



Technical Information Bulletin

TURCOFORM<sup>®</sup> MASK 540-R

DESCRIPTION:

TURCOFORM MASK 540-R is a one-package, hand-strippable protective coating which possesses a high degree of chemical resistance. This product gives outstanding protection against the corrosive action of etchant solutions and was specially developed for use in the Chem-Mill Process.

PROPERTIES:

Liquid

Viscosity, poises @ 20°C	50
Solids content, % by weight	28
Solids content, % by volume	30
Gallon weight, lbs	12.0
Flash point, °C	45°C (Setaflash)
Storage life at 20°C:	1 yr min
Color	Light beige Film
Tensile strength, psi	1100 min
Elongation, percent at rupture	650 min
Peel adhesion, lbs per inch width, aluminum	
Before etching	0.8 ± 0.4
After etching	1.1 ± 0.5

DIRECTION FOR USE;

MIXING: To assure uniform and reproducible results in applying mask, adequate mixing of the solution is necessary, prior to and during use. Caution should be exercised to prevent air from being drawn into the mask by the mixing action. Since some solvent is lost during use, periodic additions of thinner, based on viscosity measurements, are required. After measuring the viscosity with a #5 Zahn Cup, adjust to the desired operating viscosity with perchloroethylene.

Viscosity Ranges Application viscosity, #5 Zahn Cup: for dip and flowcoat, 25 to 30 seconds, depending on part size and film thickness desired.

length of part	over 4 feet	under 4 feet
viscosity	25 seconds	30 seconds
number of coats	2 coats	3 coats
dry film thickness	9 mils (approx)	9 mils (approx)

NOTE: These recommendations are starting points only. Modifications based on field experience should be made as necessary to accommodate normal seasonal changes, and other local variables.

**DRYING:** Avoid excessive heat and drafts on wet film, as these can cause undesirable skin-drying. Heat or ventilation applied for force drying should be used only if the user confirms that film quality is satisfactory under these conditions.

**CURE SCHEDULE:** After the final coat of mask is tack-free, allow the film to dry for four hours minimum before etching. Tack-free mask may be oven-cured for thirty minutes at 80° to 105°C to speed the curing cycle.

**Chem-Mill Process Application:** TURCOFORM MASK 540-R may be used for chemical Milling of aluminum, magnesium, steel or titanium. In the steel and titanium processes, TURCOFORM MASK 550 is recommended as a top-coat over the mask film to provide additional resistance against these aggressive acid etchant systems.

**DIP APPLICATION:**

- a. Dilute with thinner (Perchloroethylene) to the desired dipping viscosity.
- b. Slowly immerse clean part into the dip tank, up to but not over the top edge of the part.
- c. Remove part from dip tank.
- d. Allow the masked part to dry until tack-free, rotate 180° and again dip as in b, above.
- e. Repeat the cycle until the desired film build is obtained.

**FLOWCOAT APPLICATION:**

- a. Dilute mask with thinner (Perchloroethylene) to the desired flowcoat viscosity.
- b. Flow mask onto clean part. Avoid flowing over the top.
- c. Allow to dry until the film is tack-free; rotate 180° and recoat, as in b, above.
- d. Repeat the cycle until the desired film thickness is obtained.

**APPLICATION TECHNIQUE - DIP AND FLOWCOAT:**

Avoid dipping a part rapidly into the mask, as this introduces air and creates bubbles in the film. Slowly immerse the clean part into the dip tank, up to but not over the top edge of the part, to further minimize bubbles. Proper circulation of mask in the dip tank is recommended to avoid dipping into run-off (drainage of excess mask) from previous parts. When flowcoating, avoid flowing over the top of a part, as this creates bubbles on the back side. Flow nearly to the top leaving a narrow strip of bare metal. This will be coated when the part is in the reversed position. On subsequent coats, leave a narrow strip uncoated in the same manner.

**DISPOSAL INFORMATION:**

Dispose of spent solution per local, state and regional regulations. Refer to TURCO MATERIAL SAFETY DATA SHEET for additional disposal information.

**CAUTION!**

TURCOFORM MASK 540-R contains perchloroethylene. Avoid contact with eyes, skin and clothing. Do not take internally. Avoid prolonged breathing of vapors. Use with adequate (equivalent to outdoor) ventilation.

Protective clothing, such as a chemical face shield or goggles, gloves and apron, made from solvent resistant materials should be worn when using this product. A NIOSH-approved respirator should be used during mist conditions. Do not use or spray this product near sparks, welding torches or open flames, since hazardous vapors may be formed. Use care in opening drums to avoid spurting. Store in closed containers below 45°C.

Before using this product refer to container label and TURCO MATERIAL SAFETY DATA SHEET for additional precautionary, handling and first aid information.

**NOTICE:**

*The above information and recommendations concerning this product are based upon our laboratory tests and field use experience with this or similar products. However, since conditions of actual use are beyond our control, any recommendations or suggestions are made without warranty, express or implied. Manufacturer's and seller's sole obligation shall be to replace that portion of the product shown to be defective. Neither shall be liable for any loss, damage, or injury, direct or consequential, arising out of the use of this product.*

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