



PROCOUSTIC APPLICATION GUIDE

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For:
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This Guide is intended for the specific use in the application of ProCoustic Acoustical Tile & Ceiling Coating and its system components and is not intended for any other application. Using this Guide for other product applications is at the users own risk. Some products of the ProCoat System will work for other painting applications. Contact ProCoat Products for information on these products.

COMPONENTS OF: ProCoat Products, Inc.

ProCoustic Acoustical Tile & Ceiling Coating 1 gallon cans and 5 gallon pails
ProCoustic Acoustical Tile & Ceiling Coating Neutral Base 5 gallon pails
ProCoustic Acoustical Tile & Ceiling Coating Deep Base 5 gallon pails
ProCoustic Acoustical Tile & Ceiling Coating Black 5 gallon pails
ProCoat Acoustical Tile & Ceiling Cleaner
ProCoat Hard Surface Cleaner
ProCoat PolyCover 1 mil 400' X 20'
ProCoat PolyStick Adhesive Spray
ProCoat Acoustical Tile Restorer (in aerosol) Ultra White to match ProCoustic
ProCoat Easy Reach Spray Adapter
ProCoat Easy Reach Masking Remover Plier (8')
ProCoat Fixi Clamp
ProCoat DualTack Tape
ProCoat Soft Sweep Electrostatic Broom

INTRODUCTION

This Guide has been created as a reference tool in the use of ProCoustic Acoustical Tile & Ceiling Coating and its system components. The format is designed to help guide applicators through the project with step by step procedures to be used for the total restoration of structurally sound acoustical ceilings ... particularly in occupied spaces. However, this is a “Guide” and not a guarantee since the success of any project is dependent on the applicator skill level and conditions that can only be assessed first hand.

The Guide contains a Table of Contents for quick reference. Specific product information sheets (Technical Data and MSDS) are not contained in this Guide, but will be provided upon request.

For any questions not addressed in this Guide, please contact our corporate office at 781-767-2270. This Guide is subject to change without notice. To receive updates, contact ProCoat Products, Inc.

Abbreviations will be used for the following items:

ProCoustic Acoustical Tile & Ceiling Coating	PCW
ProCoat Acoustical Tile & Ceiling Cleaner	TC1
ProCoat Hard Surface Cleaner	HSC
ProCoat PolyCover-1 mil X 400' X 20'	POLY
ProCoat PolyStick Adhesive Spray	ADHES
ProCoat Acoustical Tile Restorer (in aerosol)	ATR
ProCoat Soft Sweep Broom	SSB
ProCoat Easy Reach Spray Adapter	ERSA
ProCoat Easy Reach Masking Remover	ERMUR
Double Sided Tape	DST
Square Foot	SF

TABLE OF CONTENTS

	Page
Introduction	
Abbreviations & Descriptions	
Area Preparation	
Chronological Order of The ProCoat Process-	-2
Wall Preparation -	-2
Poles/Columns- -	-2
Masking Light Fixtures -	-3
Masking Sprinklers-	-4
Sealing Seams/Dust Prevention-	-5
Area Encapsulation-	-5
Hanging Curtains-	-6
Ceiling Preparation	
Soot, Dust, Dirt- -	-6
Water Stains- -	-6
Priming--	-6
Nicotine/Grease--	-7
ProCoustic Preparation- -	-8
Spraying- -	-8
Equipment -	-9
Techniques- -	-9
Rolling- -	-8
Brushing- -	-8
General Applications Precautions--	-9
Tinted ProCoustic-	-10
Tinted Application & Coverage-	-10
Non-Acoustic Tile Surfaces	
Plaster- -	-11
T-Bar & Grids -	-11
Air Diffusers & Returns-	-11
Speaker Plates- -	-11
Typical Surfaces	
Standard Mineral Board Tile-	-11
Vinyl Covered Ceiling Tiles-	-12
Glacier Ceiling Tiles-	-12
Tectum Ceiling Tiles/Deck-	-12
Non-Typical Ceiling Surfaces	
Metal Pan Tiles- -	-12
Custom Colors- -	-12
Blown Insulation/Acoustic Materials-	-13
Galvanized Metal Decking w/ Insulated Batting-	-13
Designer Tiles/Colors -	-13
Miscellaneous Substrates-	-13
Safety Precautions- -	-13
Masking Materials Removal/Clean-up-	-13
Touch-up Materials/Spills -	-14
Summary Statement- -	-14
Appendix A Tinting Instructions	
Contractor Tool Requirements	

AREA PREPARATION

The age-old adage that "A job is only as good as the preparation" is as true with **ProCoustic** as it is with the application of any product. The building owner/property manager will not appreciate the best ceiling restoration job if there is over spray on the walls, spray dust on desks and a mess on the floor. For best results, particularly in occupied areas, a complete encapsulation/enveloping of the area is strongly recommended. At one time, this was viewed as an overwhelming task, but not today. The availability of 1-mil POLY 20 feet wide, DST and masking applicators, and even stilts (where allowed), makes the preparation phase of the job faster, more economical and professional.

CHRONOLOGICAL ORDER OF THE CEILING RESTORATION PROCESS

1. Clear area to be restored of merchandise and furnishings, along the perimeter walls if possible or if necessary to reach the perimeter grid
2. Apply double sided tape (DST) along the top of the wall, around the perimeter
3. Mask lights, sprinklers and miscellaneous fixtures along perimeter
4. Mask remaining lights, sprinklers and miscellaneous fixtures on the rest of the ceiling
5. Attach 1 mil X 20' x 400' ProCoat ProCoat PolyCover(POLY) to the DST
6. Seal room by overlapping sheets of POLY using PolyStick Adhesive Spray(ADHES)
7. Sweep/vacuum ceiling of surface dust, soot and other loose material
8. Clean ceiling if necessary with ProCoat Tile & Ceiling Cleaner(TC1) or ProCoat Hard Surface Cleaner(HSC)
9. Prime/seal all dry water stains (allow recommended dry time)
10. Mix & strain ProCoustic(PCW) (preferably before coming to job site)
11. Spray ceiling with PCW
12. Prior to the take down of masking materials, (inspect ceiling for missed spots)
13. Allow product fallout time (10-15 minutes)
14. Remove masking materials from lights, sprinklers and miscellaneous fixtures
15. Take down perimeter POLY
16. Discard POLY and other waste materials

WALL PREPARATION

- Attach DST(or equivalent) along the top edge of the wall (**see illustration 1.1**), just below the grid, along the entire perimeter. Use caution when attaching it to wallpaper, poorly primed or freshly painted walls. Ensure that the DST does not touch the perimeter grid, as it will result in that tape covered area, not being sprayed.



In areas where wall surfaces are in poor condition or recently painted, semi-tack tape can be substituted on the dispenser but additional pieces should be used below, in corners. The use of pushpins is also highly recommended in these cases as well as in high humidity areas.

Make every effort to use a continuous strip of DST. Tape conduit and other perimeter obstructions by going over them. Do not slide the DST behind them, as this will slow the take down of the perimeter walls once the ceiling has been completed.

1.1.

- In corners, attach an additional piece of DST, about 1-foot beneath the initial piece (**see illustration 1.2**). This piece of DST will help hold the corner section of POLY from being peeled or ripped away, providing extra strength.

Mask all columns and poles in the same fashion as walls.



1.2

Add strips of DST as necessary in areas where the POLY might be vulnerable to peeling away from the walls, especially on wall surfaces with poor adhesion such as brick and cement. Common accidents such as tripping over POLY do occur. Having added strength, especially in corners, can save time and money. Rub the taped plastic while continuing to hang. When attaching the POLY where additional pieces of DST have been applied, make sure to attach the POLY to the top perimeter piece of DST first, then attach the POLY to the additional strips of tape below.

NOTE: Always overlap adjoining ends of the DST and always go in a clock-wise manner when hanging the POLY and the DST. You will use the clock-wise method when removing the POLY.

- Once the DST is in place, begin to unroll the 1 mil POLY. 1 mil is optimal for hanging off of the DST (heavier mil POLY results in too much weight on the DST and may result in the tape peeling off of the wall, while lighter than 1 mil tends to rip/tear too easily). Unfold only enough POLY to expose the width - edge and hang it onto the DST (**see illustration 1.3**), as it will be easier to move your staging while the POLY is folded together. The width edge will hang vertically.



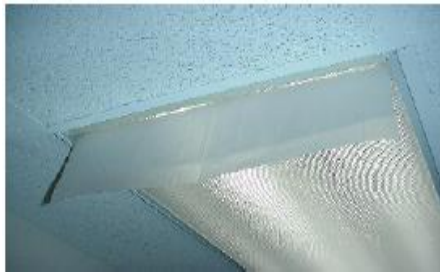
1.3



1.4

Rub the orange taped POLY while continuing to hang. When attaching where additional pieces of DST have been applied, make sure to attach the POLY to the upper piece of DST before attaching it to the lower piece of DST.

- Prior to hanging the POLY, ensure that any lights (**see illustrations 2.1-2.10**), sprinklers (**see illustration 3.1**) and miscellaneous ceiling fixtures (**see illustration 3.2**) along the entire perimeter walls have been previously masked.



2.1

Using 48" pre-taped clear masking film speeds up the job and avoids the need for substitute lighting. Cut the strip with a knife or scissors **no more than 22" wide**. Hang film by the pre-taped edge as shown.

Go to step 2.



2.2

STEP 2 Hang a piece of 2" tape along the opposite end of the light shield, from the light frame. No need to be concerned about it being too long. The edges will be trimmed once all sides are taped.

Go to step 3



2.3

STEP 3 Unfold film and tuck it up underneath the tape at opposite end of light. Make it snug. Keep film straight as possible when attaching it to tape.

Go to step 4



STEP 4 Hang tape along sides of light shield from frame. It is helpful to create a tab on one end for easy removal after the ceiling is restored.

Trim and remove excess tape that covers any grids. Make a tab in one corner of the light using the tape.

This process works for 2X2 lights as well using 24" masking film.

CAUTION: When spraying track light fixtures, ensure to run a piece of masking tape down the interior of the light to protect the connectors. The same applies to masking the exposed tube light end connectors.

2.4



2.5



2.6



2.7



2.8



2.9



2.10



3.1



3.2

Using a HandMasker to mask sprinklers, cut a strip of paper long enough to go around the top edge of the unit plus more to achieve an overlap. Attach the paper around the base of the unit and then roll up towards the top of the sprinkler and crimp. Make a tab with the paper.

CAUTION: Avoid breaking ballast of sprinklers as it will set off the sprinkler system.

NOTE: Other ceiling fixtures should be masked in a similar fashion as the above illustrations. Using masking paper on a dispenser is cost effective and speeds up the masking procedure. Other methods for sprinklers can be the use of aluminum foil or rubber gloves.

- When attaching the POLY to the DST, move in a clockwise direction. Where the POLY becomes taught, bring it back to the left and overlap, creating slack and a loop. Tape the loop and continue hanging. Repeat process as necessary. Once poly is hung, overlap adjoining edges and seal using ADHES.
- Attach the POLY to the exposed, orange side of the DST ensuring that the POLY does not touch or extend over grid. In corners, make sure to also attach the POLY to all strips of DST that were previously applied (see illustration 1.3 & 1.4).
- Once the POLY has been hung along the entire perimeter, overlap the end piece about two to three feet onto where you initially began and seal the overlapped end by using the ADHES. Avoid spraying into eyes, onto body, or onto merchandise, furnishings, walls or floors. Check MSDS for procedures in the event of accidental spraying of the eyes & exposed skin (see illustration next page).



ADHES is the ideal choice over tape and other spray adhesives since it sprays in a flat fan, ensuring that overspray does not occur.

ADHES is a poly to poly adhesive only. Do not apply to other surfaces.

- Unfold the perimeter POLY to its full width, (20' is highly recommended for faster floor and wall coverage). Make sure that the POLY is as square with the base of the wall as possible. This allows the spray personnel ample room to work and to reach tight areas. This also helps to avoid tripping and snagging the POLY. Not providing sufficient room for the spray personnel **will** result in lost time, rips in the POLY from stress, possible missed areas and lost revenue due to the need to stop and repair holes/rips (see illustrations 4.1-4.3).



4.1



4.2



4.3

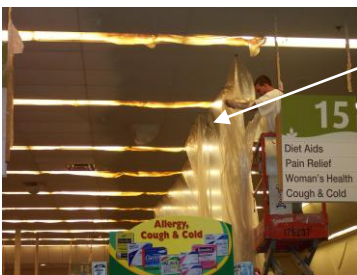
- In large areas, it will be necessary to use additional pieces of POLY to complete a given section. Unroll the POLY to desired length, cut, cover the area and then seal using ADHES.

NOTE: Where the POLY has torn or ripped, it is recommend to seal the holes/rips.

- After hanging the POLY from the walls, unfold it and begin covering the area. Make sure to square off the POLY as much as possible along walls, counters, shelving units and other permanent structures. Cut and paste additional pieces as needed to completely seal spray area. A complete seal will contain spray dust and help avoid the need to do additional cleaning after the job is finished.

CURTAINS

- In many cases for large areas, the sooner the sprayer is up and running the better the productivity. Curtain off small areas if the project can't be completed in one work period.



Hanging a temporary curtain is easily accomplished. Use 1 inch binder clips spaced about 4 feet apart and by rolling some of the poly into the clip, attach them to the grid system. If no grid is available, use ceiling fixtures as necessary, but avoid using sprinklers as a means to attach the POLY or tape.

- Techniques - The curtain itself consists of one or more pieces of POLY that are cut to the length and width of the desired curtain. Higher curtains can consist of two lengths of POLY with their adjoining edges bonded with ADHES. The simplest areas to curtain off are those that have t-bars and lay-in tiles.

CEILING PREPARATION

- Once the area is completely sealed, use the (SSB) soft bristle brooms on extension poles or a vacuum to remove loose soot, dirt and other debris from the ceiling, paying particular attention to cleaning vents/air diffusers and surrounding areas thoroughly. This should be done prior to cleaning and or coating (see illustration 5.1 & 5.2).



5.1



5.2

When removing dirt/soot and dust from ceilings, it is highly recommended that a dust mask and goggles be worn to prevent possible eye injury as a result of material falling into eyes

PRIMING/SEALING

- Water stains should be primed/sealed prior to coating the ceiling. If chemical cleaning is called for, water stains should be primed **after** the ceiling is chemically cleaned. It is recommended that a light misting of primer/sealer be used on all vents, especially on vents made of plastic or aluminum, and if rust is present.



6.1



6.2

Spot priming mixed colored tiles such as black and white is recommended especially those that are locked into place with fixtures (see illustration 6.2)



- To help expedite priming, use the Easy Reach Adapter (see illustration right)

NOTE: Nicotine, grease or other contaminants on the ceiling must be removed prior to applying any water based coating. Not cleaning may result in bleed through. See next section on "Cleaning".

CHEMICAL CLEANING

- When contamination (nicotine, grease) is suspected, apply a small amount of the coating on the tile and grid, in a remote area. If bleed through of contamination is visible, then the entire ceiling should be cleaned with the appropriate **ProCoat Products** cleaning agents.

NOTE: With any type of cleaning, proper safety precautions should be exercised!

ProCoat Acoustical Tile & Ceiling Cleaner (TC1)

TC1 is a two part cleaning system which, when applied to the entire ceiling, neutralizes and breaks down nicotine and other surface contaminants ensuring a good bonding surface and preventing bleed through.

- First sweep/vacuum ceiling to remove soot, dirt and other loose debris.
- Mix (1) bottle of Activator and (1) bottle of Concentrate into a gallon container and fill with warm water until a gallon of cleaner is made. Coverage is approximately 600-700 square feet per gallon.
- TC1 can be applied by airless, HVLP systems, or misted up with a lightweight backpack unit.

- Mist TC1 onto the entire ceiling surface. The TC1 should begin working immediately, neutralizing the contaminants. In some cases where the nicotine is particularly heavy, a second application of TC1 may be necessary. If there is still significant yellowing after spraying the TC1, spray the TC1 again before any wiping has been done.
- Use sponges on extension poles to wipe off all non-porous surfaces i.e., grids, speaker plates, vents and other non-absorbing materials. It is important to rinse the sponges in clean water frequently and avoid leaving streak marks (**See Illustration 7.1**).



7.1

A sponge pole allows the applicator to clean most of the ceiling, all from the safety of the floor. On most projects, getting up on a ladder and wiping vents is recommended to ensure that all residual cleaning material has been removed.

- There is no need to wipe the porous tiles, as they will absorb the TC1, unless the tiles are nonporous (See Vinyl Covered Ceiling Tiles).
- Remove all TC1 residue from the non-porous surfaces i.e., t-bars and air diffusers, to allow for a good bonding surface.

Not removing the TC1 residue will result in peeling/flaking of the coating at a later date.

- After the ceiling is cleaned, prime/seal any water stains, the coating can then be applied after a few minutes of good ventilation.

ProCoat Hard Surface Cleaner

HSC is used to remove grease and other contaminants from non-porous surfaces i.e., grids, vents, walls and other fixtures.

- First sweep/vacuum ceiling to remove soot, dirt and other loose debris.
- Mix 1 gallon of ProCoat Hard Surface Cleaner in with 2 gallons of warm water. Mist HSC onto surface and allow a few minutes for the chemical to work. Wet/dry vacuums can also be used to remove the cleaner residue, especially from vinyl covered ceiling panels. If using sponges, make sure to rinse the sponges frequently.
- The HSC can be applied by airless, HVLP systems, or misted up with a light weight back pack unit.
- Using an extension pole with sponge clamp attachment allows the grids and vents to be wiped from the ground. Use a sponge with high absorbency that will not leave any streaks.
- Application of the coating can proceed right after cleaning is completed if no priming is necessary.

ProCoustic Acoustical Tile & Ceiling Coating (PCW) Description

PRODUCT PREPARATION

PCW is a water based, acoustical coating, packaged in 5 gallon pails and single gallon cans. When opened, there may be a layer of thinner, yellowish material on top, since the solids have most likely settled to the bottom of the pail. Once PCW is mixed, it should have a creamy consistency and should stay creamy after mixing. Even if PCW is older than one year, it can still be used. To check for proper viscosity, mix product with a drill and beater, completely. Once mixed, pull the beater out. If the product drips off the beater and blends in, the viscosity is at the desired level. If the product drips and piles up, then the viscosity is still too high. Add small amounts of water until viscosity level is acceptable. If, after thoroughly mixing the product, it appears chunky (like cottage cheese), contact the dealer where the purchase was made. The coating may have been frozen and cannot be used after thawing.

- Mix PCW with commercial beater and electric drill for a couple of minutes, unless it has been previously shaken. It is recommended that PCW be strained to ensure that clogging of the spray tip is minimized.

NOTE: Most dealers will put PCW on a shaking machine and in most cases, shaking should be sufficient to blend all ingredients. Shake at a minimum of 5-7 minutes. For tinted ProCooustic, box product to maintain consistency of colors unless it has been manufactured by ProCoat in the desired color.

SPRAYING

The following techniques are recommended in the spray application of ProCooustic:

ProCoat highly recommends that when spraying ceilings, extension poles be used. Even on low ceilings, an extension pole is a valuable tool, allowing for better reach, avoiding spray dust in the face, maintaining a consistent spray pattern, avoiding too much build up on the ceilings and increasing productivity.

- Spraying – PCW was designed with spraying intended as the primary means of application.

NOTE: Unlike paint, a light, even coat is usually all that is required for PCW to totally restore the tile's surface to its original or better appearance. PCW should be applied at about 1 mil wet with a fifty (50) % overlap (**see illustration 8.1**). If flashing occurs, after the ceiling dries, then the coating was applied too heavily. If permissible, allow a day, view the ceiling, if flashing is still evident, mist up another even coat and allow it to dry. If time does not permit, mist up another, light coat in the opposite direction. This should help hide the flashing.



8.1

- Maintain good spray pattern
- 50% overlap
- Low pressure, just enough to obtain solid spray fan
- Keep tip proper distance away from ceiling
- Don't arc passes
- Use extension poles wherever possible
- Wear proper personal protection eyes/mouth/body

What Kind of Spray Equipment Can Be Used

- **AIRLESS OR VOLUME AIR MACHINES**

NOTE: *The success or failure of a spray application is more dependent on such factors as spray pressure, tip size, experience and adequate preparation, than it is on the machine itself.*

If a spray machine is capable of applying a typical latex paint it can be used to apply PCW.

- Mixing the ProCooustic prior to arriving on the job site is often more cost effective and less messy, especially where the project requires many pails. When straining bring along a rubber spatula for scraping the product from the sides and bottom of pails.
- Using a spatula avoids wasted product left in the pail and ensures that all of the solids (pigment) are used.
- Pick an area to start spraying, typically along a wall. Using good painting practices, spray the coating onto the ceiling in a straight line. Disengage the trigger before the wand is stopped on each pass. Doing so will help avoid build-up and lap marks.

SPRAYING TECHNIQUE

- **Airless Pressure** - The spraying of PCW is similar to a latex paint. Starting with a fluid pressure of around 1000 psi, increase the pressure until the "fingers" disappear from the spray fan at around 1600 to 1800 psi. This will ensure an even application (fan) at the lowest possible pressure, a minimum amount of overspray, and the best coverage per sf.

- **Tip Size and Type** – A 4 or 5 0.015 or 0.017 tip yields the best results on airless equipment. More applicators prefer the reversible tips versus non-reversible. If the ceiling is to receive multiple coats or colors, a smaller tip is recommended.

NOTE: With airless, keep spray tip the proper distance away from the ceiling, in accordance with type of tip being used i.e., 5-0.017 tip, keep the tip 10-12 inches from the ceiling.

- **Coverage** – PCW sprayed on flat tile surfaces can yield up to 300 sf. per gallon. *(For coverage on other surfaces, go to the section on each particular style of tile.)*
- **Volume Air Machine Pressure** – Spray at 12-15 psi
- **Nozzle Size** - Dealer can recommend the best needle, nozzle and seat combination for the application of a pigmented coating material. A nozzle that is too small will tend to retard the spray and impede production.
- **Rolling Technique** – PCW can be rolled on, but caution should be exercised. Using a flat, short napped roller, apply a thin layer of PCW in a north-south direction and then back or cross roll the area using a dry roller in an east-west direction. The dry roller will absorb the excess product allowing the pores of the tiles to open and will help remove lap marks. Applying too much of the product can result in flaking and peeling from the ceiling and very poor coverage.
- **Brushing** – It is not recommended that this product be applied using a brush.

GENERAL PRECAUTIONS

First time users of PCW who have prior experience spraying conventional paint, tend to:

- Use more material than is necessary - A light, consistent layer of PCW (1600-1800 psi @ 1 mil wet) is all that is normally necessary to achieve the desired results. Compared to conventional paint, the absorption rate is less, the pigmentation is higher, and the product has more stain blocking capability that resists some bleed-through. For best results, try to group older tiles, having different textures and colors, together. Try to keep a consistent line while spraying, but avoid lap marks by keeping the spray wand on motion even after the trigger is disengaged.
- Spray at too high a pressure – PCW is a finely ground material that atomizes at a lower pressure than does conventional paint. Spraying above the required atomizing pressure only result in additional spray dust in the air and wasted product and wet fall.
- On flat ceiling surfaces, overlapping passes in one direction with the spray fan perpendicular to the ceiling surface is all that is typically necessary to provide the desired results. On uneven surfaces, such as glacier ceiling tiles or recessed t-bars it is necessary to go north south and then east west (see glacier section).
- In most instances, every effort should be made to avoid arcing out into the air at the end of the spray pass. Arcing tends to waste material, create more spray dust in the air, and leave extra dried material (flashing) on the ceiling surface. Spraying from the floor using extension poles will allow for longer passes prior to arcing.
- Always keep spray tip in motion when pointed up at the ceiling. If the sprayer stays triggered while pointed at the ceiling, without moving, then the product will buildup on the surface and would need to be wiped off.

- **Tinted ProCoustic** - When applying tinted PCW, especially where tiles are revealed edge or deep fissured, spray technique should be such that the product is applied in all four directions – North, South, East and West. In order to achieve maximum effectiveness; apply the product in less quantity during each pass when spraying in all four directions to avoid over saturation of the tiles and non-porous surfaces.



It is especially important to utilize a spray wand when the surface to be restored is glacier, Tectum or some other highly textured or porous surface. A smaller spray tip is highly recommended.

In low light situations, using portable halogen lights are very helpful to maintain good sight lines and helps see missed areas.

9.1

Tinted Application and Coverage

- When spraying PCW tinted to a color, the amount of coverage is related to several factors such as type of surface, color contrast i.e., black to white versus white on white and spraying experience. On surfaces where paint might be used, expect that PCW will achieve better coverage than paint. An example of this would be blown on insulation that is extremely porous and absorbs very high amounts of any product. Paint might yield 50 sf. per gallon, but PCW will yield better coverage over traditional paints.

NON-TILE CEILING SURFACES - ProCoustic is designed to be applied onto acoustical ceiling tiles as well as other traditional ceiling surfaces. However, care should be taken before using it on other less common substrates. It is strongly recommended that on non-tile surfaces, a test area should be done to determine the consistency of coverage; i.e., density and absorption. Some of the products, due to their formulation or application, are not suited for a coated material. First time users of ProCoustic and those attempting to use ProCoustic on a non-tile surface are encouraged to call the ProCoat Products, Inc. headquarters and speak with a technician regarding that substrate.

NOTE: Coverage's are based on experienced contractors applying ProCoustic, where *The Guide* has been read and/or ProCoat Products, Inc. has been contacted for direction.

PLASTERED CEILINGS – PCW works quite well on plaster ceilings with the same one-coat ability to seal off contaminants, thus avoiding bleed through. The results are excellent and its coverage is far better than with latex paints. Coverage can be expected at about 300 square feet per gallon.

T-BARS AND GRIDWORK - T-bars and grids new or existing should be resurfaced with PCW at the same time the tiles are sprayed, all in place. However, non-porous surfaces must be free of oil, dirt, construction dust and/or nicotine if the coating material is to adhere properly and not be subject to discoloration, peeling or flaking. Accordingly, HSC was designed for this purpose, to wipe down the non-porous surfaces prior to application, thus ensuring proper results unless the tiles are also to be cleaned. In this case, using the TC1 is preferred for the entire ceiling.

AIR DIFFUSERS & RETURNS - Spraying PCW on air diffusers new or existing, without taking proper caution is not a recommended practice. Air diffusers/returns can build up condensation, which can lead to rust. Spraying of any water-based product on a metallic surface is an invitation to problems. New vents should be misted with a primer in aerosol.

Recommended Practice for Vent/Returns

- Mist a primer/sealer to create a bond and then coat the air diffusers. Aluminum or plastic diffusers typically do not present a rust problem. Where rust does exist, use a rust preventative primer prior to applying the PCW, but make no guarantees to the customer beyond what is stated by the manufacturer of the rust

preventative. Regardless of rust, a primer should be misted onto all air returns/diffusers to help provide a good bonding surface, especially if made of plastic.

SPEAKER PLATES - If metal, the same precautions should be taken with respect to rusting. However, the likelihood of finding rust is less on speaker plates because they are not subjected to condensation. Proper application of non-bridging PCW will leave all the holes open on the speaker plate, giving it a new appearance. This non-porous surface should be cleaned to insure proper bonding, if contamination is evident.

MINERAL BOARD CEILING TILES – Mineral board ceiling tiles are an ideal ceiling surface for PCW. Mineral board tiles are traditionally porous in nature and are the most widely used type of ceiling substrate in the United States. Where nicotine is present, TC1 is ideal in that there is no wiping of the tiles, only the non-porous surfaces need to be wiped. Application of PCW is at 1 mil wet with 50% overlap. Using a swivel head with a good tip, keep the tip perpendicular to the ceiling avoiding arcing.

- Coverage-White on white yields up to 300 sf. per gallon. Contrasting colors such as black to white yields less. More coverage will be realized as the color contrast decreases and contractor experience increases.

VINYL COVERED CEILING TILES - Vinyl tiles are most favorably treated with TC1 and may not require coating. As with any nonporous surface, nicotine and other contaminants lie on the surface and once removed, leave an appearance that is usually quite acceptable. In extreme cases, more than one application of the TC1 may be necessary in order to remove an excessive amount of contamination. Removing the wet residue can be accomplished with foam sponges (rinsed frequently) and/or a wet/dry vacuum cleaner. Or, if not contaminated with nicotine, but some other contamination, HSC should be used. Application of PCW on vinyl requires good to newer tip, swivel head to keep tip perpendicular to ceiling. 1 mil wet, keeping the tip a little farther away from the surface with 50% overlap. It might be necessary to cross pattern the spray with a light, second application to help avoid streaking and lap marks.

- Coverage – PCW yields up to 300 square feet per gallon on vinyl tiles white on white, less coverage as the color contrast increases.

NOTE: It is important that all residue of the cleaning process be removed prior to applying the coating in order to ensure proper bonding of the PCW to the surface of the tile. Failure to remove dirt, nicotine, or residue from the ceiling will likely lead to bleed through and worse, flaking at a later date.

NOTE: One should be cautious when spraying a pigmented coating on a nonporous surface. Since there is little to no absorption, all material lies on the surface. Extra build-up and over-lapping passes are more likely to be noticeable on a nonporous surface than on one that absorbs liquid. Looking at a ceiling from a position where outside light reflects off the ceiling, the over-lapping passes may be visible. Building owner/managers should be advised of this before the job is done so as to avoid complaints once it has been completed. For best results, PCW should be "fogged" on at a low pressure.

GLACIER ACOUSTIC TILES - Glacier Acoustic Tiles are directional and heavily textured. When glacier tiles are viewed in four different directions, the ceiling would appear as a different shade or style, in each direction. Glacier needs to be sprayed in all four different directions. Angle the tip into the grain of the tile to ensure proper penetration into the grain of the tile.. When spraying tinted material onto glacier, it is even more important to ensure that the tile has been coated in all directions and to inspect the ceiling prior to take down of the masking materials. Also, with respect to glacier tiles, they have deep recesses, all passes should be against the grain so that the material is driven into the fissures, resulting in less "shadowing" and more consistent overall coverage. In many cases, having halogen lighting provides better viewing of the spray area, especially where there is a significant color change.

- Coverage – Expect 175-220 square feet per gallon with white on white and less than 175 square feet per gallon when tinting, especially on ceilings with more contrast.

TECTUM CEILING TILES - Tectum Ceiling Panels or Tectum Deck Tile is one of the most durable of ceiling materials. It possesses one of the highest NRC's available for ceilings and is also extremely expensive to replace. Tectum must be sprayed in all four directions to obtain optimum coverage, similar to that of glacier. Tectum, Inc. endorses ProCoat Products, Inc.

- Coverage - When spraying Tectum, expect to get about 150 square feet per gallon in white on white, less with more contrasting colors and aged tiles.

METAL PAN TILES - Metal Plenum Ceiling Tiles with batting insulation must be addressed in a similar fashion as vinyl tiles in that they are non-porous. Use the cleaning techniques as described in previous sections. Light passes of PCW should be applied until the ceiling tiles are sufficiently coated. Due to the possible likelihood of condensation, rust must be identified and treated.

- Coverage – up to 300 square feet per gallon.

BLOWN-ON ACOUSTIC MATERIALS - Blown-on acoustic materials must be treated differently than ordinary acoustic tiles, as they are extremely absorbent. The degree of absorbency is a function of the product density and in some cases that can vary across the ceiling surface. In all cases, it is advised that a test area be sprayed first in order to determine the compatibility of that surface with a coated material such as ProCoustic as well as assessing the degree of achieved whiteness.

ProCoustic must be sprayed in all four directions to obtain optimum uniformity. To reach all of the crevices, multiple coats are generally required. Application on these highly absorbent surfaces should be done in such a way as to minimize the amount of liquid being applied to the surface per coat. Using an extension pole/wand with a 5/15 or 5/17 spray tip, apply ProCoustic approximately 18-24 inches away from the surface and fade the passes to avoid leaving lap marks. This spray technique is applicable for insulated batting, K-13, blown on insulation/fire proofing materials, and Pyrok.

- Coverage on blown on acoustic materials – 75-100 square feet per gallon and assume the need for additional coats.

GALVANIZED METAL DECKING W/ INSULATED BATTING - Galvanized Metal Decking is an extremely smooth and unpredictable surface. The galvanized material may need to be primed prior to the application of PCW. In that no primer exists that is non-bridging, a light misting of **Etching Primer** is recommended to achieve a proper bonding surface and misting helps prevent excessive bridging. It is advised that only enough primer be applied to allow for proper bonding.

- Coverage – Typically, coverage is less than 300 sf. Per gallon.

DESIGNER TILES - There are virtually hundreds of different styles, textures and shapes of acoustic and non-acoustic ceiling tiles. Regardless of their type, and as long as they are structurally sound, TC1, HSC and the PCW should work on them. In the event that the tiles are non-absorbent, then utilize the same method for cleaning and coating vinyl tiles. If acoustic, utilize the same method for restoring a standard tile with the exception of colors. When coating existing or new tiles in colors, special attention should be paid to application. Lighter (pastel) colors can be coated similarly to the standard white except for reds, oranges, blues and other low hide colors. Using a smaller spray tip and applying the product lightly, with more passes is advisable. This same process should be utilized with deep base colors of the same-reds, oranges and blues. Since deeper colors require much more tint, drying time is extended and dryfall properties are negatively affected. Neutral tone colors such as tans and light browns are not as affected and spray much more evenly. Using a good/new spray tip is highly recommended as well as using dripless/quick shut off/ anti spit tips. Spraying with extension poles allows for a faster spray, helping prevent build-up on the substrate. Spraying the coating evenly and consistently is particularly important with colors, so only an experienced painter or Certified ProCoat Applicator should be utilized for this type of application.

MISCELLANEOUS SUBSTRATES

For substrates that differ from those indicated previously, contact us at 781-767-2270.

CLIENT OPTIONS

ProCoustic is whiter than a new tile. Therefore, additional tiles should be sprayed and left on site for future replacement. This is especially important if the ceiling was restored to a custom color. This will avoid checker boarding of the ceiling, should a tile break at some future date. In many cases, because of excessive bowing, cracks, or breaks in the tiles, some tile replacement may be necessary. However, even if a section of ceiling must be replaced, the restoration of the entire ceiling, including tile replacement should still be less expensive than total replacement.

CUSTOM COLORS - ProCoat Products, Inc., strives to provide customers with just as many choices for ProCoustic in color as there are for ceiling tile colors. Therefore we manufacture ProCoustic to accommodate all ceiling color requirements from white to black:

NOTE: SEE APPENDIX A FOR TINTING INSTRUCTIONS

It is recommended that once tint has been added, shaking ProCoustic for 8-12 minutes should be sufficient to blend all the tint. Check color match on a substrate similar to the ceiling surface where the tinted ProCoustic will be applied.

SAFETY PRECAUTIONS

- The same precautions apply when spraying ProCoustic as with any other coating materials. ProCoustic is non-toxic, however **respirators should be worn** to prevent inhaling of the dust and silicate. Because ProCoustic contains silicon, goggles should be worn to protect the eyes, which can become irritated if the individual is particularly sensitive to silicate. Use the same personal protection recommended by OSHA where any paint like product will be sprayed or rolled.

MASKING MATERIAL REMOVAL/CLEANUP

- Prior to removing any masking materials, it is very important to inspect the ceiling. If, upon inspection, a missed spot is noticed, then it is much easier to simply spray that area again while the masking is still in place.
- Removal of the masking materials from the lights, fixtures and sprinklers should be done prior to the removal of the perimeter and floor poly. This is done to keep all dust in the spray area, protecting the floor and any merchandise/furnishings.

Using the **Easy reach Masking Remover**, remove as much of the masking from the fixtures as possible. This will help reduce the amount of spray dust/residue falling on exposed flooring. (See illustration)



The ERMR saves countless hours on masking removal. 8 foot fixed pole with rubber saw toothed pincer grips.

- Once the masking materials are all removed, begin to peel the poly away from the wall, in a clockwise, downward manner, rolling the poly into itself. This keeps the dust from escaping onto the floor and up in the air
- Once the POLY is completely down, use scissors to cut the POLY into sections and roll it into itself, in small manageable balls and dispose of the used POLY into a dumpster.
- Clean sprayer machine by running water through the system a few times until only clear water is visible.

TOUCH-UP MATERIAL

- In the event that spots were missed while spraying the ceiling with ProCoustic, or water stains have subsequently appeared, use the **Ultra-White ProCoat Acoustical Tile Restorer** (ATRU in aerosol). The ATRU matches the color of the ProCoustic and avoids the need to set up the spray rig again.

CLEAN UP/SPILLS

- In the event that a spill occurs on non-porous surfaces, use rags and/or other forms of absorbent materials to pick up the majority of the product. Use liberal amounts of water to continue to dilute the product until no residue can be seen. If allowed to remain for a long period of time, additional abrasive material may be needed to remove dried or cured product.
- For dryfall that has landed, sweep up excessive dust and use liberal amounts of water to remove any remaining product residue. If on carpet, vacuum up all dust and use liberal amount of water to remove any residue. If allowed to remain for long periods of time, there may be some staining as a result of the TI02 being allowed to cure.
- If excessive tint is used for dark colors, tint staining may result if the product is left for long periods of time.

SUMMARY STATEMENT

The amount of savings ProCoustic provides the building owner, in contrast to replacement, is considerable. For in-house application, maintenance budgets will go farther. The information contained in this *Guide* is intended to help in those directions. Questions or comments regarding the application of ProCoustic are welcome and should be directed to the nearest ProCoustic distributor or to ProCoat Products, Inc.; 260 Centre Street; Suite D; Holbrook, Massachusetts 02343, U.S.A., call (781) 767-2270 or FAX (781) 767-2271. www.procoat.com. e-mail: info@procoat.com

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APPENDIX A

Guidelines for Tinting ProCoustic

1. Choose Color

Note: ProCoustic is not paint, thus only close approximate matches will be possible, especially when matching a non-flat color. This is due to the fact that the eye perceives dead flat colors as lighter than those with a sheen such as a semi-gloss. Matches should be viewed from a 90° angle, not from the side.

2. Base Selection:

ProCoustic is available in three tinting bases. **ProCoustic White** (155-7941) is used for colors that are normally tinted in paint: White Base, Pastel Base, or Base 1. In addition, lighter shades of Medium Base, Tint Base, or Base 2 colors can be successfully made using ProCoustic White.

ProCoustic Mid-Deep Tint Base (937-8167) is best used for darker Medium or Base 2 colors; and is the best choice for Deep Base or Base 3 colors, which contain ½ pound of titanium dioxide per gallon.

ProCoustic Neutral Base (937-8167) is appropriate for Base 4 and Base 5 (Ultra Deep, Deep Tone, or Neutral Base) colors. ProCoustic Neutral Base may be used in cases where ProCoustic Deep Tint Base is not available, but will require large additions of White (KX) colorant.

ProCoustic Black (594-3774) is stocked at our plant in Holbrook, MA.

Note: The addition of large amounts of colorants will have a substantial impact on ProCoustic's ability to act as a dry-fall. As always, it is recommended that floors, furniture and fixtures are protected from spray dust (dry or not).

3. Select Tinting Colors.

ProCoustic will accept standard (Machine Colorants) from most paint manufacturers, provided they are glycol based.

ProCoustic will not tint exactly like paint, so paint manufacturers' color formulas must be considered starting points. Use about 80% of formula colors, then check for what is needed to get to the best match. Tint only one pail until desired match is achieved, keeping track of the exact amounts of colorant used. This may be repeated in other pails, provided proper mixing is done.

4. Mixing of colorants:

Gyromixers or shakers designed for five-gallon pails are best for completely incorporating colorants, but satisfactory results can be obtained by careful use of drill mixers, i.e. Jiffy mixers.

5. Secure approval of the tinted color.

Apply a small sample of the ProCooustic color to a sample card by brush, pad, roller or spray. Allow to completely dry and then compare to the color sample. Never allow special colors to be used without a signoff from the contractor, site manager, or end user's representative.

ProCoat Products Inc. provides this information as a guide only, and will not be held responsible for results, as the tinting process is beyond our control. Special colors may be ordered from the factory, at extra cost. ProCoat will provide base selection suggestions upon request. Read and follow all directions in the guide and on the label.

Contractor Tool Requirements Ceiling Restoration

ProCoat Products, Inc. has been in the business of restoring ceilings for better than 20 years and is the leader in the field of Ceiling Restoration. In those 20 years, we have come up with what we feel are the best, most time efficient tools available on the market today.

The basic necessities for any contractor/applicator planning on starting out in ceiling restoration are contained below. Whether the contractor is new to the construction field or he/she has been doing it for 30 years, in order to make the most out of your labor and material usage, there are certain tool requirements and some additional tools available on the market today which help expedite projects.

1. **Airless Spray Machine.** An airless sprayer with a minimum of .44 gallon per minute (gpm) is critical. Less than .44 gpm will result in slower progress and a finish that may be streaky.
2. **Extension Poles.** Extension poles are extremely valuable for many reasons when it comes to restoring ceilings of any height. Extension poles make it possible to spray ceilings from the floor-speeding up productivity, maintaining safety by avoiding ladders and staging, prevents most spray dust from impairing the applicators' vision and helps the applicator maintain a good spray line.
3. **Scissors.** Why would such a simple tool as scissors get mentioned here? Traditional box cutting implements are slow for cutting plastic sheeting and often leave a jagged line as well as pieces of poly scraps behind. Scissors such as Fiskar Commercial Grade Scissors will allow faster cuts, cleaner lines and safer use. Every crew member should be issued a pair.
4. **3M DualTack Dispenser.** The DualTack Dispenser (DTD) dispenses a double sided tape and replaces the traditional process of hanging 2 inch masking tape and then tucking the poly film beneath it. The DTD releases the tape so that the film can be applied directly onto the film speeding up the process considerably. The DTD also can handle the weight of 1 mil poly sheeting that is mentioned in item 5. This is a 3M tool and is no longer available. ProCoat has developed a way to utilize the 3M Hand Masker in its place. Call for information
5. **1 Mil X 20 X 400 foot Poly Sheeting.** 1 mil X 20 X 400 poly sheeting is ideal for ceiling restoration. 1 mil will hang from DualTack Tape (DTT). 20 foot wide will not only extend down the walls of most ceilings, but it will also extend well onto the spray area, speeding up the encapsulation process. 1 mil will prevent most tears which occur when using lesser thickness and avoids multiple types of poly on job sites. 1 mil is available through ProCoat Products, Inc. distributors.
6. **3M Handmasker.** Most painting contractors are familiar with this tool. Its use is self explanatory and is ideal for masking sprinklers and other ceiling mounted fixtures.
7. **ProCoat Soft Sweep Broom.** The Soft Sweep Broom (SSB) is used in the same way as extension poles. This tool is designed to remove soot, dirt and carbon build-up from ceilings, vents and air returns. It comes with an 11'

extension pole and the head prevents damage tiles. It is made of 100% vinyl bristles and actually grabs dirt from the ceiling, all from the safety of the floor. An SSB should be issued to every crew member on the job site.

8. **ProCoat Easy Reach Spray Adapter.** Allows the contractor to prime water stains from the ground after the entire area has been encapsulated.
9. **ProCoat Easy Reach Masking Remover.** Allows the contractor to remove masking materials from the ground while keeping the floor covered (poly) and perimeter wall POLY in place. Saves time money and keeps the work environment clean.
10. **Staging.** Staging with casters such as Perry Staging (or similar) is very important when restoring ceilings. This light weight staging allows for safe, quick movement in an occupied location and avoids the need for someone to foot or push the staging since it is so light. With Perry Staging, it can collapse easily for storage and can be erected quickly.
11. **Ladders.** Commercial grade ladders are very useful and self explanatory. Having an adequate amount of the appropriate sized ladders are recommended.
12. **Masking Tape, Film and Paper.** 1 and 2 inch masking tape are essential to any project. Also semi-tack tape of each size should be on every job site where wall surfaces such as wall paper are present. For lights, support poles and other ceiling mounted fixtures, there are pre-taped masking films available in 24 and 48 inch widths. These films allow for quicker masking than traditional papers and tapes. Masking paper is used for sprinklers and other small fixtures and is inexpensive.
13. **Commercial Mixing Blade w/ Drill.** A commercial mixing blade is used to mix the product once opened and ensure that all solid materials in ProCoustic are blended. Or, the contractor can have their local dealer shake the ProCoustic before it is used.
14. **Straining Bags.** ProCoustic, along with other traditional paint products will form dry material on the top edges of the inside of the pail. Straining ProCoustic before the job avoids clogged tips and keeps the sprayer running.
15. **Reversible Spray Tips.** ProCoustic can be applied using a .005/15000 or .005/17000 tip. Having numerous tips of each size are critical to applying ProCoustic correctly.
16. **Swivel Head.** A swivel head is needed to allow the tip to spray perpendicular to the ceiling.
17. **Extension Cords.** Extension cords are extremely valuable and there should be 200 feet of cord available for use since outlet availability will vary from job to job.
18. **Portable Halogen Lights.** Halogen lights are useful so that when all light fixtures are masked, the applicator can still see in the spray area.
19. **Tarp.** A tarp should be on every job site and should be laid under the sprayer unit, but over the plastic. This helps keep spills on the tarp and off the floor and saves on clean-up later.
20. **Fogless Goggles.** When cleaning, fogless goggles are needed in order to maintain eye protection
21. **Respirators.** Even though ProCoustic is waterbased and VOC compliant, an OSHA approved NIOSH Respirator should be worn by any crew member going into the spray area.
22. **Tile & Ceiling Cleaner/Hard Surface Cleaner.** In some cases, nicotine and or grease are present on ceilings. In order to maintain good adhesion and avoid bleed through, cleaning may be necessary. Having some of each available on every job is important.
23. **Sealer.** Where water stains are present, having aerosol cans of sealer such as BIN is very important. Water stains must be spot primed before applying any water based coating.
24. **Sponges/Fixi-Clamp/Rags.** When chemical cleaning is necessary, a tool such as the Fixi-Clamp is ideal to hold sponges and rags in place while cleaning grids. This tool is manufactured by Unger Enterprises @ 800-431-2324. Clean rags should be on site and available to clean up random spills and for cleaning the spray machine after the job has been completed.

25. **Empty Pails.** Have a couple of empty pails to carry water and to use when priming the sprayer.
26. **Spray Hoods.** Spray hoods are used by the person(s) spraying. They keep the person spraying clean which keeps him moving.
27. **Booties.** Booties are an essential tool to have for maintaining a clean working environment outside of the spray area. Every crew member who enters the spray area should have on several pairs.
28. **Wrenches.** Make sure to have all wrenches, pliers, screw drivers and extra packing kits available. Should the spray machine break down on the job, you can fix the problem and continue working.

**For assistance on specific projects, please contact
ProCoat Products Technical at 781-767-2270.**