ALCHEMY Spetec

TECHNICAL DATASHEET

# F400

Hydrophobic closed cell polyurethane foam injection resin.

**Description**

Solvent and phthalate free, water reactive, hydrophobic, closed cell, low viscosity, shrink-free, flexible, one-component polyurethane injection resin designed to shut off water leaks.

**Applications**

- Shut off water leaks in concrete, brickwork and sewers where movement and settlement may occur.
- Water cut-off of water leaks in foundations such as diaphragm walls, piling sheets and secant piles.
- Sealing water-carrying cracks and joints in tunnel segments.
- Curtain grouting behind tunnel, concrete, brickwork and sewer walls.
- Injection of water cut-off membranes and liners in tunnels.

**Advantages**

- One component.
- Different reaction times are possible by adjusting the percentage of F400 ACC.
- The closed-cell structure of cured polyurethane ensures permanent flexible sealing of cracks and joints.
- Cured polyurethane is flexible, shrink-free and exhibits good chemical resistance (contact our Technical Service for chemical resistance).
- Cured polyurethane is harmless for the environment and resistant to biological attacks
- WQA drinking water certificate.

*F400 when combined with the ACC F400 accelerator is certified by WQA to NSF/ANSI 61 and CSA-B483.1 for materials safety only, as verified and substantiated by test data. Please refer to WQA website (www.wqa.org) for more information.*

**Packaging**

5 Gallon Pails

## Properties

**Uncured**
(appearance white liquid)

| | | |
|---|---|---|
| Viscosity at 77ºF | (ASTM D4878-98) | ±340cps |
| Flash Point | (ASTM D1310-86) | >302°F |
| Density | (ASTM D3505-96 [2000]) | 1.067 ± 0.005 |

**Cured**

| | | |
|---|---|---|
| Tensile strength | (ASTM D3574-03) | 290psi |
| Elongation at break | | ±100% |
| Density | | ±62.43lb/ft³ |

**Reaction Rate with ACC F400 Accelerator**

| | 41°F | | 59°F | | 77°F | | |
|---|---|---|---|---|---|---|---|
| % | Start | End | Start | End | Start | End | |
| 2 | 145” | 320” | 120” | 300” | 60” | 170” | 4V |
| 6 | 65” | 110” | 50” | 95” | 35” | 80” | 4V |
| 10 | 45” | 70” | 30” | 65” | 25” | 58” | 4V |

**Material Prep**

Condition overnight to 70º - 80º F (21º - 26º C). Heat bands or hot water bath may be used to warm containers. Do not heat above 80 degrees F.

**Mixing**

Vigorously shake the F400 ACC before use and pour the required quantity (2-10%) into the F400 resin. Mix the accelerator homogeneously into the resin and protect against moisture and rain to prevent premature reaction.

SEALLEAKS

| | |
|---|---|
| **Equipment** | Depending on the application, injection can be carried out using a hand pump, pneumatic pump or electric pump. Preferably use a separate pump for injection of water and resin. |
| **Accessories** | AP Flush 121, AP Oakum, AP Mechanical Ports, AP Soak 130 |
| **Personal Protection** | Safety goggles, face shield, impermeable gloves, long sleeves and pants. Use in well ventilated areas. Open doors and windows. In confined areas use mechanical ventilation to keep vapor concentrations low. Prevent direct contact with skin and eyes. See MSDS. |
| **Clean Up** | Flush injection equipment with AP Flush 121 when necessary.<br>Remove cured material from metal components by soaking in AP Soak 130.<br>Clean off of skin with soap and water. |
| **Environmental Protection** | Cured material is chemically inert and safe to dispose of in landfill. Cleanup any spilled liquid resin and place in a suitable sealed container. Dispose of in accordance to applicable environmental regulations. |
| **First Aid** | **Eye Contact:** Immediately flush with large amounts of water. Seek medical attention. **Inhalation:** Move to fresh air if symptoms occur. If breathing is difficult, seek medical attention. **Ingestion:** Seek medical attention immediately. **Skin Contact:** Wipe off contaminated area and wash with soap and water. |
| **Limitations** | Low temperatures will increase viscosity making product more difficult to pump. Low temperatures or cold water will slow down the reaction time. pH of reaction water should be between 3 and 10 for optimum foam. Keep lid tightly closed. |
| **Storage** | Store between 50º - 85º F (10º - 29º C). |
| **Handling** | Keep lids on tightly to prevent moisture from entering containers. Avoid direct contact with product. Be careful when opening as pressure may build up inside containers. |
| **Limited Warranty** | Alchemy-Spetec warrants this product to be free from manufacturer's defects and to meet all published properties on current Technical Data Sheet for a period of one year if used according to published instructions and within the shelf life. The user is responsible for determining suitability for intended use and assumes all risk. No other warranties expressed or implied shall apply including any warranty of merchantability or fitness for a particular purpose. Purchaser's sole remedy is limited to the purchase price or product replacement exclusive of cost of labor or other materials. |
| **Latest Information** | Before each use read latest Technical Data Sheets, Safety Data Sheets, and instructions available at www.alchemypolymers.com. Nothing contained in any Alchemy-Spetec materials or verbal instruction relieves the user of the obligation to read and follow all usage instructions and warnings for each product contained in the latest Technical Data Sheets and Safety Data Sheets. All information given by Alchemy-Spetec about Alchemy-Spetec products and procedures is given in good faith based on our current experience level and knowledge when materials are properly stored, handled, and applied. Jobsite conditions always vary, and for this reason Alchemy-Spetec assumes no liability for the provision of such information or instructions. Neither shall any legal relationship be created by the provision of such information. |
| | FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN. NOT FOR INTERNAL CONSUMPTION. READ MATERIAL SAFETY DATA SHEET PRIOR TO EVERY USE. |





Tech Support: 404-618-0438
www.Alchemy-Spetec.com