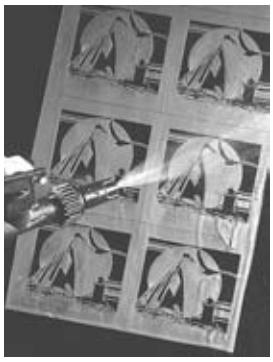
UltraPro™ Blue

Repositionable Self-Adhesive Film

UltraPro™Blue Self-Adhesive Photo Resist film is an advanced film offering:



- Easy handling — not tacky until after washout
- Repositionable
- Dries fast
- Easy carrier release
- Enhanced tack
- Easy clean-up
- Excellent imaging
- Fast exposure
- Superior durability

MATERIALS NEEDED

Exposure Device
Washout Equipment
Blast Equipment
Substrates

SAFETY CONSIDERATIONS

Refer to MSDS for safety information. Wear eye and hand protection.

LIGHT SENSITIVE PRODUCT

UltraPro™Blue film works in normal room lighting conditions for up to ten minutes. No special darkroom or yellow lighting is required for this time period. For longer times it should be used in yellow or safe light conditions. General purpose gold or yellow fluorescent or incandescent lights, red ortho-safelights or yellow bug lights can also be used.

STORAGE

- Store packaged film in a cool, dry area.
- Do not refrigerate.
- Shelf life is indefinite. IKONICS Imaging warrants this product free from defects for 12 months.

ARTWORK

1. Generate positive or negative artwork. For best results, artwork should have dense black areas, with crisp, clean line edges. Film or paper positives are acceptable.

- Acceptable ***film positive media*** includes AccuArt™ brand waterproof inkjet film, stat camera or image setter. Film positives or negatives are recommended for halftone artwork (35-45 dpi). *Transparencies are not recommended.*
- Acceptable ***paper positive media*** includes, vellum or Positive FX Drafting Film output by a laser printer or professional photocopier. Please note that results may vary based on equipment, toner quality, and media used. A toner enhancement spray, such as UltraBlack, will increase the density of the artwork resulting in a higher quality mask.

Front Blast — Positives or negatives should be right-reading emulsion (toner) side up for front blasting.

Back Blast — Positives or negatives should be right-reading emulsion (toner) side down for back blasting.

FILM EXPOSURE

1. Place the carrier (shiny) side of the UltraPro™Blue film on the black blanket when using a Letralite. When using other exposure units, make sure the film is put on a non-reflective black backing.
2. Place the emulsion (toner side) of the artwork against the emulsion side of the UltraPro™Blue film. The emulsion side of the film has a duller appearance compared to the carrier side.
3. A vacuum frame or compression frame should be used to ensure firm contact between the art work and the UltraPro™ Blue film during exposure.
4. Be sure to have a non-reflective black backing opposite your UV light source to avoid possible reflection causing overexposure.
5. Expose using the suggested exposure times listed.

NOTE: Exposure times are suggested only as a guide. All exposure times are approximations and will vary based on type of UV light source used, age of light source, and local voltage ranges. Exposure times can also vary based on type of photopositive used. Contact IKONICS Imaging for additional exposure times.

Please note that overexposure can cause image not to washout, and underexposure can cause image to washout prematurely.

Suggested Light Sources & Exposure Times

Light Source	Distance	Exposure Time 4 mil	6 mil
5 KW Metal Halide	40 in/100 cm	10 sec	10-15 sec
26-1KS	18 in/45 cm	20 sec	20-30 sec
Letralite	n/a	30 sec	30 sec

**When using a Letralite unit be advised that timers may vary. Double check for accuracy.*

USERS GUIDE

IMAGE DEVELOPMENT

1. Position the exposed film in an upright vertical position with the emulsion (dull) side facing outward, clipping the film to support plate in the washout area.
2. Wash out film with water up to 120°F (49° C). The warmer the water the faster the washout. UltraPro™Blue can be processed by using the TriggerJet® Washout Nozzle with the brass flat spray attachment at 50-80 psi (3.5-5.5 bar) or a pressure washer between 400–1200 psi (28-83 bar).
3. Using either method, spray in a slow and even motion until the image area develops clear. When using high pressure, do not concentrate on one spot as delamination of emulsion from the carrier sheet may occur. A gentle, steady sweeping motion from about 8–12 inches (20–30 cm) away eliminates this potential. High pressure water is recommended for very fine detail and halftones. The image will not appear until after 5-10 seconds after washout.
4. The entire surface area of the film must be washed to ensure adequate adhesion.
5. Wash until the blast area is completely clear of emulsion.

Suggested Washout Guidelines

TriggerJet®

1 mil 1–2 minutes
6 mil 1.5-3 minutes

Pressure Washer

A pressure washer will reduce washout time to under 1 minute in most cases.

NOTE: Washout times by either method will be influenced by the amount of detail in the artwork (longer), amount of film being developed, water temperature and amount of water pressure used.

Do not wash UltraPro™Blue film under running water from a faucet.

DRYING OF MASK

1. Remove excess water from mask to accelerate drying times.
2. At room temperature, dry the mask for 30-60 minutes; *film should be uniform in color*. High humidity will extend the drying time. At 100°F (39°C), drying will take approximately 20-30 minutes.

When storing processed UltraPro™Blue masks for later use, laminate to UltraPro™ Silicon Release Paper. Masks may be stored for up to one month.

IMAGE TRANSFER

- UltraPro™Blue is repositionable. Simply apply the mask to the substrate by lightly pressing down on the mask. If repositioning is required, remove the mask and realign.
- Once the mask is positioned properly, apply pressure to the back of the mask to ensure firm contact of the mask to the substrate.
- Avoid wrinkles or large air pockets. Air pockets under the mask may cause lack of adhesion resulting in blow-offs during blasting.
- A good transfer may still result in very small bubbles on the mask surface which will **not** interfere with either the transfer or the blasting.
- Remove the carrier sheet from the mask by flicking a corner with your fingernail or an X-ACTO® knife. Once removed, press down on the image area with your thumb to assure firm contact. Burnishing is not required.

BLAST

1. Hold the blast gun 6-8 inches (15–20 cm) away from the object and perpendicular to its surface.
2. Recommended **maximum** pressure for a pressure-pot sandblast system is 40 psi (2.75 bar) for 4 mil and 50 psi (3.44 bar) for 6 mil. A siphon (or suction) sandblast system should not exceed 80 psi (5.5 bar).
3. Grit size should be 150 or finer depending on the image detail. Recommended abrasive media is either pure aluminum oxide or silicon carbide. All manufacturer safety precautions should be closely followed.
4. Recommended blasting temperature is 68°F (20°C) or higher. Blasting in lower temperatures may result in loss of adhesion or blow-offs.
5. Stage carving can be accomplished with UltraPro™Blue 6mil by putting separation lines around the area you wish to peel away and reblast.

REMOVE MASK

- Soak the object in water for 10-15 minutes.
- An alternate method is to peel the mask from the substrate. Fine pieces of film can be removed by rolling them off with your finger tips. Caution: be careful not to scratch the substrate.

Peeling may become more difficult if the mask has been on the object for more than 3 days.

COLOR FILLING

Color filling is a popular way to add a unique touch to sandblasted projects. Once the piece has been sandblasted, use pressurized air to remove any loose abrasive from the etched area. The photo resist will protect the area you do not want to color. A thin paint coating is preferable since excess paint will dry over the top of the photo resist, causing the paint to pull away from the etched surface during resist removal. Please contact your IKONICS Imaging™ representative for information on the benefit and use of color filling.

IKONICS IMAGING™
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