Sticky Situations

The Zen of Prosthetic Adhesives & Removers

(email your question to stuartandtodd@gmail.com)

Welcome to the first of these tag-team posts with Todd and myself. We will be kicking off with a great question from Stuart Webb about adhesives & removers.

Okay, Stu, I think I'm up for it! *Stuart Webb's question is:* **"What I would like to know is what you both use to remove various prosthetic glues. I used Pros aide to glue some bondo transfers I had made & tried Telesis Super Solv to try & get them off. It took AGES! Would I have been better off using something else?"**

Maybe you'd have been better off with a different remover, but it might not have been the remover at all… remind me to tell you my story about a prosthetic not coming off before we're done here… But first things first….

There are a number of adhesives and removers designed applying prosthetics to skin, and it can seem confusing when you start looking.

They have different names, ingredients and come in varying quantities making the possible combinations of what to buy overwhelming. *And potentially rather expensive, too*

Although they are more readily available, it is worth pointing out that Spirit Gum (in its standard form) and Liquid Latex are not serious contenders where prosthetics are involved. *I hate spirit gum! Can I say hate here Stu?*

These old-school adhesives are okay for some things, but they are they often irritate skin the most, and have relatively weak sticking power so for the purposes of this blog post, we won't include these. Check my video on doing a simple cut effect using wax with spirit gum to see it in action.

That's about the only time I'd consider using spirit gum; I still prefer Pros-Aide. The thing about spirit gum is that almost everybody has some kind of allergic reaction to it, it's not flexible when it's dry, and it dissolves in water, or sweat as is often the case…

So let's start settling the mind by establishing a basic point - there are essentially two types of glue. These are:

Water based acrylic emulsion adhesives. ***This would include Pros-Aide.***

These are great for sticking latex, foam latex, gelatine and silicone appliances which have a cap plastic barrier. They tend to be less expensive so are great for when you are starting out - although they are still great professional adhesives.

Solvent based silicone adhesives

These cost more, but stick pretty much anything. *Especially important when gluing silicone pieces because nothing sticks to silicone except other silicone.*

Glues: Water based acrylic emulsion adhesives

Pros Aide (The Origianl)
Pros Aide 2 (The Sequel) *I can't really tell a difference, can you?*
Telesis Beta Bond
Aqua Fix *Is this some fancy-shmancy Brit glue?*
Kryolan Prosthetic Adhesive
Ben Nye Prosthetic Adhesive *Yuk. This stuff is useless. Sorry, Dana…*
Technovent ProBond Adhesive G609 *More weird foreign stuff?*
Graftobian Theatrical Pro Adhesive *I think I like this as much as I like Pros-Aide.*

Glues: Solvent based silicone adhesives

Telesis 5
Telesis 7
Snappy G
Kryolan Medical Spirit Gum
Bluebird Silicone adhesive *I'd really like to try this. I've been hearing great stuff about Bluebird's products*

Removers

Isopropyl myristate (often an ingredient in many removers)
Super Solv, Super Solv Gel
Pros Aide Remover
Mavidon Body Makeup Remover *Don't know this one. But PPI makes a product called Telesis Make-Up Remover that will also get rid of adhesive residue, so it may work as a remover too…*
Ben Nye Remove It All
Ben Nye Bond Off *Probably my number one 'Go To' removers for bondo pieces*
Kryolan Medical Adhesive Remover
Pro Clean
Mouldlife Life Wipes

For removing the bondo transfers Stuart mentioned in his question, you can even use 99% IPA in a pinch. It may help, or it might just make your cleanup messier….

- **Good Points for Water based acrylic emulsion adhesives:**
  Sticky and flexible; relatively inexpensive
- **Bad Points for Water based acrylic emulsion adhesives:**
  Sweat; can't use with silicone

- **Good Points for Solvent based silicone adhesives:**
  REALLY strong
- **Bad Points for Solvent based silicone adhesives:**
  Very pricey. That's about it for bad points…

Application technique

To apply the adhesive, some people like brushes, other like cotton swabs (Q-Tips, Cotton Buds etc.), others like to use sponges. A lot of it is personal preference, although for large areas sponges work great.

Cotton swabs work well for small pieces as they can easily be disposed of, and remove the need for brush cleaning and solvents. For larger pieces, I use a large paintbrush in the main, and switch to cotton swabs for the edges.

Swabs are great for edges, as they can be used in a rolling action, allowing edges to be lifted up by the rotation of the swab. Also, you can use swabs with solvent to dissolve the edges of the cap plastic barrier. Often a little alcohol on a swab allows you to temporarily reactivate the glue so you can reposition a folded edge. The alcohol evaporates, and the edge remains in position, held by the glue which returns to it's dried state. *You know, you can even do pretty large areas, powder the adhesive once it's dry, and then you can reactivate it with alcohol as well…*

Some people prefer to apply glue to the skin only, others to the appliance, some do both. Just don't ever drop an appliance which is covered in glue! When starting out, I suggest you apply to the skin only, just make sure you don't add too much -this stuff ain't cheap, so you don't need a thick layer at all! *With the silicone adhesives at least, you can use a thinner – full strength isn't necessarily stronger, and thinned, your adhesive will go a lot farther.*

If you slap a piece of rubber over wet glue, the air can't get to it so it can't dry properly and it won't stick. This is something a lot of newbies get wrong because it seems so counter intuitive. *That's one of the things I really like about Pros-Aide – it's white when it's wet, but completely clear when it's dry, so it's easy to tell*

Let the glue dry before applying? Sounds like madness. ***Utter chaos!***

These glues do not stick when they are still wet. Pros Aide, for example, is very tacky and shiny when dry, and this one of it's great features. Telesis 5 feels dry to the touch but 'grippy' once the solvents have evaporated. *Grippy? You made up that word.* However if you press a clean appliance onto it, it sticks. The firmer you press, the better it sticks, and after the piece has been worn for a while, the bond increases slightly as the body heat warms the glue. *Weird, ain't it?*

-Bubbles of white Pros Aide can be seen through translucent appliances like silicone. *True, but you really don't want to use Pros-Aide with silicone, or do you know something I don't?*

-Wet Pros Aide has water in it, so applying gelatine over Pros Aide that is still white means water is in contact with gelatine - another no-no!

-If you put silicone over wet silicone adhesives, the liquid solvent can't evaporate and is held against the skin, not drying.

Let it dry off, and you will get better adhesion.

Contact

For areas which get a lot of stretch, wear, movement and maybe moisture such as the mouth, silicone glues are more durable. If the character is shouting a lot, drinking or getting blood everywhere, then anticipating the extra hold required is a wise move.

For areas like these, often glue is applied to both skin and appliance and allowed to dry before applying. This method is known as a contact, and can be done with both silicone and water based acrylic glues such as Pros Aide. *But anything being glued around a high movement area – like the mouth – is going to require a lot of attention. I don't care how good you are, an appliance will come loose at some point if it's getting a lot of movement...*

This can be a tricky maneuver because once the surfaces touch, they stick very well straight away. It will need careful unsticking with a solvent such as 99& alcohol should you accidentally place the piece incorrectly. If you were to apply Telesis 5 or Snappy G to two surfaces and leave them for a week, they would still stick amazingly well once pressed together. *Having more than two hands when applying can sometimes become essential!*

Like Lance the drug dealer played by Eric Stoltz in Pulp Fiction, "That stuff costs more, but when you use it, you will know where that money went!

Pros Aide & Pro Bondo Transfer Appliances (pic)

There are a lot more flat moulds and transfer pieces being used nowadays which use a thickened Pros Aide mixture for the actual appliance material instead of silicone or latex. *These are a favorite of mine, to be sure. Easy to make, easy to apply; supposed to be easy to remove. Making the bondo or TPA itself though, can be a bit of a pain – can we leave this discussion for a later blog post? I'd love to do a whole Stuart and Todd/the FX Guys thing about this*

This material works incredibly well for small appliances, and sticks especially well because it is made of the very material which is used as a glue. If you have ever used it, you may have seen just how tenacious it is, bonding very well to clean skin. *You can even wear these things swimming. I did a test once and kept a piece on for 10 days, showering, clothes, etc.; it got dirty, but the edges were almost perfect!*

Glue removers which work well with Pros Aide will work best on 'bondo' transfers. Ben Nye's Bond Off! Is my 'Go To' for this stuff.

Surfaces & Why They Matter As Much As The Glue Itself ***A neglected subject, I think***

It is worth pointing out that the surface to which the adhesives are applied counts as much as the glues themselves. Pros Aide sticks great to normal skin, but skin ideally needs to be clean, and free of oil, makeup or dirt etc. so they glue can do it's job properly. *Work smart, not hard.*

Also check and clean appliances to ensure there is no residue of release agents, powder or talc used in the casting and demoulding process. *This is really important for pieces that get multiple use, such as for theatrical productions. Remover residue, or residue of any kind left on an appliance will cause problems… and only at the most inopportune times when you can't make a repair*

Silicone appliances which have a cap plastic barrier can usually be applied using both types of glue, as the material in contact with the cap plastic surface rather than the silicone gel behind it.

You can also choose to use a silicone adhesive instead with cap plastic coated appliances if you wish - it sticks very well. However if you are using an appliance which doesn't have a cap plastic barrier (something like a large overhead cowl appliance for example - see picture) then you HAVE to use a silicone adhesive.

If you think about it, silicone appliances are made out of....silicone. Remember moulds get made out of silicone because of its amazing release qualities where not much sticks to it. That is a bit of a problem when appliances are concerned, so using a silicone based adhesive designed for the purpose fixes that.

These silicone/solvent glues tend to cost more, as the hoops that manufacturers have to jump through to get a skin-safe material out to market mean a lot of extra work.

You what we haven't mentioned, Stu? Using silicone itself as an adhesive. For example, Smooth-On's Skin Tite is a skin-safe platinum silicone that not only can be thickened and used just like Alcone's 3rd Degree or Mould Life's Sculpt Gel to build up directly on an actor's skin, but it also works great as a silicone adhesive.

Mix it up 1:1 (by volume or weight), apply a very thin layer to your actor's skin, and then carefully press the appliance into the still wet silicone. Edges will blend very nicely, too.

Sweat

Heat and moisture build up behind an appliance can reduce the effectiveness of a glue. Pros Aide can kind of melt away if there is enough sweat, and I have mopped up many bubbles of milky perspiration from bubbles forming under appliances.

This was less of an issue with foam latex as foam can absorb and 'wick' out perspiration to some degree, whereas silicone is not absorbent in the slightest. *Ooh ooh ooh! Let's do a blog where we compare and contrast different prosthetic casting materials – you know, gelatin, foam latex, silicone, bondo…*

You can also use a glue primer on the skin such as Top Guard which is sprayed or brushed on to provide a perspiration resistant surface which also sticks better to the adhesive. *Matt Singer recently developed a silicone adhesive primer for 3rd Degree. It's pretty great! Works super with Telesis. Haven't tried it with Snappy G…*

Try to minimise perspiration by keeping the performer as cool as possible and hydrated. *More easily said than done, I'm afraid. I know some world class perspirers…* Usually this isn't something you have a whole lot of control over, as heavy costumes, lights and physically active performances are all contributing to the heat build up. *But there are some precautions you can take to minimize the schvitzing. For example, zinc powder helps the skin be more perspiration resistant. Michael Davy sells a product called Sweat Stop that makes you perspire less, and the more you use it, the more sweat resistant…*

Also a trick I learned was to dilute some Telesis 5 with 99% alcohol to make a primer which improves the strength of the glue. *Really?! You've been holding out on me, Mr. Bray…*

Repairing lifted edges

Appliances which become loose or unstuck can be repaired quicker with silicone/solvent glues. If you can, clean the exposed area under the appliance with an astringent like Seabreeze (http://www.seabreezeclean.com/) to get the sweat and oils off, dry it and reapply silicone adhesive. *Doesn't hurt to have a small, portable blow dryer with a cool setting close by either…*

Often edges in a certain area will continually pop up no matter what you do. *Like around the mouth…* In this case you should be able to restick the edge down without more glue being added. There comes a point when simply adding more and more glue will not help the situation, and it could turn into a gummy mess. Silicone glues usually can be restuck just with pressure.

Hair

If applying over hair, it may need flattening down first. Arm hair for example is usually thin enough to stay down with the glue used to apply the appliance, but eyebrows may need gluing down flat first. *Something actors love for you to do to them…*

If gluing into and over hair on the head which often happens when forehead pieces creep over the hairline, it may need sticking down with something like Gafquat first so the volume of hair is pressed and held down as flat to the skin as possible before applying the glue and the piece over the top of it.

This also helps removal, as the layer of glue is actually on the Gafquat rather than the hair itself, and Gafquat can be washed out with water. http://fx.wikia.com/wiki/Gafquat

Gafquat is amazing, but it's the stickiest stuff known to man. I kid you not.

Problems with glues/removers/reactions

It is important to check that the adhesives you intend to use are suitable for the person wearing them. So long as you use products intended for skin use from an approved manufacturer (you may not use paint stripper or turpentine from a hardware store!), there is unlikely to be any serious problems, but it makes sense to check.

Most performers will be aware if they react badly to something and may tell you, but ideally you would do a patch test at least a day or two before the application is required. By placing a small amount of the glues and removers on the skin for a short time and seeing if any reaction develops over the next 24 hours, you can be more certain of success. *I think it's a good idea to test everything you may be using; even some of the appliances themselves can potentially cause some sort of skin irritation, particularly latex. Latex allergies can be awful!*

Don't do the patch tests on the face, as if there is any reaction you don't want it to be something that will make them feel self conscious. Usually the back of the neck and inside arm is a good place to test.

Skin reactions and allergies are not the same thing. The skin can react to a material, or more likely it often appears red after the continued rubbing and wiping action. Mild skin reddening after removal is quite common and usually fades after a short time. Irritation which is persisting is different, and you should discontinue use of the materials if his is the case.

Allergies involve the immune system, and are much more serious. I have not had anyone truly allergic to the materials used when wearing prosthetic makeups, only irritated with some adhesives requiring us to change products.

Allergies need treatment, so be sure to supply all packaging and ingredients to medical personnel. It makes sense to have MSDS (Material Safety Data Sheets) available for any materials in direct contact with the performers skin for the same reasons. Most suppliers and manufacturers will have them available online.

Patch testing small amounts in advance can help flag these issues up before you start slapping it all over, giving you time to modify your approach and keep everyone happier.

There was an incident several years ago when I couldn't get an appliance to come off this one time, even though we'd been doing it for several days before… What was different was now my actor was in full costume, and sweating much more profusely than in the days before. What should have taken 10 or 15 minutes to do took almost two hours this time! I told this story in my book. Did I mention that my actor is blind?

His skin was getting red and irritated, he was getting irritated, I was flop sweating like Albert Brooks in Broadcast News. NOTHING was working, Super Solv, Bond Off… alcohol just seemed to make it worse. Alcohol…

I called PPI first thing the next morning and talked to Eric Heinly, explaining everything and the first words out of his mouth were, "Does he drink?" Long pause. I said, "yeah, but it's not like he's a drunk, or anything…" Eric said it didn't matter. A glass of wine, a couple of beers. When you perspire heavily after having had a cocktail, alcohol is leaching out of your skin along with the sweat… INHIBITING the remover!

He overnighted Top Guard, and I applied that prior to applying the adhesive (in this case Telesis 5). The piece came off without a problem. Problem solved, but man did I feel like a complete doofus! Now I try to use Top Guard whenever I'm gluing down anything.

Dry Skin

It is not uncommon for people with dry skin to find that the glues tend to stick better to them than most which can make removal more time consuming and uncomfortable. Depending on how dry, it may be helpful for them to moisturise before application.

Also, thinning the adhesives down so the bond strength is appropriately reduced is helpful. In the case of water based acrylic adhesives, a 10-50% solution of water will do it. *Hmm. I've never thinned Pros-Aide. Just as strong? Oh, by the way, never put 99% IPA into liquid Pros-Aide…*

Silicone adhesives should have their own suitable thinners or solvent available from the glue supplier. By adding a thinner to the glue, you again reduce the strength of the bond to suit. You may need to do some tests to determine how much dilution is required, but by testing small amounts you will save a lot of time later, especially if large appliances are being used. *And since they're easily the most costly of the adhesives, you'll get more mileage out of your adhesive, too.*

Oily Skin

Skin usually secrets natural oils to protect it, so cleaning the skin with a toner or mild astringent will help the glues do their job. Silicone adhesives may be a better option in this case, and even using a primer like Top Guard for more severe cases. *Speaking of Top Guard – I got tell you: I'm a huge fan of PPI's products. Top Guard will not only make removals less of a hassle, it will also help your adhesive hold better. Contradiction? Nope.*

Removal (pics of removed pieces)

When it is time to remove the appliance, you need to get the remover on the glue. It sounds like an obvious thing, but I have seen people futilely brushing remover on the outside of the appliance, hoping it would just soak through and magically fall off. Mrs Doubtfire has a lot to answer for - it doesn't just fall off. *HA!* If it did, it may do that halfway through a take, so these glues are designed to keep that sucker on there!

This is often an issue in makeup schools where appliances may only be worn for a short time before being removed. The glues are at full strength, having not been perspired into by a sweaty stunt performer for eighteen hours. *If he's drunk, it'll never come off!*

First, make sure you have covered costume or clothing with towels, cape or paper roll of some type. This is usually then end of a long day, so removal is happening when you may be at your most tired and ready to get to bed. Make sure the sloppiness and spills are protected against before you start. *Oh, don't I know it! You don't want to have to buy your actor a new shirt or pair of trousers because you got glue and appliance schmutz on them!*

If your edges are still blended in well, you may need to encourage them up by wiping remover over them using a cotton-wool pad. These work well at gripping the edges, allowing you to then work into the piece with a dedicated brush. If you're not concerned with saving the appliance, you can be a bit more aggressive at the edge, and then have at it

Work remover into the skin, getting under the piece and lifting the appliance off as you go. Try to not 'pull' the piece off - you may get a performer who likes to tear it off heroically at the end of the day. Well, the glue is still there, so no real time has been saved.

Take care near the eyes - I think it is a good idea to keep tissues and eyewash on standby should some remover accidentally get into the eye.

I think the quicker the better so if you can get help during removal then do so. For big appliances get as many involved as can comfortably fit around them if you can. Also, if your performer is happy to the have them hold a cup of remover for you near the appliance. They probably want out more than you do, and it saves you from moving back and forth constantly to dip your brushes. Plus it reduces the chance of knocking the cup over too.

Removing Rigid Collodion scars can be a little tricky. You're essentially putting nail polish on the skin to create realistic scars, so you need an appropriate remover – also somewhat like nail polish remover – and it can be a little harsh.

You definitely want to make sure you clean and moisturize the skin afterwards! Tom Berringer used to like to peel off (rip, is more like it) his Collodion scars at the end of the day after shooting Platoon as part of his ritual, much to his mua's horror. His skin was a mess, from what I heard… I'm gossiping; that's not good.

Foam latex may absorb remover, so be sure to apply it onto where the skin is attached to the appliance, as the foam may soak it up instead. *It is a sponge, after all…* Foam has a tendency to

swell and distort with removers too, so often it helps to tear off large unattached sections especially if they flop about and get in the way. *But take pictures because it's funny…*

With cap plastic encapsulated appliances, it is not uncommon to find that the cap plastic peels away from the silicone. Essentially, the plastic may just be bonding better to the skin that the silicone.

Because cap plastic is so thin and clear, it may not be obvious so ensure the remover gets under the appliance and onto the skin where the remover can work on the glue to unstick it. *I've found that if it's the alcohol soluble cap plastic like Super Baldiez, using alcohol to remove or dissolve the encapsulate can actually get the dissolved plastic into the pores and become a real hassle to get off the skin then…*

Hot Towels

After the bulk of the piece is off, hot face cloths work wonders to loosen remaining glue and feels fantastic after a day under makeup. Hot water can be used to soak the face cloth first, and then be twisted to dry. However, heating a damp cloth in the microwave works wonders too. Just be sure to check the towel isn't so hot that it can cause burns - wave it around and allow it to cool to a sensible temperature. If it is too hot on your hands, their face is probably going to feel the same!

To finish

A good skin cleanser and moisturiser work well as a final flourish to help skin recover from a days prosthetic makeup wear. Most prosthetic glue removers have some kind of oil content, and this greasy film can be removed afterwards using a cleanser or from simply washing the skin as normal.

If the makeup has to be applied many times in a row, you need to take care to reduce irritation as much as possible. This may mean taking rest days, thinning the glue down and using good moisturising and face creams. Most appliance makeups are wanted once or twice, but regularly appearing characters may well need to have rest days from prosthetics as part of their routine.

If you have a question or suggestion for us to cover, then please get in touch.
We set up an email just for these suggestions! It's stuartandtodd@gmail.com