

C.R. LAURENCE CO., INC.

CRL 3M™ Trizact™ Scratch Removal System

- 3M™ Trizact™ Films - A Cleaner, Long Lasting Abrasive System for Glass Scratch Repair
- Starter and Professional Kits are Both Easy to Use

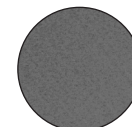
C.R. Laurence introduced 3M™ Trizact™ Abrasive Film to the glass industry. This material uses natural abrasive formed in the shape of small pyramids, and provides uniform layers of abrasive throughout the pyramid. As abrasive particles are exposed and used, they fall down and are flushed away between the pyramids.

This easy-to-use system uses five grades to go from a fine ground finish on glass to absolutely clear! It is perfect for scratch removal, edge finishing and a variety of other applications. No more messy slurries and contamination problems!

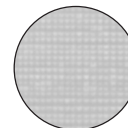
The potential for this material in your glass fabrication process is amazing! For a small investment, you can purchase equipment and supplies to remove scratches in flat and curved glass, and to create your own finished products, including "high polish" work.

3M™ Trizact™ will remove light or deep scratches, scuffs, wiper marks, and stains on a variety of glass surfaces. Makes an old windshield or table top look like new again!

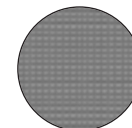
3M™ Trizact™ should always be used wet, with plain water. Polish requires using each grade long enough to remove all scratches from the previous grade. If this is not done, small effects will remain in the finished product. When using "high polish clear" (cerium), work surface must be flushed with water between stages to remove loose abrasive.



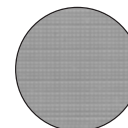
20 Micron - A20
Refines Scratches,
Removes Scuffs
Made by Grade A35



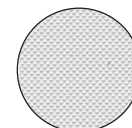
35 Micron - A35
Removes Large
Scratches and Defects



5 Micron - A5
Refines Finish Made
by Grade A10

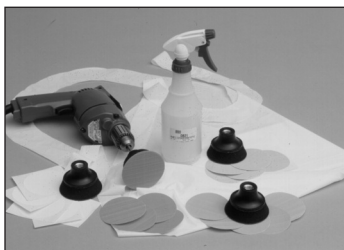


10 Micron - A10
Refines Scratches,
Removes Scuffs Made
by Grade A20



Cerium
Polishes and Leaves
Glass Crystal Clear

CRL 3M™ Trizact™ Scratch Removal Starter Kit



Drill Not Included

- The Best Way to Start Using Trizact™ Discs
- Uses Your Hand Held Electric Drill

Each Kit Includes:
1/4" Shank Adapter
Spray Bottle for Water
Plastic Apron
Marker
Full Instructions

Five Each 3M™ 3" Disc Pads
Five Each 3M™ Trizact™ 3" A35 Discs
Five Each 3M™ Trizact™ 3" A20 Discs
Five Each 3M™ Trizact™ 3" A10 Discs
Five Each 3M™ Trizact™ 3" A5 Discs
Five Each 3M™ Trizact™ 3" Cerium Discs

- Includes Five Disc Pads for Quick Change-Out of Discs

CAT. NO.	DESCRIPTION
ZSRPSSKM	Starter Kit for Flat Glass

CRL 3M™ Trizact™ Professional Scratch Removal System



- Developed for Professionals

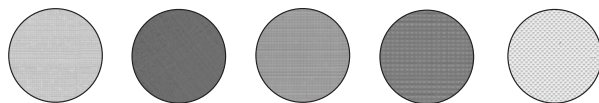
New, more powerful 115 Volt or 230V Electronically Controlled Center Water Feed Polisher with built-in ground fault circuit interrupter. CRL's new on-demand water delivery system and pressure tank makes this system easy to use. This high torque polisher comes equipped with a center mount "C" Handle for added stability and control.

This Kit Includes:

10 Each of the Five Different Grades of 3M™ Trizact™ Abrasive Discs
Five Each 5" 3M™ Soft Disc Pads
Eight Ounces Glass Polishing Compound
115V AC or 230V Center Water Feed Polisher
Pressurized Water Delivery System
Full Instructions and 3M™ Applications Guide

CAT. NO.	DESCRIPTION
ZSRPSM	Scratch Removal System for Flat Glass
ZSRPSM230	230V

CRL 3M™ Trizact™ Discs



3M™ Trizact™ Discs with pressure sensitive adhesive backing can be used with our 3M™ Disc Pads, as well as our Scratch Repair/Polish System. Larger discs, belts and sheets are also available. Contact CRL Technical Sales at (800) 421-6144, Ext. 7720.

CAT. NO.	GRADE	DESCRIPTION	COLOR
TD335P	A35	3" Disc	Green
TD320P	A20	3" Disc	Pink
TD310P	A10	3" Disc	Blue
TD35P	A5	3" Disc	Orange
TD3CP	Cerium	3" Disc	White
TD535P	A35	5" Disc	Green
TD520P	A20	5" Disc	Pink
TD510P	A10	5" Disc	Blue
TD55P	A5	5" Disc	Orange
TD5CP	Cerium	5" Disc	White

Important Things to Know Before You Start

Use of water.

It is very important to avoid generating too much heat. A carefully controlled water flow will keep the glass cool and reduce the chance of breakage. Water also helps to start the cutting action of the aluminum oxide grades and to form the slurry for the final polishing step. Too much water on the final polishing step, however, will wash away the cerium oxide particles that form the slurry and no polishing action will occur.

Cleanliness, cleanliness, cleanliness.

CRL's 3M™ Glass Defect Repair System utilizes a sequence of progressively finer grades of abrasives. Contamination from abrasive particles left from previous grades can cause micro-scratches that are visible after the polishing step. Cleanliness is the key to such scratch prevention.

A few tips to prevent scratching:

- Keep tools and work area clean. When not in use, set the sander on it's side so dirt is not picked up on the working surface.
- Use an ample amount of water from the tool, or spray bottle, and a soft paper towel to thoroughly remove any residue and loose particles from the entire glass surface between each abrasive step. Use clean paper towels each time.
- Wipe the debris off the sander frequently. Pay special attention to the center hole area, the sander shaft, and the casing.
- Use a designated back-up pad for each grade of abrasive.
- Always designate a separate back-up pad for the final polishing step (white). Abrasive residue and glass particles from previous grades (A35, A20, A10, A5) may contaminate the pad and cause scratching. CRL Cat. No. C0301 Cerium Oxide may be used with the cerium oxide disc only.

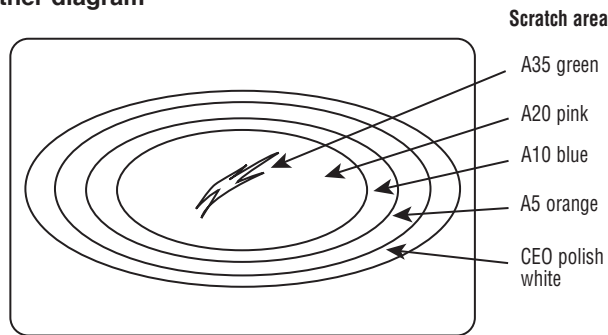
Let's not forget about technique.

There are a few polishing techniques that should be followed to get optimal results from this system.

A few tips on technique:

- Always begin polishing by applying a small amount of water to the surface. With the sander running, gently contact the surface. Apply firm, even pressure sufficient to comfortably maintain surface contact. Sanding should be done with small overlapping strokes of the tool. Moving the sander in a clockwise circular pattern helps to reduce jerking. Do not dwell in one area.
- Maintain continuous contact with the glass. Avoid lifting the abrasive off and on the glass surface.
- Lift sander off the glass before stopping it.
- Controlled water flow helps reduce heat and keeps the glass cool. If the glass gets hot, lift pad off the glass. Apply more water and fan the glass with the pad running 1-2" above the surface.
- Feather the work edge. Overlap each previous grade with the next finer abrasive grade as indicated.

Feather diagram



Let's Get Started

Step 1 - Scratch Removal

Prepare the surface. Use an ample amount of water (from the tool) and a soft paper towel to thoroughly clean the entire glass surface.

Determine the severity of damage. If the scratch is deep enough to hook a fingernail, start with the green A35 disc. For shallower scratches, scuffs, or acid marks you may be able to start with the finer pink A20 or blue A10 disc. Some trial and error may be necessary to choose your starting abrasive grade. If you begin with too coarse of grade, unnecessary work will be done to the surface. Too fine of a grade may not remove the scratch.

Wipe the face of the back-up pad clean and dry. Remove the selected abrasive disc from it's liner. Press the disc firmly in place ensuring good adhesion to the back-up pad. **Note:** PSA discs will not adhere well to a wet back-up pad.

Apply a small amount of water from the sander to the glass surface.

With the sander running, gently contact the surface. Apply firm, even pressure. Tilt pad until 1/2 to 1/3 of the pad is in contact with the surface. Do not tilt too much. Sanding should be done with small overlapping strokes of the tool. Do not dwell in one area.

Remember: If the glass gets hot, lift pad off the glass. Apply more water and fan the glass with the pad running 1-2" above the surface. Temperature on tempered glass should not exceed 175°F. Softer glass requires a lower temperature. Lowest temperature for successful operation 110-115°F.

Wipe residue from the glass. Inspect to see that the scratch has been removed or "bottomed out".

Step 2 - Scratch Refining

Use an ample amount of water (from the tool) and a clean paper towel to thoroughly remove any residue and loose particles from the entire glass surface.

Use a designated back-up pad for each grade of abrasive.

Repeat the process using the next finer grade. This will be the pink A20 disc if you started with the green A35. If you started with pink A20 disc, you should now be using the blue A10 disc. Remember to overlap your previous work area slightly using the feathering technique described earlier.

When you think the scratches from the previous grade have been refined, wipe the surface clean and inspect the surface. The damaged area should have a hazy or cloudy appearance with no deep scratches remaining.

If you were using the A10 disc, repeat the process with the orange A5 disc. After you have completed the process with the orange A5 disc, you are ready to begin the final polishing step.

Step 3 - Final Polish

Cleanliness is of the utmost importance in the final polishing step. Thoroughly clean the glass surface with water and paper towels as in previous steps. Then use Cat. No. 1973 Glass Cleaner to assure that all dust and stray particles have been removed.

Use a fresh back-up pad that has been designated solely for the final polishing step. Be sure to clean off the residue that may have accumulated on the sander, paying special attention to the area around the sander shaft.

Clean possible contaminants from the polishing disc (white) with an air nozzle or clean water before use. The filtered water from the sander is convenient.

Remember: Jerking of the sander as you polish can cause scratches. Avoid this by maintaining firm pressure.

Apply a small amount of water, approximately a 1-2" diameter puddle, to the glass surface. With the sander running, bring the pad down flat onto the surface. Begin polishing with the pad flat, moving slowly in a clockwise circular motion, working from the outside of the work area to the inside. Do not leave the fringe areas to polish last.

After a few seconds of polishing, a milky looking slurry will form. Continue polishing until the slurry is dry. Add more water while the pad is still in contact with the glass and run until the slurry is dry again. Repeat this process as many times as necessary until the glass is visually clear (usually 2-3 times). Remove all residue that remains on the last pass by polishing dry. Lift the sander off the glass near an edge to minimize the possibility of scratching caused by residue being redeposited onto the surface.

Wipe the surface clean and inspect carefully. The glass surface should now be scratch-free and crystal clear.

Overcoat Removal

Defective coatings can be removed by starting the abrasive sequence with the orange A5 disc.

Sand the entire surface of the glass with the orange A5 disc. Use the same procedure as used for scratch removal (see Step 2).

After the coating has been removed, polish the surface using the procedure indicated as in Step 3.