



## Semi-permanent Mold Sealer and Release Products for Composite Molding Systems

### Dyna-Tek DT-420 Mold Sealer Product Data Sheet

#### Product Summary

- Proven performance in use with all composite resin systems including toughened Epoxy resin systems, as well as polyester, vinyl-ester, phenolics, BMI.
- Excellent adhesion to most tooling substrates:
  - All metals
  - INVAR
  - Plated finishes
  - Composite tools.
- Glossy, clear finish when fully cured.
- No contaminating transfer of fully cured mold sealer to the molded parts.
- Only requires one application of DT-420 Sealer to the mold surface.
  - DT-420 can be applied over itself where it has seen abrasion to reseal those areas.
- Where DT-420 has been previously used as the mold sealer, DT-420 can be re-applied provided the surface is cleaned with solvents such as denatured alcohol, lightly sanded with fine grit media to reseal the substrate. No need to remove the first application down to the original substrate.

#### Product Characteristics

- Clear
- Pencil Hardness (ASTM D3363) - 9h
- Mandrel Bend (ASTM 522) – 0 mm coating loss or signs of cracking with 180° rotation.
- Solvent Based Polymer
- Odor: Solvent
- No Chlorinated Solvents
- Gloss finish
- Outstanding adhesion properties

#### Safety and Storage instructions

- Nine (9) month shelf life from date of manufacture if not opened. Once opened during the nine (9) months; if the user doesn't use diligence and observe the "special precautions" below, the shelf life can diminish faster.

- Special precautions:
  - Moisture/Air impact on DT-420. Our coatings are engineered to polymerize (cure) when exposed to air and the humidity in the environment. Consequently, when applying DT-420 always pour the amount of coating you expect to use within 15 minutes into a smaller container. Then reseal the quart container immediately to minimize the air/moisture impact on the remaining amount. Always keep the container tightly sealed when not using.
  - Product expansion. Bottles of DT-420 which has been exposed to air/moisture may begin to chemically react, which in turn produces a gas by-product causing the HDPE container it is stored in to expand. If the container shows signs of expansion, partially unscrew the lid, allow the gas to escape and reseal immediately. It is best to do this in ventilated areas.

## Product Application

**NOTE: If using DT-420 for projects under BOEING BAC 5578, defer to the application instructions provided in PSD number 6-225.**

### General instructions are:

- Easy to apply; wipe on or spray.
- If wiped on:
  - Use linen wipes such as DuPont Sontara aerospace grade wipes (<https://www.amazon.com/DuPont-Sontara-Aerospace-Grade-Wipes/dp/B003ZZHMWG>) or equivalent.
  - Fill in porosity first, lightly applying the coating into the surface. Allow to ambient (air) cure for 15-20 seconds and then moisten the cloth again and apply it in a consistent straight-line pattern. DT-420 will have a wet film build of 7-13 microns with a DFT (dry film thickness) of 4-10 microns.
- If sprayed on:
  - Conventional spray equipment, HVLP and/or airbrush application is recommended.
  - You will achieve the higher ends of this thickness when spraying the coating.
- Curing Options:
  - At room temperature, depending upon temperature and humidity; 420 will dry to the touch in 45 min. It will achieve full polymerization within 5 days at 60 degrees or more.
  - To accelerate the curing process, cure for 60 min. at 350° F.
- Application temperature - 55-90° F.
- Once DT-420 is fully cured, additional reapplications will not adhere without lightly etching the surface with fine grit media.

### Specific Benefits

- Sealer with low surface energy itself, the DT-420 enhances and extends the life of DT-6060.
- Cured Thermal Stability – ≤550° C.
- Longer Tooling/Mold Life.
  - No damage to the tooling from hand/power sanding in order to remove existing 420 coats.
  - See easy application instructions for how to reseal rough areas caused by work from surface/tooling repairs.
- Increased production due to less downtime, and increased lay-up cycles.

SURFACE MAINTENANCE BETWEEN LAY-UPS: AS RECOMMENDED WHEN USING PERMANENT MOLD RELEASES, DO NOT USE METAL SCRAPERS, ABRASIVES OR OTHER MECHANICAL ETCHING TOOLS TO REMOVE ANY LOOSE

DEBRI ON THE MOLD SURFACE. USE SOFT PLASTIC SCRAPERS, AND IF NECESSARY; CLEAN THE SURFACE WITH CLEANING SOLVENTS INCLUDING ACETONE, METHANOL (Denatured alcohol) AND ISOPROPYL ALCOHOL PRIOR TO APPLYING ANOTHER COAT OF DYNA-TEK'S MOLD RELEASE; DT-6060.

### **Safety Information**

Refer to our SDS for all safety data for all safety information. When opening DT-420, use care as the containers can experience some pressure build-up.