface placement
Better object selection
Overall code refactoring

Beta3 unpublished

Beta2 New features :

Fix negative volume issues
Mass and center of mass (WSF only and not yet fixed for negatives)
Polygon count
Bounding box dimensions of object
Warning if previous exceeds material boundaries
New WSF price

Beta 1 Features:

Volume in CC
Shapeways price for selected material
Final price including VAT, markup
VAT selection
Target Pricing - Calculates scale which will meet target price
Scaled Pricing - Calculate price based on scaling
Polycount warning/bailout if over 1.000.000

[list type=circle]
[*] --

Cheers.

File Attachments

1) ShapewaysCalculator.ms, downloaded 314 times

Subject: Re: 3D Studio max pricing script/utility
Posted by joris on Thu, 05 Mar 2009 08:03:57 GMT
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Virtox,

that is quite simply awesome!

Have others tried it yet? What do they think of it?

Subject: Feedback
Posted by virtox on Tue, 10 Mar 2009 10:59:14 GMT
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Please don't be afraid to share any ideas you might have for this tool
Anything can be done unless proven otherwise

Subject: Re: 3D Max 2009 Pricing Utility BETA available
Posted by Jettuh on Tue, 10 Mar 2009 14:10:54 GMT
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wow, this is a great bennefit for the community, i'm going to test it right away!

thank you!

Subject: New: 3D Max 2009 Pricing Utility BETA2
Posted by virtox on Mon, 30 Mar 2009 22:08:51 GMT
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As per request I hurried a new version online.
Hope I got all the kinks out

Subject: Re: New: 3D Max 2009 Pricing Utility BETA2
Posted by joris on Tue, 31 Mar 2009 08:00:12 GMT
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Sweeeeeeet!

Subject: Re: Feedback
Posted by MaxSMoke777 on Fri, 03 Apr 2009 22:59:56 GMT
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Can you make it support Version 8? I get an error message when trying to run it.

Subject: 3D Max R8-R2009 Pricing Utility Beta4
Posted by virtox on Fri, 03 Apr 2009 23:11:42 GMT
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Ok, BETA4 is up, and should from 3d Max R8 and up !
Only tested in Max R8sp3 and Max R2009.
Does have some visual issues in R8, but nothing serious.

Subject: Re: 3D Max R8-R2009 Pricing Utility Beta4
Posted by AO on Sat, 04 Apr 2009 16:05:47 GMT
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Virtox,

I think you have to change your nick into VIRTUOS.
Could you make it also as a plugin for other programs as accutrans or meshlab, or maybe as the calculator on everybodies computer?

Great work,
AO

Subject: Re: 3D Max R8-R2009 Pricing Utility Beta4
Posted by virtox on Sat, 04 Apr 2009 20:35:22 GMT
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Thanks

The current version is written in maxscript, the internal scripting language for 3d max, pretty straightforward with al the 3d functions.
I don't really know meshlab or accutrans, so I have no idea if they support plugins and in what format. I had a quick look and it didn't look like it, but I could be wrong, anyone with more expertise on these programs or other programs ?

I was thinking of writing a version for a good free easy to use 3d program, but I have to find a friendly "host" and get to know it, before I could write a sensible plugin. But there is of course the blenderscript by Loonsbury which solves that
(I wish I had the time to switch to/learn blender.. max sucks sometimes , but you don't throw away 10 years of knowledge/experience/habit)

I have been thinking about a standalone application, but this would entail a whole lote more research/work. Since it would also require file format support, 3d parsing and everything.
I don't have the time for that, I also want to model !

And I would think Shapeways has the best angle of providing a desktop application, since they already have the server version

---

Subject: Re: 3D Max R8-R2009 Pricing Utility Beta4
Posted by joris on Sat, 04 Apr 2009 21:37:43 GMT
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Would people really like a desktop app? Or would they prefer plug ins for the software they use?

Subject: Re: 3D Max R8-R2009 Pricing Utility Beta4
Posted by AO on Sun, 05 Apr 2009 07:31:40 GMT
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Hi Joris,

I think a desktop app that can import stl or obj would be the most convenient since there are so many different softwarepackages available.

AO

Subject: Re: 3D Max R8-R2009 Pricing Utility Beta4
Posted by AO on Sun, 05 Apr 2009 07:42:03 GMT
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Virtox,

Most of us are modelers and hobyist.
Having a job and also spending alot of time on modeling or writing a app like you did makes it extra hard.
The hours at night count double or even triple.....the frustrations are at least triple .
Therefore don't forget to model and having fun in that.

AO

Subject: Re: 3D Max R8-R2009 Pricing Utility BETA4
Posted by Laserschwert on Wed, 15 Apr 2009 08:06:52 GMT
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I was wondering, why does the volume-calculation (without any other checks) take so long? When using 3dsmax's own Measure-tool (under Utilities -> Measure) the volume is calculated in real time. I assume you've used a different algorithm, but why is that?

Subject: Re: 3D Max R8-R2009 Pricing Utility BETA4
Posted by virtox on Wed, 15 Apr 2009 08:58:04 GMT
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Hi there,
The simple answer is : maxscript IS slow
Unfortunately there is no way I can get access to the info from the measure tool from within maxscript, the only workaround is to do the calculation inside the script itself, which is just terribly slow. The actual algorithm is the same, I think.

Subject: 3D Max R8-R2009 Pricing Utility BETA 5
Posted by virtox on Wed, 15 Apr 2009 09:57:27 GMT
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Ok, I held you guys back a little, I was still testing the latest version.
But BETA 5 is here, approximately twice as fast as BETA 4.

Hope I got all the kinks out !
And as usual any feedback is welcome !

Stijn

Subject: Re: 3D Max R8-R2009 Pricing Utility BETA 5
Posted by ShapewaysMechanical on Wed, 15 Apr 2009 14:57:06 GMT
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You rock!

Subject: Re: 3D Max R8-R2009 Pricing Utility BETA 7
Posted by virtox on Sat, 29 Aug 2009 16:54:40 GMT
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Beta 7 online, updated dollar2euro, stainless steel, new WSF pricing.
For file, see opening post.

Subject: Re: 3D Max R8-R2009 Pricing Utility BETA 7
Posted by Jettuh on Sun, 30 Aug 2009 10:26:34 GMT
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Thanx for the update Virtox!

and it works good

Subject: Re: 3D Max R8-R2009 Pricing Utility BETA 7
Posted by virtox on Sun, 30 Aug 2009 11:31:05 GMT
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Good to hear !

Did it solve your price discrepancy I saw in another topic ?
(Quite curious where that came from)

Subject: Re: 3D Max R8-R2009 Pricing Utility Beta4
Posted by randomblink on Thu, 03 Sep 2009 18:54:25 GMT
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Desktop App.

Build it in Adobe Flex and it will be universal... meaning it can run on PC / Mac / Linux... (with the appropriate runtime of course)

But I agree on the Desktop Part. MUCH easier. Rather than trying to manage plugins for ALL the different apps and ALL their different versions...

Subject: Re: 3D Max R8-R2009 Pricing Utility Beta4
Posted by sFsGaming on Wed, 06 Jan 2010 01:45:51 GMT
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This is totally awesome!

Thank you so much for this tool!

So, how much ya gonna charge for V1.0?

Subject: Re: 3D Max R8-R2009 Pricing Utility Beta4
Posted by virtox on Wed, 06 Jan 2010 10:14:48 GMT
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Glad you like it ! Should you find any bugs or have ideas for improvements, just let me know !

v1.0 will arrive by the year 2100, or was it 2010, I forgot.
And the price will be an arm and a leg.

Nah, it's my gift to the shapeways community.

But rating of my latest models is always appreciated :
Latest models
And since I have more ideas than money, I created the
TriMatrix Special Unlimited Sponsor Edition
It has an increased markup, through which people can help and support this struggling artist

Kind regards,

Stijn

Subject: Re: 3D Max R8-R2009 Pricing Utility BETA 7
Posted by virtox on Sun, 04 Apr 2010 08:36:06 GMT
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Just a little bump, also gauging for update needs ? Bugs found ?

Still working on a practical solution to add the wall thickness checks and improve the manifold check. But maxscript seems too sluggish and the c++ API too buggy/cumbersome.

Ah, and again I see I have neglected to update the latest version here.
I will polish up the code and add it asap. It has a user-editable config for the prices and materials infos.

And I'm thinking of an STL "quick" export (and import) feature.

Even pondering the idea of implementing the shapeways upload API, but I'm not familiar with the used http interface.

So in short : any new wishes ?

Stijn

Subject: Re: 3D Max R8-R2009 Pricing Utility BETA 7
Posted by nemo_uk on Mon, 17 May 2010 16:20:15 GMT
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Just wanted to say thanks for your hard work. The plug-in is very useful.

Subject: Re: 3D Max R8-R2009 Pricing Utility BETA 8
Posted by virtox on Fri, 04 Jun 2010 22:24:16 GMT
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Thank you ! Always nice to hear !

I updated the script and opening post, please check it out !

Subject: Re: Feedback
Posted by bobbob12 on Sat, 07 Aug 2010 16:05:34 GMT
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Hi Virtox,
Seems to be a great app, but it doesn't work for me on MAX2009.
The object is not being calculated + there is a white square appearing in the viewing panes

File Attachments
1) virtox.png, downloaded 175 times

Subject: Re: Feedback
Posted by virtox on Sat, 07 Aug 2010 16:10:12 GMT
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Hi

It looks like you have multiple objects selected, that does not work yet.
It only works for a single mesh or poly object.

Did you get any warnings or error messages ?
After a (major) error its usually best to reload the script.

I will see if I can improve the error handling and feedback a bit.

Thanks for the feedback !

Stijn

Subject: Re: 3D Max R8-R2009 Pricing Utility BETA 8
Posted by Fleafa on Sun, 08 Aug 2010 13:53:31 GMT
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Excellent tool, many thanks!

Subject: Re: 3D Max R8-R2009 Pricing Utility BETA 8
Posted by virtox on Thu, 26 Aug 2010 11:23:41 GMT
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Thank you!

Any remarks/wishes?

Cheers,

Stijn

Subject: 3D Max R8-R2009 Pricing Utility BETA 9
Posted by virtox on Mon, 16 May 2011 13:58:24 GMT
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Shapeways Calculator Beta9 online !

- Bugs squashed!
- Glazed ceramics support!
- WSF density discount!
- Open source code!

I forgot to add WSFP to the config, will try to add shortly, but one can add/edit it themselves

Updates courtesy of anonymous contributors via Triple Matrix Sponsor

Cheers

Virtox

Subject: Re: 3D Max R8-R2009 Pricing Utility BETA 9
Posted by avandius on Mon, 30 May 2011 06:54:22 GMT
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I don't think it works on Max 2012. It fleshes out some of the dimensions but not the actual pricing/material picker.

Please help.

Subject: Re: 3D Max R8-R2009 Pricing Utility BETA 9
Posted by virtox on Mon, 30 May 2011 09:53:09 GMT
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Can you explain a bit more what you did to install the script + config?
What does the text in the scrollbox under checks and warnings say?
Config loaded ok?

I do not have 2012 to test unfortunately.
A screenshot might be helpful?

Subject: Re: 3D Max R8-R2009 Pricing Utility BETA 9
Posted by avandius on Mon, 30 May 2011 18:59:57 GMT
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After downloading the zip, I placed both files into:

C:\Program Files\Autodesk\3ds Max 2012\Scripts

Upon running the script it props an error immediately saying:

Ini file not found C:\User\Seth\AppData\Local\Autodesk\3dsMax\2012 - 64bit\enu\plugcfg\VirTools.ini

This directory/path doesn't exist on my system. I'm running Windows 7-64 bit with Autodesk 64-bit.

The Checks and Warnings continuously says "Test object size : TOO BIG" regardless of how small I make it. The object in question is 22mm diameter.

Hope this helps!

Subject: Re: 3D Max R8-R2009 Pricing Utility BETA 9
Posted by virtox on Mon, 30 May 2011 20:40:20 GMT
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Hi,

C:\User\Seth\AppData\Local\Autodesk\3dsMax\2012 - 64bit\enu\plugcfg\
is given to the script by your max program.
And is where the virtools.ini should be.

It is probably a hidden path. If you paste that into your explorer you can still browse it.

I'll see if I can find an easier install path for the config.

And because the config is not loaded there is no material info or max dimension -> everything bigger than zero is rejected.
Perhaps I'll look into error handling.

Subject: Re: 3D Max R8-R2009 Pricing Utility BETA 9
Posted by sFsGaming on Mon, 30 May 2011 20:51:08 GMT
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Yes, it's a hidden path.

It's working here on Max 2012.

I thought it wasn't working a couple of days ago, but I didn't see the "Calculate" button.

Seems to be working fine, now.

Any chance of adding FUD to it?

Subject: Re: 3D Max R8-R2009 Pricing Utility BETA 9
Posted by virtox on Mon, 30 May 2011 20:59:15 GMT
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I'll try to update the config file.

Subject: Re: 3D Max R8-R2009 Pricing Utility BETA 9
Posted by virtox on Mon, 30 May 2011 21:09:17 GMT
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Attached a quick update of the ini file only.
Removed, script was updated

You can also use the "edit config" option to fiddle with the settings.
Most values should be self-explanatory (although a bit cryptic sometimes)

Subject: Re: 3D Max R8-R2009 Pricing Utility BETA 9
Posted by sFsGaming on Mon, 30 May 2011 21:51:36 GMT
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Thank you!

It seems to work for me. (Well, it was a penny off for FUD.)

Subject: Re: 3D Max R8-R2009 Pricing Utility BETA 9
Posted by avandius on Tue, 31 May 2011 03:51:00 GMT
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virtox wrote on Mon, 30 May 2011 20:40Hi,

C:\User\Seth\AppData\Local\Autodesk\3dsMax\2012 - 64bit\enu\plugcfg\
is given to the script by your max program.
And is where the virtools.ini should be.

It is probably a hidden path. If you paste that into your explorer you can still browse it.

I'll see if I can find an easier install path for the config.

And because the config is not loaded there is no material info or max dimension -> everything bigger than zero is rejected.
Perhaps I'll look into error handling.

I've posted the address into windows explorer and it still says "Windows can't find". I've tried deleting directories all the way down to AppData and it props the same error. Curious, this is an admin account if those folders are only created when using multiple UAC's. Any other suggestions?

Subject: Re: 3D Max Shapeways Calculator BETA 10
Posted by virtox on Tue, 31 May 2011 08:40:39 GMT
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The path max gives you should exist,
normally it starts with "c:\users\" (yours is missing an S)

Perhaps you made a typo ? I just copied the path you gave me, but it should be the path max shows in the error.

You can try to enable hidden files to navigate easier.

Subject: Re: 3D Max Shapeways Calculator BETA 10
Posted by sFsGaming on Tue, 31 May 2011 13:13:14 GMT
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I just checked it out and when I docked the panel it basically maximized and I couldn't see any of

the viewports, and I couldn't figure out how to undock it.

Subject: Re: 3D Max Shapeways Calculator BETA 10
Posted by virtox on Tue, 31 May 2011 13:30:23 GMT
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EDIT
I have fixed the beta10 file. It should be only be able to float, dock left and right now.

That's weird

Did you dock it manually at the top or bottom?
Usually you can right click the docking bar (the double lines to the top or left of the calculator) to choose docking or float options.

It always used to dock at the left by default, the basics did not change.

Did you update/restore the config?

Perhaps re-running the script?

Can you try the edit config and find the "docking" value at the bottom of the file, it can be either left or right. Any other value should float it.

Subject: Re: 3D Max Shapeways Calculator BETA 10
Posted by sFsGaming on Tue, 31 May 2011 15:10:46 GMT
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Thanks for updating it. I'll try it in a moment.

I manually docked it by dragging it to the left side of Max.

There was no docking bar for me to right-click on or drag the panel away from the left.

Subject: Re: 3D Max Shapeways Calculator BETA 10

Posted by jgarnham on Mon, 15 Aug 2011 16:08:51 GMT
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Virtox,

loved the calculator and the object properties matched those of 3DS. Excellent work, a very useful tool indeed. I even tried adding Silver to the materials list.

FWIW, I tried the calculator in the new 3DS 2012 version and I could not get the object properties either by "selected object" or "pick object" buttons. If there is anything I can do to help, let me know.

Anyway, now my problem is solved I can place an order.

John

File Attachments

1) shapeways calculator 2012.jpg, downloaded 313 times

Subject: Re: 3D Max Shapeways Calculator BETA 10
Posted by virtox on Mon, 15 Aug 2011 16:38:19 GMT
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Glad it could be of service

Too bad the latest max broke it

Currently I don't have access to Max 2012, so any help is appreciated
Do you see any output in the "Maxscript Listener"
or any error, or just nothing..?
Does the config load properly?

I haven't been through the material list to see if things are up to date, so feel free to post any mistakes or updates

Cheers,

Stijn

Subject: Re: 3D Max Shapeways Calculator BETA 10
Posted by jgarnham on Tue, 16 Aug 2011 10:34:05 GMT
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No it's fine Virtox, I got it working okay in Max 2012 now (see below). It may have been because I ran 2012 after 2011.
I rebooted and it worked better.

It does however have an issue and the control remains open after Max 2012 shuts down that cause an error report to be sent to Autodesk.
No big deal really.

John

File Attachments

1) teapot calculator 2012.jpg, downloaded 326 times

Subject: Re: 3D Max Shapeways Calculator BETA 10
Posted by virtox on Tue, 16 Aug 2011 11:32:03 GMT
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Hmm, strange..

Attached a version (b11) that hopefully fixes that behavior.

EDIT: For posterity sake this post will keep Beta11 attached.

Current latest is V1.1 which got a big overhaul, but it breaks compatibility with the old config.
There were just too many changes in materials and new parameters to keep it compatible.

File Attachments

1) ShapewaysCalculator.ms, downloaded 92 times

Subject: Re: 3D Max Shapeways Calculator v1.1

Posted by virtox on Fri, 06 Jul 2012 20:39:04 GMT
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V1.1 is here! Get it : http://www.shapeways.com/forum/index.php?t=getfile&id=18 270

Please check the opening post for details:
http://www.shapeways.com/forum/index.php?t=msg&th=714&am p;am p;start=0&