

Caulk!

THIS TUTORIAL IS WORK IN PROGRESS, PLEASE FEEL FREE TO ADD MORE CLIP / CAULK DEFINITIONS AND EXPLANATIONS

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Textures

All clip textures described here are found in the common texture directory, so from now on, when I say *caulk*: I mean *common/caulk*.

Areaportal



This texture is used to create VIS areas that can be opened or closed by doors or scripting. The easiest way to use them is to put them inside doors because then they are controlled automatically by MOH:AA. Area portals are complex enough to call for their own tutorial here: [Areaportals](#).

Surface parameter
areaportal
nodraw
noimpact
nonsolid
structural
trans

Black



This is not really a clip (as this tutorials name may suggest), but I include it because it is an interesting texture in the common texture group. This texture will not be affected by light and shadow of the map, and has a black colour. Really pitch black. In the way a bottomless pit would look if you found one. This texture is useful for stuff like texturing the far end of a tunnel that is supposed to look tike it goes on forever... You can do stuff like blasting the light of a rocket past it and it will still be **black**.

Surface parameter
nolightmap

Blank_lightmap



This texture is often mistaken to be the *caulk* texture. Not really surprising as it uses the same texture in Radiant combined with the fact that it is one of the first textures you see when loading up the common texture group. You want the *caulk* texture, you see it, you select it, you are entering a world of hurt... But it **CAN** also be used on purpose. This texture is a flat, white texture that will receive shadows and lights from the surrounding map. Maby you could use it when you are waiting for your texturer to make the new textures, because you want to see how the light falls on your buildings? The problem in doing so is that then you will have buildings that have 2 identically looking textures in Radiant :(

Carpetclip



Used to give an area the sound and surface effects of a carpet. Your steps will sound like walking on a carpet, and you will get puffs like from a carpet when fired upon.

Surface parameter
carpet
nodraw
trans
nomarks

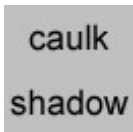
Caulk



This is a basic texture that you really need to know about. *caulk* should be used on all surfaces that are never seen by a player. A good idea is to make your structures entirely out of caulk from start, and then add texturing only to the places a player can see afterwards. Caulked surfaces does not affect the FPS, as they are not drawn, but at the same time they **DO** affect the VIS compile, possibly making the FPS higher. **WARNING:** This texture is often confused with the *blank_lightmap* texture, because they look exactly the same in Radiant. Make sure you are using *caulk*!

Surface parameter
nomarks
nodraw

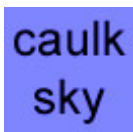
Caulkshadow



This caulk will only cast shadows. It will not affect the game in any other way. It can be used to make a shadow on objects that will not normally cast a shadow (The C47 model, or door entities). This shadow is generated in the light compile stage, and is therefore not dynamic (Moving the C47 will not move the shadow, opening the door will not let the light in).

Surface parameter
nodraw
castshadow
nomarks
nolightmap

Caulksky



For removing the sky entirely, mainly for fogged levels. This texture takes on the colour of the *\$world farplane_color*. If this is not set in your map (either in Radiant or in the script), you Will get the [hall of mirrors?](#) effect. This is a sky texture.

Surface parameter
nolightmap
noimpact
nomarks
sky

Clip



This clips both AI and players, but it does not block any shots and does not affect VIS compile. Useful for blocking player access to off limit areas just to be sure that the players that really try way to hard never get there.

Surface parameter
nodamage
nodraw
noimpact
nonsolid
playerclip
monsterclip

Clipall



This clips both AI and players and any shots but does not affect VIS compile. Useful for blocking... well everything really.

Surface parameter
nodamage
nodraw
noimpact
nonsolid
playerclip
monsterclip
vehicleclip
weaponclip

Dirtclip



Creates an area that sounds like dirt when you walk on it and throws up a bit of dirt when shot at.

Surface parameter
dirt
nodraw
trans
nomarks

Foliageclip



For use as a collision volume for foliage. Foliage (for those not having English as their main language) is stuff you find in nature that is often green in colour. Examples are bushes, treetops, moss and so on.

Surface parameter
foliage
nodraw
nomarks
nonsolid
shootonly
trans

Glassclip



For use as a collision volume for glass. Throws shards and stuff when shot at.

Surface parameter
glass
nodraw
trans
nomarks

Grassclip



For use as a collision volume for grass. Sounds like the green stuff when you walk on it and shoot at it. Gravel is... you know, a large amount of small stones.

Surface parameter
grass
nodraw
trans
nomarks

Gravelclip



For use as a collision volume for gravel.

Surface parameter
gravel
nodraw
trans
nomarks

Grillclip



For use as a collision volume for grill. Grill is stuff like metal bars and metal surfaces with holes in them.

Surface parameter
grill
nodraw
trans
nomarks
nonsolid
playerclip
monsterclip
vehicleclip
weaponclip

Hedgehogclip



For use as a collision volume for hedgehogs. I have no idea what this texture does... Logic states that it is used for hedgehogs, and this is probably it, but the fact that it has the fence property really makes no sense to me what so ever... This is a none-culled texture, meaning that if you see the "other side" of it (if the rest of the faces of the brush are textured with *nodraw*), you will be able to see its "back". The default is that you will not see a texture from the back side.

Surface parameter
grill
fence
nonsolid
playerclip
monsterclip
vehicleclip
weaponclip
nodraw
nomarks

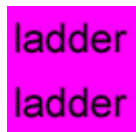
Hint



This texture represents something more than is defined in the shader. Like the *caulk* texture it affects the VIS compile. TODO: ADD MORE DETAILS ON **HOW** IT AFFECTS VIS.

Surface parameter
nodraw
noimpact
nonsolid
structural
hint

Ladder



This is a special texture used on func_ladder entities to mark them as ladder triggers.

Surface parameter
nodraw
ladder

Light



This could be a cool clip to use on surfaces that should look glowing, **but** unfortunately: it is broken. If you use this texture, you will just see a flat blue surface with the word "LIGHT" across it in MOH:AA.

Surface parameter
nolightmap

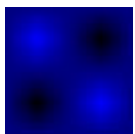
Metalclip



For use as a collision volume for metal. Walking on it and shooting it will give the reactions you would expect from... wait for it... metal!!!

Surface parameter
metal
nodraw
trans
nomarks

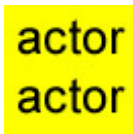
Modelshader



No Radiant texture, this is the "blank" texture. I have no idea what so ever about what this texture does... Something with models perhaps? Do tell me if you know...

Surface parameter
nodraw
nolightmap

Monster



Oooooo... monster clip :) Well, like your mother told you: there are no monsters. And she was right too, at least in MOH:AA there are no monsters... But there **are** AI characters, and these are the guys that cant get through this clip. Shooting is no problem and vehicles and players can pass through it, but not AI. Useful for banning AI from areas they get stuck in, or just should not be in general.

Surface parameter
nodamage
nodraw
noimpact
nonsolid
monsterclip

Mudclip



For use as a collision volume for mud. Sounds like mud when walked on and flips up a little mud when shot at. I think a nade here would throw up a nice cascade of mud.

Surface parameter
mud
nodraw
trans
nomarks

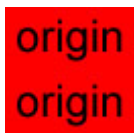
Nodraw



This is a handy texture that makes anything you put it on disappear. It is used together with all forms of *fence* textures to remove the other sides of the fenced brush. You may have seen an error like "fence brushes must only be combined with nodraw. This is because a fence brush is designed to work together with nodraw... this allows stuff like being able to shoot through a fence texture. If you use *caulk* instead of *nodraw*, it will look exactly the same, but you can't shoot through it.

Surface parameter
nodraw
nonsolid
trans
nomarks
noimpact

Origin



This special texture is used to create new origins. As an example: If you create a `func_rotatingdoor` without an origin brush, it will rotate around its center point... but if you add an origin brush, the door will rotate around the center of the origin brush instead - thus creating a sort of hinge.

Surface parameter
nodraw
nonsolid
origin

Paperclip



For use as a collision volume for paper (pretty useless!). Probably using this for cloth or cushion models, like beds or chairs.

Surface parameter
paper
nodraw
trans
nomarks

Patharea



I have no idea what this does. Some AI utility texture is a wild guess. Please tell me if you know about this texture.

Playerclip

[Attach:playerclip.p.jpg](#) [Δ](#)

Used to block players out of areas. AI and vehicles and gunfire is not affected by this one.

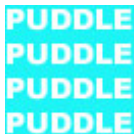
Surface parameter
nodamage
nodraw
noimpact
nonsolid
playerclip

Portal



This one is unknown to me. I'll have to look into this one more as I suspect it has to do with the VIS compile. It produces the [HallOfMirrors?](#) effect when you look at it in-game. TODO: ADD MORE DETAILS ON **HOW IT AFFECTS VIS**. It is probably this property that pakes the areaportal act the way it does...

Puddleclip



For use as a collision volume for puddle. A puddle is a very small water volume (like a spilled bucket of water). This volume is invisible and you can **not** walk through it. You get water splashes when shooting at it, and it sounds "squishy" when you walk on it.

Surface parameter
puddle
nodraw
trans
nomarks

Rain



This special texture is used to mark brushes as rain volumes. By using the weather system, you can get rain or [Snow](#) to appear in this volume.

Surface parameter
nodraw

Sandclip



For use as a collision volume for sand. Sounds like sand when walked on, acts like sand when shot at.

Surface parameter
sand
nodraw
trans
nomarks

Skip



TODO: ADD MORE DETAILS ON **HOW** IT AFFECTS VIS.

Surface parameter
nodraw
nonsolid
noimpact
trans

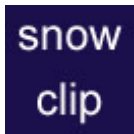
Skyportal



TODO: ADD MORE DETAILS ON **HOW** IT AFFECTS VIS.

Surface parameter
nolightmap
sky

Snowclip



For use as a collision volume for snow. Sounds like snow when walked on, acts like snow when shot at.

Surface parameter
snow
nodraw
trans
nomarks

Static_visible



Another of the clips using the same Radiant image as *Caulk*. Don't confuse them! No idea how to use this texture, if you do: please don't hesitate to tell me.

Surface parameter
nonsolid

Stoneclip



For use as a collision volume for stone. Sounds like stone when walked on, acts like stone when shot at.

Surface parameter
stone
nodraw
trans
nomarks

Sunblock



TODO: ADD MORE DETAILS ON THIS CLIP.

Surface parameter
nodraw
nomarks
trans

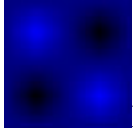
Switchflat



TODO: ADD MORE DETAILS ON THIS CLIP.

Surface parameter
metal

Switchflat_pulse



No Radiant texture, this is the "blank" texture.

TODO: ADD MORE DETAILS ON THIS CLIP.

Surface parameter
metal

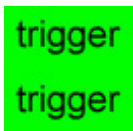
Tankclip



For use as a collision volume for tanks. Sounds like a tank when walked on, acts like a tank when shot at.

Surface parameter
metal
nonsolid
playerclip
monsterclip
vehicleclip
weaponclip
nodraw
nomarks

Trigger



A special texture used on the different types of triggers that is available.

Surface parameter
nodraw

Vehicleclip



For use as a collision volume for vehicles. Sounds like a vehicle when walked on, acts like a vehicles when shot at. The vehicle is probably a thin steel chassis type.

Surface parameter
nodamage
nodraw
noimpact
nonsolid
vehicleclip
nomarks
trans

Vis



A special texture used on the *vis_leafgroup* entity. Read more in the [Vis Leafgroup "hands on"](#) tutorial. You may also find the [VIS designing with detail and structural brushes](#) tutorial interesting for boosting your FPS before having to dig into the *vis_Leafgroup* entities.

Surface parameter
nolightmap
nodraw
noimpact
nonsolid
structural
hint

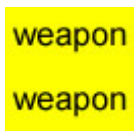
Waterskip



For use as a collision volume for water. This volume is invisible and you **can** walk through it. And when you do: your speed is reduced, you hear a wade in water sound, and your vision is distorted in the same way as when you are under water.

Surface parameter
water
nodraw
noimpact
nonsolid
trans

Weapon



Surface parameter
nodamage
nodraw
noimpact
nonsolid
weaponclip

Woodclip



For use as a collision volume for tree trunks & model wooden furniture. Throws splinters when shot at and leaves "wood" type bullet marks.

Surface parameter
wood
nodraw
trans
nomarks

Explanations to the texture surface parameters

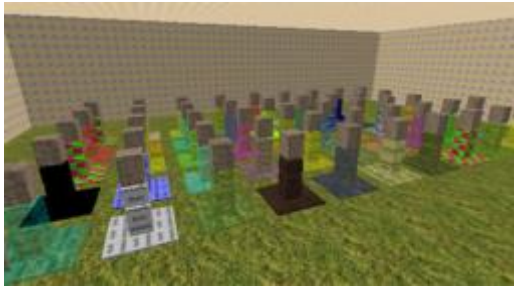
Here are some detailed descriptions of what the texture surface parameters mentioned above actually does to the textures face. Most explanations are taken from [Quake III Arena Shader Manual, Revision #12](#).

Surface parameter	Explanation
areaportal	A brush marked with this keyword functions as an area portal, a break in the Q3MAP? tree. It is typically placed on a very thin brush placed inside a door entity (but is not a part of that entity). The intent is to block the game from processing surface triangles located behind it when the door is closed. It is also used by the BSPC (bot area file creation compiler) in the same manner as a cluster portal. The brush must touch all the structural brushes surrounding the area portal.
castshadow	This texture will cast a shadow, even if it is invisible. Can be used to create simple shadows for models when not using -staticshadows in the light compile.
dirt	Sounds and reacts to gunfire like dirt would.
fence	This texture type is used on textures with alpha, like a fence. You can shoot through the untextured parts, but not the textured ones.
foliage	Tells the engine that it sounds like foliage. When shot through: leafs and stuff will fall "off". Walking through it will sound like pushing leafs and twigs aside.
glass	Sounds and reacts to gunfire like glass would.
grass	Sounds and reacts to gunfire like grass would.
gravel	Sounds and reacts to gunfire like gravel would.

grill	I think this is like <i>fence</i> , except it blocks all bullets and only makes hit sounds some of the time the brush is hit with gunfire (REALLY unsure about this one).
hint	This parameter makes the texture affect the VIS compile by making VIS splits at the surfaces it is textured with.
metal	Sounds and reacts to gunfire like metal would.
monsterclip	Blocks AI movement through a nonsolid texture. Other game world entities can pass through a brush marked monsterclip. The intended use for this is to block the bots/AI but not block projectiles and players.
nodamage	The player takes no damage if he falls onto a texture with this surfaceparm.
nodraw	A texture marked with nodraw will not visually appear in the game world. Most often used for triggers, clip brushes, origin brushes, and so on.
noimpact	World entities will not impact on this texture. No explosions occur when projectiles strike this surface and no marks will be left on it. Sky textures are usually marked with this texture so those projectiles will not hit the sky and leave marks.
nomarks	Projectiles will explode upon contact with this surface, but will not leave marks. Blood will also not mark this surface. This is useful to keep lights from being temporarily obscured by battle damage. Design Note: Use this on any surface with a deformVertexes keyword. Otherwise, the marks will appear on the unmodified surface location of the texture with the surface wriggles and squirms through the marks.
nolightmap	This texture does not have a lightmap phase. It is not affected by the ambient lighting of the world around it. It does not require the addition of an rgbGen identity keyword in that stage.
nonsolid	This attribute indicates a brush, which does not block the movement of entities in the game world. It applied to triggers, hint brushes and similar brushes. This affects the content of a brush.
origin	Used on the "origin" texture. Rotating entities need to contain an origin brush in their construction. The brush must be rectangular (or square). The origin point is the exact center of the origin brush.
paper	Sounds and reacts to gunfire like metal would.
playerclip	Blocks player movement through a nonsolid texture. Other game world entities can pass through a brush marked playerclip. The intended use for this is to block the player but not block projectiles like rockets.
puddle	Sounds and reacts to gunfire like puddle would.
shootonly	only collide with bullets
sand	Sounds and reacts to gunfire like sand would.
sky	This texture is a sky, and will not be drawn with perspective and such that regular textured objecta are subject to. Take a look at any sky in a MOH:AA map, can you see that it is a box? No, because it is drawn exactly the same wherever you're location is in the map.
snow	Sounds and reacts to gunfire like snow would.
stone	Sounds and reacts to gunfire like stone would.

structural	This surface attribute causes a brush to be seen by the Q3MAP? process as a possible break-point in a BSP tree. It is used as a part of the shader for the "hint" texture. Generally speaking, any opaque texture not marked as "detail" is by default, structural, so you shouldn't need to specify this.
trans	Tells q3map that pre-computed visibility should not be blocked by this surface. Generally, any shaders that have blendfuncs should be marked as surfaceparm trans.
vehicle	Blocks only vehicles, not players, AIs? and gunfire.
weapon	Weapons will be stopped by this texture. Bullets will be blocked, grenades will bounce, rockets will explode.
wood	Assigns to the texture the game properties for water. Used on tree trunks & models of wooden furniture . The resulting surface will sound like wood when walked on and splinters will fly from the impact location if shot at.

Example map with caulks and clips



(In Radiant)



(In MOH:AA)

Compiling this map will let you test how the caulks and clips react to you and how you react to them.

Compiling it will give you the following errors:

```
WARNING: Couldn't find image for shader textures/common/switchflat_pulse
Entity 0, Brush 28: origin brushes not allowed in world
WARNING: Couldn't find image for shader textures/common/modelshader
Entity 0, Brush 130: origin brushes not allowed in world
Entity 0, Brush 159: origin brushes not allowed in world
writing C:\MOHAA\maps\obj\caulk_test.prt
WARNING: areaportal brush 53 doesn't touch two areas
WARNING: areaportal brush 7 doesn't touch two areas
WARNING: areaportal brush 154 doesn't touch two areas
WARNING: areaportal brush 194 doesn't touch two areas
WARNING: areaportal brush 53 doesn't touch two areas
```

...none of these are fatal, they only reflect the fact that area portal and *origin* are not meant to exist in any other places than their original intended locations.

Download it here: [Attach:caulk_and_skip_tutorial.zip](#)

L8R

Well, that's all I have to say about that...

-[Bjarne](#)