

Winn Mountain Restorations, LLC

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A Short Primer on Glazing Your Windows

Before you start:

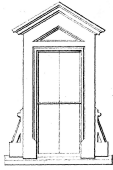
- Prepare a work area, either flat or an easel to hold the sash
- Be careful about lead! Conduct all work in a tray or area protected by plastic with a rim to keep paint and old glazing from being tracked elsewhere. Use a spray bottle with a small amount of detergent (i.e. Simple Green) added to the water and keep your work wet to minimize dust. Wear an apron, shoe covers and dust mask (N100 rated) to protect yourself and keep all exposed clothing separate from family laundry. Wash thoroughly whenever you leave your work area and do not let children in the area. Shop vacs are not allowed as they can spread the lead dust. For more info. see www.epa.gov/lead

Removing the old putty

- First look at the glass you are working on. If there are cracks or broken pieces, it may be advisable to tape them over at this time to make work easier and safer. Use blue painter's masking tape for easy removal.
- You can soften the old glazing using either steam (preferred) or a heat gun set on low volume and low temperature and with a deflector. The steam can be from a garment steamer or even a wall paper steamer. If doing a number of sash you can build a simple steam box and make the job much, much easier. In my shop, I use a very large commercial steam chamber for getting all of the old glazing soft enough to glide off in most cases. If using a heat gun, be aware of the lead-safety issues (mostly related to the paint) and use care in keeping the heat off of the glass directly. You can shield the glass using a piece of sheet metal with a backing of pressed cardboard (like found in a cereal box or back or a writing pad). Tin foil on corrugated cardboard does not work very well, but flat pieces of step flashing (about 5"x7") can be purchased from a lumber yard or hardware store and works quite well. Heat a small area and carefully work your way into the glazing using a stiff putty knife or a scraper, being careful to avoid scraping the glass. Do not worry about getting every last bit of the old glazing off of the glass at this point – you can do that as you clean it.
- Remove glazing points by gently prying out with a stiff putty knife or using a pair of side cutting pliers that are sharp all the way to the tip. Use the pliers to gently grasp the sides of the points and pull out. A thin piece of sheet metal (also know as shim stock) can be used to shield the glass if you slip – it happens.
- Carefully press the glass outwards to remove it from the back-bedding. You may need to scrape the edges (use a dental pick or other fine tool and be careful to avoid stressing the glass). Sometimes it helps to warm the glass slightly. Place the glass in to a bucket filled with warm water and a bit of detergent to soak. You should also note down the order in which you are removing the glass if you want to replace it in the exact same way.

Preparing the wood

- Use your heat gun to soften up any remaining glazing and scrape this out. If you are planning on repainting this is the time to get off whatever you need to. Seal all paint and glazing in an airtight container and dispose of properly.



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- Scraping is preferred to sanding as you do not want to raise dust. If you need to sand, either wet sand or use a sander connected to a HEPA vacuum. This can be the most hazardous step in terms of causing lead pollution so use caution.
 - If there is damage to the wood, use a structural epoxy like Abatron to make repairs or a consolidant to firm up soft wood. Thin strips of wood can also be glued in to place to replace failed glazing bars (very common). Use wood from other old sash (tends to be finer grained than new wood) and glue in using a waterproof glue like Titebond III.
 - Prime the area to be glazed with a 50/50 boiled linseed oil and Turpentine mixture. Be aware that “modern” turpentine can have a foul odor – I use either balsam turpentine (special import) or Recochem as it doesn’t smell so bad. I do this treatment to the entire sash and wipe off the excess after 10-15 minutes. Be sure to dispose of your rags in a bucket of water or hang to dry as rags with linseed oil can combust if left piled up.
 - Priming your sash before glazing (except the rabbets where glazing will go) is a good step at this point. You can lightly sand the dried primer (watch all those corners!) so everything is paint ready when the glazing is dry

Back bedding

- The back bedding of the glass provides a weather tight seal and also keeps condensation from rotting out the sash from the inside. Do not skip this step! Avoid the use of silicones as they are difficult to paint and subject to mildew.
- Apply a back bed of putty. You can use a small ball of putty in your hand and work it though to your thumb, applying a small amount continuously along the entire glazing rebate. No need to tool it as it will flow out a bit as you set the glass.

Replacing the glass

- If replacing glass, cut to 1/8” smaller than the width and height of the opening. There will be some exceptions but this is a good rule of thumb. Do NOT do an exact fit of the glass as this will cause stress and cracking – including the poor soul who must deal with this when the sash needs re-glazing.
- Seat your glass in the back-bedding by gently pressing and wiggling the pane to work it into the putty. Don’t over do it but you want to make sure you have contact all around the edge. I prefer to leave about 1/16” of putty in the back bed. Another trick is to use a small sander (WITH ALL ABRASIVES REMOVED) and a cloth over it to vibrate the glass into place. The sander technique works very fast but be careful not to squeeze out all of the back-bedding.
- Set your glazing points. Make sure they are set in far enough that they will not poke through the finished glazing and that they flush to the glass. On smaller panes it is sufficient to set one point per side. Figure every 12 inches or so for larger panes of glass and on very large and/or heavy glass consider using a 1/2” triangle point.
- Trim the back bedding even with the muntins by using a putty knife and carefully removing the excess. You may need to stroke the putty in the opposite direction to smooth it over. Also a good time to clean the inside glass again.

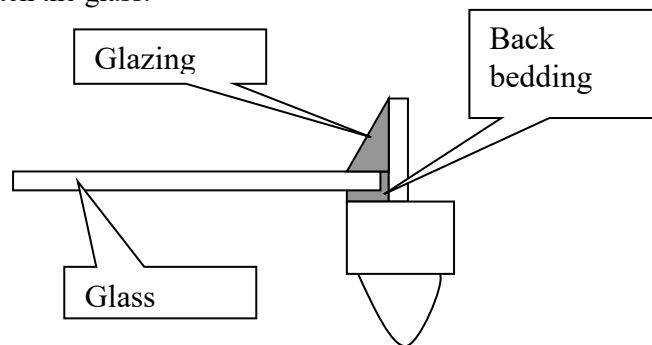


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Glaze and paint

- Apply your final glazing. Everyone has their own preferences, whether you roll it up or just use the ball of putty in the hand applied with the thumb, just make sure you press in well enough to get good contact on the edges.
- Tooling the putty. Using either a flat, flexible or bent nose putty knife, work the putty into a smooth triangle between the sight line of the interior side and the top of the glazing bar. You can use a rag dampened with turpentine to keep the knife clean (and also for cleaning up). Do NOT dip your knife in turpentine or oil or anything else when glazing – this will affect the glazing and may lead to a number of issues. I have achieved best results using a smooth thin (flexible) putty knife but have observed pulling of the putty on thicker knives with a square edge at the working end. If you find this is happening you may wish to use a whetstone or fine sandpaper to bring the edge to a true knife like profile. Make sure to dull the corners so you do not have a very sharp corner which can scratch the glass.



- After about 3-4 days (9-12 days for Dual Glaze) the putty should skin over enough that it does not stick to your finger when you brush it across. Times may vary with temperature and humidity but this is a general rule. For Type M, the sash should be inside and can have a fan blowing across them to help this along. The putty drying stages are; oily skin, soft skin and then sandy/dry skin – you want the last one.
- In all painting of glazing, the paint should flow on to the glass for about 1/16” of an inch edge in order to seal the putty. NEVER use a razor blade to cut into the putty edge once it has dried or to trim your paint line. You can use a large drywall knife set along the edge of the glazing and then use a FRESH razor blade to score and peel away excess paint of you need to.
- Final paint should be 2 coats of a high quality acrylic applied as per the manufacturer’s instructions. It is not necessary to prime the glazing. Allow plenty of time for it to dry – no sense getting impatient now and ruining all you hard work.

I hope this helps. Feel free to e-mail me at info@winnmountainrestorations.com with any additional questions or suggestions to make this clearer.

Andrew Roeper