

# Care & Maintenance

## OVERVIEW

With proper due care and attention, your AcryliCo windshields and windows should afford you many years of trouble-free service, can keep your boat transparencies looking and performing like new. Through a basic understanding of acrylic and its properties, and by using the proper care products and techniques your AcryliCo products should afford you trouble-free service.

First, most windshields are acrylic plastic, as opposed to “Lexan” or polycarbonate, and therefore regardless of hardening treatments and protection, acrylic is a scratchable material. Therefore proper care involves avoiding scratches which are preventable by taking due care and attention with those which are not. Thus when cleaning a window, always remove as much (abrasive) dirt as possible without touching the surface. Ideally this would involve flushing the surface with clean water and allowing the accumulated residue to soak. You may find by adding a little dish washing liquid to the water, the soaking process is improved. If a little rubbing is required, do this lightly with your bare hand. After a final flushing with clean water, carefully dry with a clean lint-free soft cloth. This should be followed by the use a good grade cleaner/polish specifically intended for acrylic windows, following the manufacturers directions.

There are many different brands for cleaners and polishes, and everybody seems to have a favorite; from the most adequate offering excellent results, to those which are very poor or even dangerous. The best ones, which are specifically designed and formulated to be safely used on acrylic plastics, tend to be the commercial ones, and will always not only offer the best results, but more importantly be free from solvents, abrasives or other chemicals which could affect the longevity of your windshield and windows.



The bad ones, include those which are highly aggressive to acrylic and formulated with chemicals for glass windows or furniture polish. Glass cleaners invariably contain ammonia, an absolute killer on acrylic. Therefore, DO NOT use anything containing ammonia on acrylic plastics since it will cause ‘crazing’ — an effect causing thousands of microscopic cracks — in short order.

Furniture polish appears to be safer, but its long term use is undocumented and reports indicate it builds up and produces smears which can be hard to polish off. Besides, furniture polish is intended for indoor use on furniture, not boat windows. Furthermore, it’s not much less expensive than many acrylic window cleaning products, so we would strongly advise focusing on products only intended for use on acrylics.



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## MICRO ABRASIONS TREATMENT:

Good and safe care products vary in their properties and ease of use, so if you are not satisfied with the results of one, try a different brand. We recommend you talk with other boaters about what they are using, or check boating blogs on-line. Whatever your choice, the safest route is to choose a product intended for use acrylic windows.

Other products we recommend you never use, include any aromatic solvent, such as MEK, acetone, lacquer thinner, gasoline — a minor fuel spill should do no harm — and, least of all paint stripper. For the removal of masking tape residue or other sticky or greasy stuff, the safest solvents are 100% mineral spirits or kerosene. Some alcohols are safe, such as isopropyl alcohol, but not all, so please check the labels for warnings.

Concerning polishing cloths, we recommend use the softest cotton cloth available. One hundred percent cotton flannel is ideal and available in good hardware stores. Old washed-out 100% cotton T-shirts are an excellent alternative. We at AcryliCo have never found a paper product which did not scratch or cause swirl marks; even those as advertised for cleaning plastics. Besides, one additional benefit of cotton cloth is that it can be washed, thereby effectively recycling the material. Recently micro-fiber cloths have become a popular alternative to cotton and we have found them to be safe and achieving a good result.

Your choice of cleaner/polish should also be based upon what is required. In essence, determine what type of care is needed, and then pick the best products to do the job. Before commencing treatment, it is best to understand what types of products are available, and they can be loosely grouped into these three categories:

1. Non-abrasive liquid sprays, in pumps or aerosols, with or without scratch filling properties.
2. Non-abrasive creams with scratch filling properties.
3. Mildly-abrasive creams with scratch removing properties.

Since over time all windows accumulate minute scratches as part of everyday wear and tear, cleaning and maintenance will be required. So, for those types of micro scratches which cannot be felt with a fingernail but can visibly be seen when flying into the sun, we recommend use of those products which can fill ultra-fine scratches, and importantly, are safe for regular use. However, if after such treatment, their presence can still be seen when flying towards the sun, then the abrasive variety with some elbow grease will be called for. However, it is very important this type of cleaner should be used only occasionally as and when required. Most manufacturers of abrasive cleaners will usually recommend a follow-up treatment with a scratch filling product as a second step.



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## DEEP VISIBLE SCRATCH TREATMENT:

In the event and misfortune of a deeper scratch affecting the finish of your windshield, which cannot be remedied using the previous method, then a more aggressive treatment will be called for, but great care must be taken so as not to ruin the finish of the windshield. The danger, here is to be gentle and not getting carried away with an overly assertive initial treatment. Practically speaking, the only way to remove a scratch from clear acrylic is to remove the material from around the scratch down to the greatest depth of the scratch, then polishing the window back to clarity.

However, there are two problems with this process. Firstly, polishing back to clarity can become a difficult process, especially if a coarser than necessary abrasive has been used to wear down the surrounding area. Second, it is very easy to introduce an annoying and possibly deceptively dangerous optical distortion if a large enough area has not been prepared, in other words, reducing the surrounding area in a very mild gradient so distortion is kept to a bare minimum.

It is important to keep in mind some scratches are best left alone because sometimes the cure can be worse than the ailment. Should the course of remedy be taken, elementary to success is time and patience. Working with only the finest abrasive, it is important to wear down the surrounding area very gradually, working a large enough area to prevent optical distortions. As a measure of caution, we would highly recommend you practice on a scrap piece of acrylic first, to ensure the correct result can be achieved first before tackling your windshield or window.

The 3M Company, Meguiars, Micro-Surface (Micro-Mesh), and other brands all supply kits capable of completing such an undertaking — with the aid of patience and time. The kits usually consist of multiple elements and progressively finer abrasive sheets or creams used sequentially thus removing the defect and ultimately polishing the transparency back to clarity. Our personal favorite product is the Satinal pad made by Transelco. This one-time-use pad is dipped in water which then creates a 5-micron slurry and will remove fine scratches and polish back to clarity in one step. When used in conjunction with 600, 1500, or 2000 grit wet sandpaper, it is capable of removing deeper scratches, but once again we believe it would be best to practice on scrap material first to ensure the correct result can be achieved.

In conclusion, we can say there is no fast and easy way to polish your windshield to perfection, and hence any treatment will require much care, attention to detail, and above all, patience and time. Finally, if your windshield is made from polycarbonate, or “Lexan,” then regrettably there is no good way to remove scratches. Polycarbonate is so soft that any attempt to remove material by abrasion will do more harm than good. Even for the hard coated varieties of polycarbonate which are less vulnerable to scratches, trying to repair a scratch in these will only remove the hard coating. In such instances, your only option will be to fill minor scratches with a scratch-filling polish or replace the window.

