Tech-Neal-calities

Cutting Sandblast Effectively

Sandblasting is very common method for making wood signs and monuments. Sandblast resist, also known as 'resist,' is a sheet of thick rubber or vinyl with adhesive for mounting on wood or stone. The process consists of cutting a graphic out of sandblast resist and mounting it to a block of wood or stone. The exposed areas are etched away by the sandblasting, leaving a relief of the graphics that was protected by the resist overlay. The blasted sign can then be painted to highlight the graphics even further.

For cutting sandblast resist effectively, Graphtec cutters offer two items: a feature called Tangential Emulation and a special blade particularly for this type of cutting. This TNC explains what Tangential Emulation mode is and provides the blade settings for cutting sandblast resist.

What is the Tangential Emulation?

Note: *Tangential Emulation is also known as* ***Thick Sheet*** *mode on our earlier products. Although the name is different, it provides the same function.*

This remarkable feature can be turned on for each cutting condition* and has two advantages:

- When the blade maneuvers around the corners, the TANGENTIAL EMULATION mode will perform up and down motions that adjusts the blade to the next cut direction, thereby preventing the corners from tearing up. This, in turn, will give you corners that are cleaner.
- Included with this mode is the **OVERCUT function.** When cutting rubber, the tool, at times, can drag or stretch the material, causing a gap in the start and stop points. By using the OVERCUT function, the tool will start the cut before the starting point of the graphic and, when finished cutting the graphic, will continue past the stop point, allowing for material stretch without leaving a gap**.** The OVERCUT has two settings: The distance to start cutting before the START point and the distance value for cutting past the END point.

***Note**: For products other than the FC4100 Series, the Tangential Emulation mode only works in CONDition [4].*

Which Blade, What Settings

There is only one blade to be used with sandblast resist, the CB15U-K30. This blade has a sharper angle and is slightly longer, allowing it to maneuver around sharp corners without pulling up the resist. This blade works well when used in conjunction with the TANGENTIAL EMULATION mode. See "What is Tangential Emulation?"

Below is a chart of suggested settings for cutting sandblast resist.

Material	Blade Model No.	Speed	Force	Quality
Sandblast rubber	CB15U-K30	10-15	27-30	4

Sandblast types

Listed below are the email addresses and the toll free phone numbers of the different resist manufacturers. Call for their brochures and a list of their distributors. Be sure to ask about the width sizes they offer.

Manufacturer	Phone Number	Internet Address
3M	800-367-2537	www.mmm.com
Anchor Continental	800-232-7161	www.anchortape.com
Hartco	800-240-2811	www.hartcoservice.com
Gerber Scientific Products	800-222-7446	www.gspinc.com

Tip: *When obtaining sandblast resist, avoid the types that have a thin backing. This type of backing can stretch, causing undesirable results when cutting. Preferably, ask for sandblast resist built for friction feed plotters.*

Tip*: Even though the edges are stripped away, position the wheels on the rubber.*

Caution*: Try not to leave the wheels in one position on the resist for extended periods of time (for example overnight). This could cause indentations on the resist, which could effect the cutting.*