



Welcome to Glass Engraving Supplies

RapidMASK! The world's unique and only dry-processing, self-adhesive photo resist film!

With **no washout required, no adhesive application and an effortless slip sheet and carrier sheet removal**, RapidMASK will provide a simple, creative and productive sandblasting experience.

RapidMASK photo resist film offers :

- EXPOSE-APPLY-BLAST**
- NO WASHOUT / NO DRYING**
- SELF ADHESIVE**
- FINE DETAILS / HALFTONES MAKING ABILITY**
- STRONG BLASTING RESISTANCE**
- EASY TO REMOVE**

RapidMASK photo resist film comes in :

- RapidMASK HD (high detail)** 2 mil/50 micron
- RapidMASK HT (high tack)** 4 mil/100 micron

Required equipment :

- Computer generated artwork**
- UV exposure unit**
- Sandblasting cabinet and abrasive media**

SAFETY AND HANDLING

Refer to SDS for safety information.

STORAGE

Store RapidMASK film in a cool (21-26 C), dark, low humidity (<70%), or air conditioned environment to maximum shelf life (up to 2 years). **Shelf life is indefinite.** Glass Engraving Supplies warrants this product free from defect for 12 months. Extended storage times outside of these conditions can adversely affect film performance with reduced adhesion and/or blast resistance. As an option, film can be refrigerated to extend shelf life (**DO NOT FREEZE**). RapidMASK should be stored in its original package when not in use. Store rolls and sheets horizontally.

PRODUCTION ENVIRONMENT

High detail etching requires care and cleanliness to minimize dust and dirt particles, particularly during film exposure and application.

LIGHT SENSITIVE PRODUCT

RapidMASK sandblasting film is light sensitive. Although it has good white light stability (**up to 2 hours working time under most indoor lighting**), for optimum results it is recommended to use the film in yellow safe light conditions until blasted. UV filtered yellow fluorescent lights or UV filter sleeves or white tubes are sufficient.

ARTWORK

High quality artwork is an **essential factor** for high quality results. RapidMASK uses photo positives vs. photo negatives for photographs with halftones and photo negatives.

NOTE : Only clear areas of the artwork will be sandblasted.

CLEAR = BLAST

Unexposed RapidMASK protects the surface during sandblasting. Make sure to **include at least 10 mm of black border** around your artwork. This will assist the removal of the carrier sheet and for masking off. Generate a positive/negative of artwork. For the best results, artwork should have dense black areas, with crisp, clean line edges.

Recommended film positive/negative media includes our **Folex inkjet printing film** or **Folex laser printing film**. A **toner spray** should be used to darken the printed areas when using laser printer. For best quality printout we recommend to use inkjet media.

IMPORTANT INFORMATION

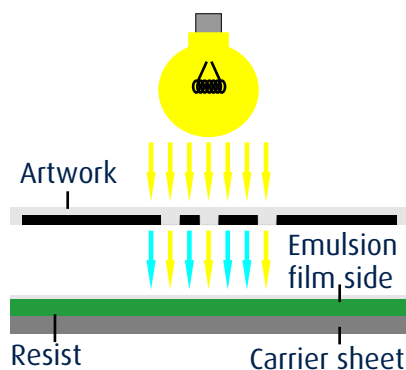
When UV light passes through the clear areas of the artwork, RapidMASK turns **blue/dark and brittle** in those areas. Unexposed film (black area of artwork) remains **green and rubbery**. **DO NOT underexpose RapidMASK!** The film must have sufficient exposure energy to become brittle. Since exposure units are not alike, follow the detailed set up instructions to ensure consistent results.

FILM EXPOSURE

1. Place the emulsion (toner side) of the artwork against the emulsion side of the film. The emulsion side will face up (towards light source). The emulsion of the film has a duller and softer appearance compared to the carrier side.
2. A vacuum frame/compression frame should be used to ensure firm contact between the artwork and the film during exposure. The higher the detail level of the artwork, the more important it is to use a **vacuum light box**.
3. Be sure to have a non-reflexive black backing opposite your UV-light source to avoid possible reflection causing overexposure. This will end in loss of details and adhesive power.
4. Expose using the suggested time listed.

Light source	Exposure times
Vacuum UV light box	2 mil = 35 sec.
	4 mil = 55 sec.
Non vacuum UV light box	2 mil = 55 sec.
	4 mil = 90 sec.

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 quality of photo positives used.



NOTE : Overexposure can cause image not to washout. Underexposure can cause entire mask to washout prematurely.

SETTING YOUR EXPOSURE UNIT

Cut several small strips of RapidMASK (approx. 2 cm x 10 cm). Place one strip of film under a clear piece of artwork into your unit, so light passes through the artwork first. Begin with **30 seconds** exposure time. Remove strip of film and note that it turned blue. Now bend it in half **with the slip sheet out** a crease it. It should make a **SNAP** sound when creased. If not, more exposure time is needed. Repeat test using a new strip of film adding 10 seconds more exposure for each strip tested. Repeat this test until the film is dark blue and snaps when creased. **This is proper exposure time setting for RapidMASK in your particular unit.**

IMPORTANT INFORMATION

1. The slip sheet side can be identified as the **SOFTER** side when scratched with fingernail, or as the inside layer within the natural curl of a sheet of RapidMASK. The carrier side can be identified as the harder, **SHINY** side and cannot be scratched with a fingernail, blade or knife.

2. You should etch your fine detailed images within 24 to 48 hours of exposure to ensure good performance when etching. Held longer, the imaged areas can begin to deteriorate.

3. Used alone, **RapidMASK is not suitable film for use with acrylic substrates.** The peel after sandblasting is difficult, and becomes more difficult if the film and substrate are soaked in water. **For applications excluded glass, RapidMASK may stain the substrate.** The staining appears within 2 hours of film application to substrate. Testing the substrate is highly recommended.

IMAGE TRANSFER

1. Remove the slip sheet of the RapidMASK mask. Simply apply the adhesive side of mask to the substrate by lightly pressing down on the mask. If repositioning is required, gently remove the mask and reapply.

2. Once the mask is positioned properly, apply firm pressure to the back of the mask using a pressure roller or squeegee to ensure firm contact of the mask to the substrate.

3. Take special care to avoid wrinkles or large air pockets that can cause lack of adhesion, resulting blow-offs during sandblasting. To remove air bubbles, reposition the mask or pop it with a pin and tape over the area to avoid blast through.

NOTE : Trim any exposed (blue) edges prior to removal of slip sheet.

4. Remove the carrier sheet from the mask by flicking a corner with your fingernail or a knife. Once removed, press down on the image area with your thumb to assure firm contact, paying special attention to fine details and small letters.

USEFUL TIP - WET APPLICATION

To minimize air entrapment and allow for proper positioning of RapidMASK, the **WET APPLICATION** method is recommended, particularly for halftones.

Clean the substrate using a glass cleaner to remove dust and finger prints. Trim any exposed (blue) edges prior to application. Remove the protective slip sheet by placing a piece of tape on a corner and peel back. Spray the RapidMASK (adhesive side) and substrate with a light mist of water. Place the film on the substrate and when positioned correctly, squeegee the carrier side from the centre out to remove the water between the substrate and the film. Squeegee the entire surface well to ensure good adhesion. Using a piece of tape on a corner, remove the carrier sheet and carefully mask all edges. Let sit for 10-15 minutes to optimize adhesion before starting to etch.

BLAST

1. RapidMASK photo resist film can be blasted using a siphon (venturi) or pressure pot sandblast system. **Recommended blasting pressure is :**

Siphon (venturi) system : HD = 3-4 bar / HT = 4-5 bar
Pressure pot system : HD = 1-2 bar / HT = 2-3 bar

2. Hold the blast gun approx. **10-15 cm** away from the object. Hold the sandblasting gun in **90 degrees angle** against the object. Begin blasting using a **back-and-forth motion** over the entire surface. Keep nozzle moving all the times. **Do not concentrate on any one area of surface.** During the first few passes, you will notice the blue areas of the film will lighten and then disappear. Continue blasting until all blue areas of the film have disappeared and desired etched pattern/depth is achieved.

3. Depending on the image detail, the grit size should be **180 mesh or finer**. Grit size **220 mesh** is recommended for doing **halftones above 40 dpi**. Recommended media abrasive is either **white aluminium oxide** or **silicon carbide**. All manufacturer safety precautions should be closely followed.

4. Recommended blasting temperature is 20 C or higher. Blasting in lower temperature may result in loss of adhesion or blow-offs.

RESOLUTION AND DEPTH

MINIMUM LINE RESOLUTION HD (HIGH DETAIL)
2 mil/50 micron thickness

Use minimum grit size **220 mesh** and negative artwork with Dmax 3.0

MINIMUM LINE RESOLUTION HT (HIGH TACK)
4 mil/100 micron thickness

Use minimum grit size **180 mesh** and negative artwork with Dmax 3.0

HALFTONE RESOLUTION (UP TO 65 DPI)

Use minimum grit size **180 mesh** for 45 dpi.
Use grit size **220 mesh** for higher dpi.

ACHIEVABLE DEPTH

HD ~ 0,15 mm
HT ~ 0,45 mm

MASK REMOVAL

Peel the mask from the substrate. Fine pieces of film can be removed by rolling them with your finger tips or with sharp razor blade. **Be careful not to scratch the substrate.** Alternatively soak the object in warm water.

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

**Any further question?
We are happy to help you!**