

CHEMENCE ANASEAL® FX®1 ELECTRONICS DEVICE IMPREGNATION SEALANT

ANASEAL FX1 is a very high quality, water washable impregnation sealant for porous materials, which has been especially formulated to cure anaerobically at room temperature. Polymerization (cure) occurs as a result of the presence of free ions and the inhibition of oxygen (O²). Cure speed can be controlled through adjustments in process variables.

ANASEAL FX1 is suitable for use in impregnation equipment with provision to aerate and refrigerate the sealant when not in the vacuum step of the process cycle. Most types of equipment can be modified to process FX1. The sealant is suitable for use with all common types of impregnation process, including simple wet vacuum, dry vacuum, wet or dry vacuum/pressure or pressure injection.

ANASEAL FX1 forms a densely crosslinked thermoset polymer when cured. Because it cures anaerobically, "bleedout" of sealant during high temperature curing does not occur as with most other sealants, usually resulting in higher sealing rates. No additives, which could detract from the quality and integrity of the polymerized sealant, are used. This critical formula results in a sealant with high resistance to solvents and to thermal degradation, yet is easily washable in plain water.

I. GENERAL PROPERTIES

The following data is not intended to be used for specifications, but are typical properties based on laboratory results. Chemence technical personnel can help determine actual specification data.

Uncured Properties

Composition/type: methacrylate monomers
Appearance/Color: translucent, amber liquid
Viscosity @25°C: 15-12mPa.s
Specific Gravity: 0.99
Flash Point: >90°C
Solvent Content: <0.1%
Shelf Life: 6 months
Vapor Pressure: Very Low

Cured Properties

Appearance: hard, slightly flexible
Hardness Shore D (ASTM D2240): 70
Compressive Modulus (ASTM D695) 42,000
Dielectric Strength, volts/mil (ASTM D-149) at
10mils. 1,170

TECHNICAL INFORMATION

Dielectric Constant, (ASTM D-150)

@ 100 Hz. 3.85
@ 1 KHz. 3.60
@ 1 MHz. 3.20
Volume resistivity, ohms-cm (ASTM D-57)..7.3x10¹³

II. SOLVENT RESISTANCE

ANASEAL FX1 anaerobic cure results in a very high quality cured polymer, which is, resists common solvents, including oils, glycol, chlorinated and fluorinated solvents, mild caustics and acid solutions, and water. Specific data concerning resistance to other solvents is available upon request.

III. SERVICE TEMPERATURE RANGE

ANASEAL FX1 is formulated from the highest quality monomers to maximize the service operating range of the polymer. FX1 is recommended for continuous service at least to 154°C, (300°F). Contact your Chemence representative for help in evaluating your application needs.

IV. CURING RATES AND METHODS

ANASEAL FX1 cures/polymerizes anaerobically at room temperature. Pressure testing and other processes may be accomplished in as little as 20 minutes, depending on the application and the variables attendant to the process. Typical impregnation process time is 20 - 25 minutes.

V. STORAGE

ANASEAL FX1 is easy to store and will exhibit long shelf life under proper storage conditions. The sealant should be stored in its original container and away from direct sunlight or other sources of UV light. Storage temperatures should be maintained below 27°C (80°F).

VI. NOTE

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