



## 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 to reseal areas where wear/abrasion has been removed. Because the DT-420 formulation is engineered not adhere to itself, re-applications over previously coated areas, it reseals only areas where the coating has been scratched or removed.
  - Consequently, re-applying DT-420 does not result in additional coating build-up. See application instructions for more information.
- Reseals mold surfaces without sanding/removing the 1<sup>st</sup> application.
  - To refresh worn, used molds previously coated with DT-420, clean the surface with Methanol (Denatured Alcohol) and re-apply a new coat of 420 to the entire mold surface. DT-420 adheres to all surfaces where there has been surface wear; and reseals those areas.

#### 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
- One (1) year shelf life from date of manufacture with observance of “special precautions” (below)

- Special precautions:
  - Moisture sensitive. Always keep the container tightly sealed when not using.
  - Can build up pressure. Always carefully open if it has been sitting for a while.
- Outstanding adhesion properties

### Product Application

- Easy to apply, wipe on or spray.
- Fills in porosity first, before building to a coating thickness of 4-10 microns range is based upon how applied (wipe on, spray or dip).
- Curing Options:
  - At room temperature, 420 will dry to the touch in 45 min. and then fully crosslinks within 5 days at 60 degrees or more.
  - To accelerate the curing process, cure for 60 min. at 250 deg. F.
- Application temperature - 40° - 90° F.
- Although 420 can be applied using different techniques (wipe, spray or dip) to increase its initial film build, once fully cured it does not build on itself, therefore there is no build-up on the mold surfaces.

### 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.

### Storage Instructions

- As a precaution, we reduced the stated shelf life for DT-420 from 12 months to 6 months from date of manufacturing. Storage stability for longer periods are being investigated under controlled conditions.
- We recommend storing DT-420 in a dehumidified room at a 50-65 °F.

### Handling and Safety instructions:

- Please practice the first-in-first-out (FIFO) method of drawing from your inventory stock.
- Handling containers when using the material in production:
  - Whenever possible, do not leave the container open with the cap off for extended periods.

- Always tightly reseal the container. This product is designed to cure/catalyze rapidly with air and moisture. Therefore, leaving containers open permits unwanted catalyst and will shorten the shelf-life to be reduced.
- We recommend inspecting all DT-420 inventory every thirty days.
  - Unopened containers can show some signs of the container's walls indenting slightly but not enough to cause the container to be unstable in storage. This is acceptable.
  - Containers that have been opened at your facility may show signs of expansion. This expansion results from too much moisture/air reacting with the DT-420.
- Precautions for opening containers exhibiting signs of expansion:
  - Follow all safety instructions as noted in the Safety Data Sheet.
  - Slowly twist off the cap and allow the excess gas to release.
  - If you have concerns before opening your containers, please consult us at 855.500.6266 and ask for "Dyna-Tek Technical Assistance".

### **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.